

**Brookfield**



**Acquisition by Brookfield LP and MidOcean Energy  
of Origin Energy Limited**

**MERGER AUTHORISATION APPLICATION**

5 June 2023

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### IMPORTANT NOTICE

This document has been prepared by Brookfield LP and MidOcean Energy solely for the purpose of seeking merger authorisation under the *Competition and Consumer Act 2010* (Cth). It must not be relied on for any other purpose.

This document contains confidential information and confidentiality is asserted over relevant information on behalf of:

- Brookfield and its affiliates and their managed clients and funds
- AusNet and its affiliates
- Intellihub and its affiliates
- Origin and its affiliates
- MidOcean Energy and its affiliates
- GIC and its affiliates
- Temasek and its affiliates

#### Note to ACCC:

Information confidential to Brookfield and Origin is highlighted **Confidential to Brookfield and Origin**

Information confidential to Brookfield is highlighted **Confidential to Brookfield**

Information confidential to AusNet is highlighted **Confidential to AusNet**

Information confidential to Intellihub is highlighted **Confidential to Intellihub**

Information confidential to Origin is highlighted **Confidential to Origin**

Information confidential to Origin and Intellihub is highlighted **Confidential to Origin and Intellihub**

Information confidential to MidOcean Energy is highlighted **Confidential to MidOcean Energy**

Information confidential to GIC is highlighted **Confidential to GIC**

Information confidential to Temasek is highlighted **Confidential to Temasek**

## Summary

### Key points

- The Board of Origin Energy Limited (**Origin**) has agreed to a \$18.7 billion acquisition by a consortium led by Brookfield and MidOcean Energy and has recommended that Origin shareholders approve the acquisition.
- The acquisition is subject to regulatory approvals, including from the Foreign Investment Review Board (**FIRB**) and the Australian Competition and Consumer Commission (**ACCC**).
- Brookfield will invest in Origin Energy Markets via the Brookfield Global Transition Fund (**BGTF**) and Brookfield Renewable Partners L.P. BGTF is the world's largest private institutional investment fund dedicated specifically to investing in the global transition to renewable energy.
- BGTF sees the Australian market – and Origin Energy Markets in particular – as an attractive investment because of the urgent need to transition to renewable energy. With its dual objectives – to achieve attractive risk-adjusted financial returns *and* to generate measurable environmental change – BGTF was established to invest in exactly the types of opportunities that the investment in Origin Energy Markets presents. BGTF 'goes where the emissions are'.
- Brookfield and MidOcean Energy consider that the acquisition comfortably meets the requirements for merger authorisation under Australian law.
- The transaction does not raise any material competition concerns. The Origin acquisition introduces two new entrants; Brookfield which currently owns no material electricity generation or energy retail assets in Australia; and MidOcean Energy which currently owns no assets in Australia, although it will acquire Tokyo Gas' very small interests in a number of LNG facilities in **Confidential to MidOcean Energy**. Moreover, the regulation of the energy sector – particularly in the highly regulated electricity and gas network sectors – means the acquisition will not give rise to vertical competition concerns.
- The transaction will however provide substantial public benefits, in particular because the Brookfield led consortium acquiring the Origin Energy Markets business intends to pursue a rapid acceleration of Origin Energy Markets' renewable generation build out, which will improve materially Australia's ability to attain its net zero targets at this crucial time in the energy transition.

### The Origin acquisition

A consortium comprising Brookfield and MidOcean Energy (the **Scheme Consortium**) has offered to acquire all of the shares in Origin for \$8.912 per share.<sup>1</sup> This price values Origin at \$18.7 billion<sup>2</sup> on an enterprise value basis. This will provide a significant return to Origin investors, including the many Origin retail shareholders.

The proposed acquisition of Origin Energy Limited (**Origin**) will comprise two interdependent acquisitions:

- (a) **Scheme Acquisition:** It is proposed that MidOcean Reef Bidco Pty Ltd (**MidOcean Bidco**) will acquire 100% of the ordinary shares in Origin pursuant to a scheme of arrangement under the *Corporations Act 2001* (Cth) (**Corporations Act**) (the **Scheme**). The Scheme Acquisition is

<sup>1</sup> The price offered is \$5.78 per share and US\$2.19 per share. Based on an assumed AUD / USD exchange rate of 0.70, this implies a total consideration of \$8.912 per share. The consideration mix between Australian dollars and US dollars is expected to change as future US dollar receipts are converted into Australian dollars at the prevailing foreign exchange rate, and if the Consortium elects to convert an additional fixed amount of US dollar consideration to Australian dollars. The total consideration payable will be reduced by any dividends paid by Origin prior to implementation of the Scheme Acquisition. A 4.5 cents per month ticking fee, accruing on a daily basis, will be payable if implementation of the Scheme Acquisition is delayed beyond 30 November 2023.

<sup>2</sup> Based on 1,728,724,644 diluted shares outstanding, net debt of \$3.3 billion as disclosed in Origin's 2023 half year report and an assumed AUD / USD exchange rate of 0.70.

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subject to various conditions precedent, including FIRB approval, ACCC authorisation, Origin shareholder approval and Court approval.

- (b) **On-Sale Acquisition:** Conditional upon, and as soon as possible following implementation of the Scheme Acquisition, MidOcean Bidco will procure that Origin and its interests are divided into two separate businesses, being the Origin Energy Markets business and the Origin Integrated Gas Business. Origin's Energy Markets business comprises Origin's energy retailing business, electricity generating assets, energy wholesale and trading business, development assets relating to energy production and storage, its investment in Octopus Energy and its LPG business and domestic gas trading business. Origin's Integrated Gas Business comprises Origin's upstream gas interests and shareholding in Australia Pacific LNG. The division of Origin will be implemented by MidOcean Bidco procuring the sale of the various Origin subsidiaries and assets comprising the Origin Energy Markets business to various entities wholly owned by EOS Aggregator (Bermuda) LP (**Brookfield LP**). MidOcean Bidco will retain 100% of the shares in Origin which, following completion of the sale of the Origin Energy Markets business, will own only the Origin Integrated Gas business.

(together, the **Proposed Acquisition**).

### ACCC merger authorisation

Brookfield LP and MidOcean Bidco (the **Applicants**) are applying to the ACCC for authorisation for the Proposed Acquisition (comprising both the Scheme Acquisition and the On-Sale Acquisition) under section 88 of the *Competition and Consumer Act 2010* (Cth) (**CCA**) on the basis that the ACCC can be satisfied in all the circumstances that the Proposed Acquisition (under section 90(7) of the CCA):

- would not have the effect, or would not have the likely effect, of substantially lessening competition; or
- would result, or be likely to result, in a benefit to the public and the benefit would outweigh the detriment to the public that would result, or be likely to result, from the Proposed Acquisition.

The Applicants request that the ACCC grant a single authorisation under section 88(5) of the CCA of the two interdependent acquisitions set out above which, taken together, form the Proposed Acquisition.

The Applicants consider that the acquisition will not adversely affect competition. There is no meaningful horizontal competitive overlap between the parties. Although Brookfield Infrastructure funds have a significant interest in AusNet, the high level of regulation of AusNet's electricity and gas networks, and the unique role of the Australian Energy Market Operator (**AEMO**) in Victoria, mean vertical competition issues should not arise. In addition, AusNet and Origin Energy Markets will remain separate companies, owned by different Brookfield funds and co-investors. Brookfield is prepared to give an enforceable undertaking to the ACCC to provide the ACCC further comfort around the ringfencing of AusNet and Origin Energy Markets, and the ringfencing of Brookfield's interests in AusNet and Origin Energy Markets.

Furthermore, although Brookfield Infrastructure holds a 50% interest in Intellihub, a smart meter provider, Intellihub faces significant competition from other smart meter providers and does not have market power, meaning vertical competition issues should not arise.

The fact that Brookfield Infrastructure, through its funds, has interests in AusNet and Intellihub is incidental to BGTF's objective which is to invest in a significant acceleration of Origin Energy Markets' renewable generation.

As outlined below, the Applicants consider that the Proposed Acquisition will provide substantial public benefits, in particular because BGTF intends to pursue a significant acceleration of Origin Energy Markets' renewable generation build out, which will improve materially Australia's ability to attain its net zero targets, with the direct economic and social benefits that flow from this. These benefits clearly outweigh any potential public detriments.

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Set out below is a more detailed description of BGTF's transaction rationale and the public benefits that are an inevitable corollary of that rationale. This is followed by an analysis of why the Proposed Acquisition will not have an adverse impact on competition.

### **BGTF is a dual objective fund**

Launched in 2021, BGTF is a new type of investment fund with a mandate to invest multiple billions of dollars in the global transition to a net zero carbon economy. To achieve this mandate, BGTF also draws on Brookfield's long-standing experience as one of the world's largest investors in renewable power and climate transition assets.

BGTF is led by Mark Carney, the United Nations' Special Envoy on Climate Action & Finance, Chair of Brookfield Asset Management and Brookfield's Head of Transition Investing, and Connor Teskey, President of Brookfield Asset Management, Head of Brookfield's Renewable Power and Transition business and CEO of Brookfield Renewable Partners LP (*BEP*). BGTF has a dual objective: to achieve attractive financial returns and to generate measurable environmental change by integrating a focused impact management approach throughout its investment process. In Mark Carney's book, *Value(s) Building a Better World for All*, he details the pivotal role values-based investing will need to play if the world is to achieve the vital net zero goals on an aggressive and critically important timeline.

The Treasurer the Hon Dr Jim Chalmers, in his article in The Monthly, 'Capitalism after the crises', refers to Mark Carney's book, and calls for a new approach to building a more inclusive and resilient economy, by 'reimagining and redesigning markets – seeking value and impact, strengthening safeguards and guardrails in areas of unchecked risk. And with coordination and co-investment – recognising that government, business, philanthropic and investor interests and objectives are increasingly aligned and intertwined'. Dr Chalmers said this new approach relies on objectives of which an orderly energy and climate transition is the first priority.

BGTF's approach is completely aligned with the Treasurer's call for a shift to values-based capitalism.

### **Origin Energy Markets is an attractive investment**

BGTF seeks to achieve its dual objectives by investing in high-quality assets and businesses that can support and accelerate the transition to a net zero global economy. BGTF pursues investment opportunities across three primary themes: business transformation, clean energy and sustainable solutions.

And Origin Energy Markets, as Australia's fourth largest greenhouse gas emitter, is exactly the type of investment that BGTF seeks. The opportunity lies in helping to transition businesses, primarily within the utility, energy, industrial and technology sectors, towards net zero business models. BGTF's conviction is that this transformation will bring considerable economic and social benefits for Australia and deliver attractive returns for BGTF in the medium to long term.

Added to this, Origin Energy Markets' strong management team, sophisticated energy markets operations and well-known retail brand complement the transition opportunity.

The key here is that BGTF sees the net zero transition as an attractive investment rather than a risk to be managed.

### **Australia's ambitious net zero plans**

The need to decarbonise the world's energy systems in order to minimise the impact of climate change and limit global temperature increases is both urgent and daunting.

At the Sharm el-Sheikh Climate Change Conference in November 2022, the United Nations Framework Convention on Climate Change (*UNFCCC*) parties issued an Implementation Plan, which stressed the urgent need for immediate, deep, rapid and sustained reductions in global greenhouse gas emissions and

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highlighted that about US\$ 4 trillion per year needs to be invested in renewable energy globally up until 2030 to be able to reach net zero emissions by 2050.

In Australia, in its *First Annual Progress Report to the Minister for Climate Change and Energy* published in November 2022, the Climate Change Authority also recognised the significant challenge posed by the scale and urgency of the energy transition.

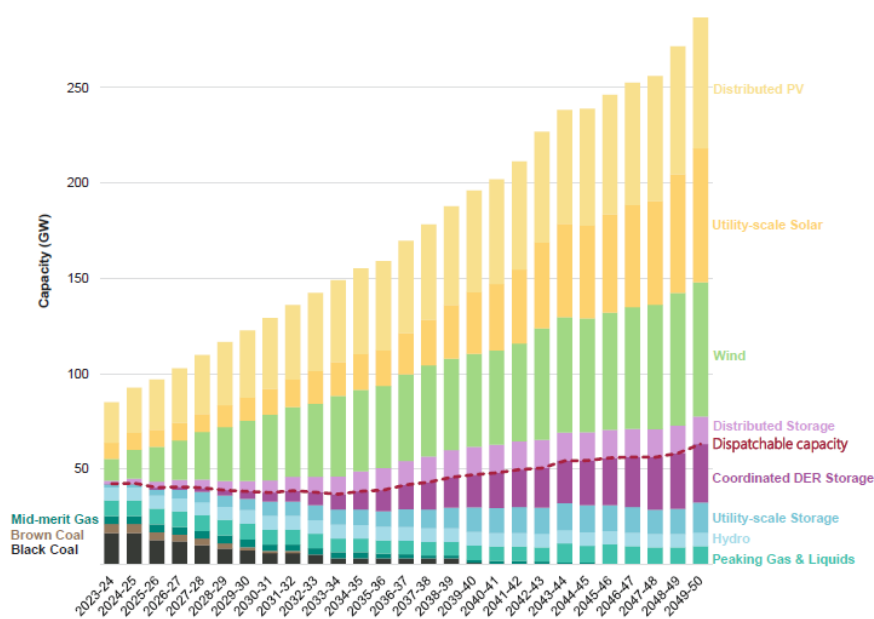
This urgency is reflected in Australian government policy across the Commonwealth and all States and Territories. Notably, the *Climate Change Act 2022* (Cth) formally enshrines in Australian law the national commitment under the Paris Agreement: to target net zero greenhouse gas emissions by 2050 and to reduce greenhouse gas emissions to 43% below 2005 levels by 2030.

But the government understands the magnitude of the task. As the Hon Chris Bowen, Minister for Climate Change and Energy recently put it, 'reducing emissions by 43% is an achievable but ambitious target and we are going to need a collective effort and determination across all of the economy to get there.'

The scale of the task ahead is starkly illustrated in the 2022 Integrated System Plan (*ISP*) published by AEMO which is designed to provide a 'whole of system plan' for supplying affordable and reliable electricity in the eastern and south eastern states, while supporting Australia's net zero ambitions.

The ISP included a generation path for achieving Australia's net zero targets. This is set out in **Figure 1** below.

**Figure 1: Forecast NEM capacity to 2050, Step Change scenario**



Source: AEMO, 2022 *Integrated System Plan – For the National electricity Market* (June 2022)

The scale is staggering. AEMO estimates that around 125 GW of new utility-scale renewable energy (principally solar and wind) must be built by 2050 to meet demand as coal-fired generation withdraws. This means maintaining the current rate of development every year for the decade to nearly treble the existing 16 GW of utility-scale renewable energy by 2030 – and then doubling that capacity by 2040, and again by 2050.

As AEMO notes, 'this plan is for a true transformation of the National Electricity Market (*NEM*), from fossil fuels to firmed renewables. It calls for levels of investment in generation, storage, transmission and system services that *exceed all previous efforts combined* (emphasis added).

At the same time, there are serious questions about whether the current energy market participants and structures will be able to deliver this change. These concerns permeate many of the current energy

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market reforms. From novel financings by the Clean Energy Finance Corporation and government generation underwriting schemes through to State-run renewable energy zones and the revival of the State Electricity Commission of Victoria, the need to do things differently, and to make the change quickly, is evident throughout the energy sector.

But deploying State and Commonwealth balance sheets will not be enough – the energy market also needs substantial new private capital that, like BGTF, seeks to invest in the energy transition for both attractive returns and social and environment outcomes, both on a standalone basis and via co-investment with government.

The amount of private sector investment required over a relatively short timeframe is rare, if not without parallel. Global capital in particular will play a critical role in Australia's energy transition.

### **Under BGTF Consortium ownership Origin Energy Markets will accelerate Australia's net zero plans and deliver other public benefits**

The BGTF Consortium's acquisition of the Origin Energy Markets business is an illustration of this urgently needed private sector investment and one that will make a material difference to Australia achieving its net zero targets.

The rationale is simple. The Proposed Acquisition brings together two complementary aspects of each of the Origin Energy Markets business and the BGTF Consortium to accelerate the build out of renewables for Australia.

As a listed company, Origin is inherently constrained, by its current ownership structure, in its ability to raise substantial new equity and debt to fund a transformation program. The demands of listed company shareholders – notably the need to pay dividends and / or return capital and an aversion to dilutive capital raisings – can work well for a steady yield stock. These demands are challenging for a company in transformation, operating in an industry in a once-in-a-century transition, particularly where the scale of capital required is so significant and the required investment horizon is long term. On the other hand, the BGTF Consortium has substantial capital to invest in renewables in Australia. However, it lacks the retail customer base to underpin and maximise the decarbonisation impact of its capital (ie, it would need to enter into an offtake agreement with a substantial offtaker such as a retailer before it could justify any significant renewables investment in Australia).

If Brookfield was unable to acquire Origin (or another major retailer), Brookfield would continue to seek out potential opportunities to develop and invest in renewables and storage in Australia. This would, however, be on a piecemeal basis and at a much smaller scale and be subject to the relative attractiveness of other global opportunities available to Brookfield at any given time. Building renewables and storage absent the Proposed Acquisition would face significant challenges. It is highly uncertain what quantity of renewables and storage Brookfield Renewable Power and Transition may be able to construct in Australia absent the Proposed Acquisition.

However, with the Proposed Acquisition providing the required committed third party offtaker for BGTF (ie, Origin Energy Markets), the BGTF Consortium will be in a position to materially accelerate Origin Energy Markets' proposed build-out in Australia. Origin Energy Markets will also have the required capital, procurement capabilities, and global expertise to effect its proposed build-out.

To illustrate the scale of the financing task, the BGTF Consortium proposes to invest between \$20 to \$30 billion to build out the Origin Energy Markets renewables and storage assets over the next 10 years (to 2033). That investment, over the balance of this decade, is substantially more than the value of Origin today. To put this into context, Ian Learmouth, CEO of the Clean Energy Finance Corporation (**CEFC**) recently estimated that Australia needs \$120 billion of capital expenditure by 2030 to fund the new solar, wind, transmission, storage and ancillary services needed to meet Australia's ambitious 2030 emissions goals.

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There is a high degree of certainty that the BGTF Consortium will make the investment of \$20 to \$30 billion to materially decarbonise the Origin Energy Markets business by 2033. The 'green build-out' plan has been approved by Brookfield's Investment Committee, and contemplates an expected return based on the BGTF Consortium materially decarbonising the Origin Energy Markets business over the life of the investment (no more than the life of the BGTF Fund). GIC's and Temasek's investment is being made on the same basis. All parties in the BGTF Consortium therefore expect the same investments to be made in the Origin Energy Markets business. BGTF's reputation is also a key factor. It relies on BGTF delivering on expected returns to its shareholders and on delivering on its decarbonisation targets, to attract investment in future versions of the BGTF fund (and in attracting co-investors for future projects). As a closed-end fund with an expected operating term of 12 years, BGTF will exit any investments, including in Origin Energy Markets, prior to the end of the fund's term. Brookfield is therefore incentivised to execute the 'green build-out' plan so that BGTF can generate better returns on exit, having completed the material decarbonisation of the Origin Energy Markets business by that time.

For the reasons outlined further below, the BGTF Consortium, through the support of BGTF and Brookfield, is well credentialed to undertake this transformation. BGTF, the world's largest private institutional investment fund dedicated specifically to investing in the transition to renewable energy globally, was established to fund exactly these types of transitions. Capital invested in BGTF is intended for investments with longer term return horizons suitable for renewable energy projects.

Central to BGTF's investment ethos is that of 'additionality'. BGTF will not make an investment where its capital does not meaningfully advance the impact outcomes over and above the status quo. In practice, this means that BGTF will not pursue an investment unless it is going to have a greater contribution to that company's net zero goals than would have been achieved absent an investment from BGTF. A prerequisite for BGTF's investment in Origin Energy Markets is BGTF's ability to improve the speed and certainty of Origin Energy Markets' transition to net zero.

The difference in approach is best illustrated by the relative commitments to developing new renewable generation and storage assets. Origin Energy Markets currently sources the majority of its wholesale electricity from third parties and has comparatively modest plans to develop new generation. Origin's Climate Transition Action Plan sets a target for Origin Energy Markets to have 4 GW of renewable generation and storage capacity by 2030 (including both owned and contracted generation and storage). As discussed below, this implies Origin Energy Markets will develop up to 2,332 MW of new renewable generation and storage (both owned and contracted) between now and 2030. For the purposes of this application, the BGTF Consortium has assumed that Origin Energy Markets accelerates this rate and develops 4 GW of new renewables generation and storage between now and 2033.

In contrast, the BGTF Consortium intends to deploy a 'green build-out' plan for the Origin Energy Markets business, developing new internal generation equal to approximately **Confidential to Brookfield: the significant majority** of Origin Energy Markets' aggregate customer load requirements by 2033. Based on the dual premise that renewable generation is crucial to achieving global net zero ambitions and represents the cheapest levelised cost method to replace Australia's retiring coal generation fleet, the 'green build-out' plan involves the BGTF Consortium developing – via Origin Energy Markets – up to 14 GW of new, large-scale renewable generation and storage assets by 2033.

This acceleration of renewables development – 10 GW over and above business as usual – will make a material difference to achieving Australia's net zero targets. To put this in context, Ian Learmonth, CEO of CEFC, recently estimated that Australia needs to install approximately 29 GW of large-scale renewable generation to reach 82% renewables by 2030. According to Learmonth, Australia requires a build-out of ~3.6 GW a year (or a substantial wind farm a month), in circumstances where Australia installed only 2.3 GW of renewables last year. Brookfield is of the view that even more may be needed – up to 4.2 GW a year until the end of the decade. The NEM currently has only 27 GW total of utility-scale wind, solar,



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hydro and battery renewable energy capacity.<sup>3</sup> The BGTF Consortium, through the Proposed Acquisition, is providing a net 10 GW additional rollout by 2033.

In addition to bringing the necessary capital, the BGTF Consortium, through Brookfield, has access to decades of successful global experience and expertise in renewable generation development, ownership and operation, a leading global procurement network, and a track record of success that will assist it in dealing constructively and confidently with suppliers and other stakeholders needed to deliver a step change in the delivery of new renewable generation and storage assets. Although the 14 GW build-out is ambitious, the BGTF Consortium will bring what is required to ensure it can be delivered.

The BGTF Consortium is acquiring the Origin Energy Markets business because its customer base, and 'short electricity' position, make it the ideal platform for renewables investment. Having acquired Origin Energy Markets as a vehicle for renewables investment, consistent with its investment mandate, there can be a high degree of certainty the BGTF Consortium will follow through with its investment plans.

An accelerated renewables build-out will deliver both environmental benefits (helping Australia meet its net zero targets) and consumer benefits (putting downward pressure on electricity prices and reducing the risk of market dislocation events). It will also provide a public benefit by assisting Australia to meet its international commitments to address climate change, including under the Paris Agreement.

Over and above an additional 10 GW renewables build-out, the Proposed Acquisition will (i) facilitate further decarbonisation of Australia through the development and expansion of behind the meter solutions for consumers, (ii) further develop local supply chains for renewable development in Australia, by improving security of supply and providing new job opportunities, (iii) facilitate the growth of Australia's renewable power industry, and (iv) facilitate the development of new renewable technologies.

### **The Proposed Acquisition will not substantially lessen competition**

The Proposed Acquisition will not result in a substantial lessening of competition in any relevant market. While Brookfield Infrastructure (a separate Brookfield business unit) has interests in AusNet and Intellihub which supply Origin and other generators and retailers, this incidental vertical relationship will not adversely impact competition. There are a number of other minor overlaps and vertical relationships which are discussed in more detail in the application.

### **Transmission – generation**

AusNet owns Victoria's principal electricity transmission network. Origin currently owns Mortlake, a gas-fired electricity generator connected to AusNet's transmission network that produced 0.6% of electricity generated in Victoria in 2021.

AusNet does not have any ability to use its position as the owner of Victoria's principal electricity transmission network to foreclose Origin's generation rivals.

Electricity transmission systems in the NEM are very heavily regulated by the National Electricity Law and National Electricity Rules to ensure that network generators cannot misuse any market power they may otherwise have but for such regulation.

The regulatory regime contemplates that vertical integration may exist and establishes a regulatory tool intended to ensure that competition cannot be harmed as a result. Specifically, the regulatory regime includes 'AER Transmission Ring-fencing Guidelines' with which transmission businesses must comply. The purpose of the guidelines is to ensure that where there is vertical integration between a transmission business and a contestable business, the transmission business is operated in a way that does not adversely affect competition in the contestable market. The guidelines include requirements to ensure there is no cross subsidisation, no taking advantage of information and no discrimination.

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<sup>3</sup> AEMO, *NEM Generation Information – May 2023*, <<https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>>.

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In Victoria, unlike other states, the functions of the Transmission Network Service Provider are split between AusNet and AEMO. AEMO is responsible for the activities likely to be most competitively sensitive, including system planning, augmentation and the provision of network services to users. AusNet has no ability to foreclose in areas controlled or overseen by AEMO in Victoria. The unique role of AEMO in Victoria means that far fewer issues arise than if a transmission network in another state was involved.

There is a high level of transparency over all relevant aspects of AusNet's operation of the transmission network. There is no possibility of subtle forms of discrimination 'flying below the radar'. In addition, the fact that Origin sells far more electricity than it produces in Victoria (ie, it is structurally short electricity) means it has no incentive to seek to have AusNet foreclose competition as higher NEM prices will harm, rather than benefit, Origin.

The lack of any ability or Incentive to foreclose is reinforced by the fact that AusNet and Origin will remain separate companies, with separate co-investors holding a significant proportion of the equity and with separate Brookfield funds as investors.

To provide the ACCC with further comfort, Brookfield is prepared to provide an enforceable undertaking to the ACCC, ring-fencing AusNet and Origin, and ringfencing the teams within Brookfield responsible for managing Brookfield's interests in AusNet and Origin.

### **Distribution – retail**

AusNet also owns one of five Victorian electricity distribution networks and one of three Victorian gas distribution networks. Origin is a retailer of electricity and gas using those networks.

AusNet does not have any ability or incentive to use its position as the owner of these distribution networks to foreclose Origin's retail rivals.

Electricity and gas distribution systems are very heavily regulated to ensure AusNet cannot misuse any market power it may otherwise have without regulation.

The electricity regulatory regime includes 'AER Distribution Ring-fencing Guidelines' with which distribution businesses must comply, and the gas regulatory regime also includes ring-fencing rules. The purpose of the guidelines and ring-fencing rules is to ensure that where there is vertical integration between a distribution business and a contestable business, the distribution business is operated in a way that does not adversely affect competition in the contestable market. It is important to observe that the regulatory regime contemplates that vertical integration may exist and establishes a regulatory tool intended to ensure that competition cannot be harmed as a result.

The fact that retail customers are geographically dispersed across a distribution network makes many theoretical foreclosure strategies impossible to execute in practice. It is difficult to imagine, for example, how selectively upgrading one part of a distribution network (say, a particular suburb) could advantage an associated retailer. There is a high level of transparency over relevant aspects of AusNet's operation of its distribution networks. There is no possibility of subtle forms of discrimination not being detected.

The lack of any ability or incentive to foreclose is reinforced by the fact that AusNet and Origin Energy Markets will remain separate companies, with separate co-investors holding a significant proportion of the equity and with separate Brookfield funds as investors.

### **Smart meters**

Intellihub is a smart meter provider. Origin, in its capacity as an electricity retailer, procures smart meters (and related services), including from Intellihub, for use in its downstream retail business.

Intellihub does not have market power in relation to the supply of smart meters. It is only one of a number of suppliers of smart meters in Australia and faces significant competitive constraints from large suppliers like PlusES, Vector and Yurika with significant existing scale, as well as a number of smaller suppliers.

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Demand for metering services is also expected to grow materially in the next five to ten years, creating further opportunity for expansion and new entry. The purchasers of mass market smart meters are electricity retailers who possess significant buyer power and who conduct highly structured competitive tenders on an episodic basis to appoint a company (or several companies) for the supply and installation of smart meters. The nature of competition, with episodic competitive tenders for long term deployment contracts, and the presence of sophisticated buyers with countervailing power, reinforce Intellihub's lack of market power.

In relation to competitive tenders to supply and install new smart meters, if Intellihub sought to charge Origin's competitors a higher price or to provide a lower quality of service or less attractive terms and conditions, it would simply lose the competitive tender to a competitor.

In relation to existing contracts to supply and install smart meters, the contracts entered into between Intellihub and its customers protect the energy retailer against Intellihub providing poor service or misusing their confidential information. In addition, as almost no retailers have yet awarded 100% of their smart meter requirements until 2030, providing poor service to a retailer is likely to result in the loss of future opportunities with that retailer (and potentially others if Intellihub's reputation is affected).

In combination, the above factors mean Intellihub has no ability to discriminate against Origin's retail competitors. It follows that it has no incentive to do so.

### **East Coast wholesale gas**

EIG and MidOcean Energy currently own no assets in Australia. However, MidOcean Energy has recently entered an agreement to acquire Tokyo Gas' minority and non-controlling interests in the Gorgon (1% interest), Ichthys (1.575% interest), Pluto (5% interest) and QCLNG (1.25% interest) LNG projects. Origin is one shareholder in APLNG, an incorporated joint venture, which has as its current shareholders Origin Energy Limited (27.5%), ConocoPhillips Australia Pacific LNG Pty Ltd (47.5%) and Sinopec Australia Pacific LNG Pty Limited (25%). MidOcean Bidco intends to sell part of Origin's 27.5% interest in APLNG to ConocoPhillips, which will see MidOcean Bidco retain a 25.01% interest.

The Proposed Acquisition will not lessen competition in the East Coast wholesale gas market. MidOcean's interests in the East Coast wholesale gas market will be limited to a 1.25% interest in QCLNG and a 25.01% interest in APLNG. MidOcean Energy's interest in QCLNG is *de minimis* and will not give it control or meaningful influence over the conduct of QCLNG operations. MidOcean Energy also will not have a role in the marketing of domestic gas produced by QCLNG or receive competitively sensitive marketing information. MidOcean Energy is also only a minority shareholder in APLNG, and will not be in a position to control output or marketing of domestic gas produced by APLNG.

As a result, MidOcean Energy's acquisition of the Origin Integrated Gas business would not lessen competition in the East Coast wholesale gas market.

EIG is in discussions with Senex regarding it (or its shareholders Hancock Energy / POSCO) investing in MidOcean Energy with a minority interest. This investment will give Senex an indirect interest in the Origin Integrated Gas business and the Tokyo Gas assets being acquired by MidOcean Energy.

Any governance rights arising by virtue of Senex's investment in MidOcean Energy will be limited and will be akin to those of a limited partner. EIG will manage MidOcean Energy (including its proposed interests in QCLNG and APLNG) and all decisions relating to MidOcean Energy's portfolio companies will be made by EIG. Senex will not have control over MidOcean Energy.

As MidOcean Energy does not have control over QCLNG or APLNG, and Senex does not have control over MidOcean Energy, Senex's possible investment in MidOcean Energy would not result in the Proposed Acquisition lessening competition in the East Coast wholesale gas market. In any event, if Senex (or Hancock and POSCO) do ultimately take a minority interest in MidOcean Energy, MidOcean

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Energy would be prepared to provide an enforceable undertaking that it will procure that no person from Senex, Hancock or POSCO will be appointed to the board of APLNG.

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## 1 Application for Authorisation

1 In this section of the Application an overview of the following is provided:

- **The Authorisation Application:** A description of the conduct for which authorisation is sought ([section 1.1](#)); information about the Applicants for authorisation ([section 1.2](#)); the rationale for the Proposed Acquisition ([section 1.3](#)); and a description of the parties to the Proposed Acquisition and areas of overlap ([section 1.4](#));
- **Test for Authorisation:** A summary of the test for authorisation and why authorisation should be granted ([section 1.5](#));
- **Public benefits:** The public benefits from the Proposed Acquisition, specifically, how this will facilitate Origin Energy Markets' transition to net zero and help achieve Australia's own net zero targets and Paris Agreement commitments ([section 1.6](#));
- **Counterfactual:** A summary of Brookfield's, Origin's, MidOcean's, GIC's and Temasek's position in Australia absent the Proposed Acquisition. This section also considers the market counterfactual ([section 1.7](#)).

2 In relation to any competitive effects, the following sections provide an overview of why the Proposed Acquisition will not result in any SLC in any:

- **electricity generation markets through transmission:** via the incidental vertical interface between – on the one hand – Origin as electricity generator and – on the other hand – AusNet (in which Brookfield has a 45.4% interest) as operator of the principal Victorian Transmission network ([section 1.8](#)). This focuses on the extensive existing regulation of AusNet and the unique role of AEMO in Victoria which would prevent it from executing any foreclosure strategies directed at Origin's generator competitors;
- **electricity retail markets through distribution:** from the incidental vertical interface between Origin's electricity retail activities in Victoria and AusNet's ownership of one of five electricity distribution networks in Victoria ([section 1.9](#));
- **gas retail markets through distribution:** from the incidental vertical interface between Origin, as a gas retailer in Victoria, and AusNet as owner of one of three gas distribution networks in Victoria ([section 1.10](#));
- **electricity generation markets through electricity distribution:** from the interface between AusNet as owner of one of five Victorian electricity distribution networks, to which embedded generators may connect and Origin as an electricity generator ([section 1.11](#));
- **gas and electricity markets** through Jemena's interests in transmission and distribution assets ([section 1.12](#));
- **supply of smart meters** from Origin's interface with Intellihub, in which Brookfield has a 50% interest (via a separate fund) ([section 1.13](#)); and
- **gas wholesale market** from the possible overlap between MidOcean's proposed 25.01% interest in APLNG and the proposed 1.25% interest in GCLNG that it has agreed to acquire from Tokyo Gas ([section 1.14](#)).

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### 1.1 Application for Authorisation

- 3 This authorisation application is made by EOS Aggregator (Bermuda) LP (**Brookfield LP**) and MidOcean Reef BidCo Pty. Ltd (Australia) (**MidOcean Bidco**, together with Brookfield LP, the **Applicants**).
- 4 The Applicants request authorisation by the Australian Competition and Consumer Commission (**ACCC**) of their proposed acquisition of Origin Energy Limited (**Origin**), comprising two interdependent acquisitions:
- (a) **Scheme Acquisition:** It is proposed that MidOcean Bidco will acquire 100% of the ordinary shares in Origin pursuant to a scheme of arrangement under the *Corporations Act 2001* (Cth) (**Corporations Act**) (the **Scheme Acquisition**). To implement the Scheme Acquisition, a binding Scheme Implementation Deed was signed on 27 March 2023 by Origin, MidOcean Bidco and Brookfield Renewable Group Australia Pty Ltd. The Scheme Acquisition is subject to various conditions precedent, as set out in the Scheme Implementation Deed (see **Annexure 5.1**), including FIRB approval, ACCC authorisation, Origin shareholder approval and Court approval.
  - (b) **On-Sale Acquisition:** Conditional upon, and as soon as possible following implementation of the Scheme Acquisition, MidOcean Bidco will procure that Origin and its interests are divided into two separate businesses, being the Origin Energy Markets business and the Origin Integrated Gas Business. Origin's Energy Markets business comprises Origin's energy retailing business, electricity generating assets, energy wholesale and trading business, development assets relating to energy production and storage, its investment in Octopus Energy and its LPG business and domestic gas trading business. Origin's Integrated Gas Business comprises Origin's upstream gas interests and shareholding in Australia Pacific LNG. The division of Origin will be implemented by MidOcean Bidco procuring the sale of the various Origin subsidiaries and assets comprising the Origin Energy Markets business to various entities wholly owned by Brookfield LP. MidOcean Bidco will retain 100% of the shares in Origin which, following completion of the sale of the Origin Energy Markets business, will own only the Origin Integrated Gas business. The terms of Brookfield LP's acquisition of the Origin Energy Markets business are set out in the Commitment Deed (see **Annexure 5.3**) and the steps that MidOcean Bidco and Brookfield LP will take to prepare for the implementation of the Scheme Acquisition and the On Sale Transaction are set out in the Bid Conduct Deed (see **Annexure 5.2**).
- (together, the **Proposed Acquisition**).
- 5 The Scheme Acquisition and the On-Sale Acquisition are interdependent in the sense that once the conditions precedent to the Scheme Acquisition are satisfied, both the Scheme Acquisition and the On-Sale Acquisition must occur. There are no additional conditions precedent to the On-Sale Acquisition. Conversely, if the conditions precedent to the Scheme Acquisition are not satisfied, neither the Scheme Acquisition nor the On-Sale Acquisition can occur. Either both acquisitions occur, or neither does.
- 6 A more detailed explanation of the various steps required to implement the Proposed Acquisition is set out in section 2.2.
- 7 The Applicants seek authorisation of the Proposed Acquisition on their own behalf, and on behalf of the following classes of person:
- (a) any entity that is a related body corporate of Brookfield LP that acquires any part of the Origin Energy Markets business; and

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- (b) any entity that is a related body corporate of MidOcean Energy, LLC that acquires any part of the Origin Integrated Gas business.
- 8 The Applicants are applying to the ACCC for authorisation of the Proposed Acquisition under section 88 of the Competition and Consumer Act 2010 (Cth) (**CCA**) on the basis that the ACCC can be satisfied in all the circumstances that the Proposed Acquisition (under section 90(7) of the CCA):
- (a) would not have the effect, or would not be likely to have the effect, of substantially lessening competition; or
- (b) would result, or be likely to result, in a benefit to the public and the benefit would outweigh the detriment to the public that would result, or be likely to result, from the Proposed Acquisition.
- 9 The Applicants request that the ACCC grant a single authorisation under section 88(5) of the CCA of the two interdependent acquisitions set out in paragraph 4 which, taken together, form the Proposed Acquisition.

### 1.2 Further information about Brookfield LP and MidOcean Bidco

- 10 Brookfield will invest in and control Brookfield LP via the Brookfield Global Transition Fund (**BGTF**)<sup>4</sup>, Brookfield Renewable Partners LP (**BEP**), and certain other Brookfield-managed co-investors. The Brookfield-controlled portion of Brookfield LP is expected post-syndication to be somewhere between **Confidential to Brookfield: 40 – 50%** and 67.6%. The balance of Brookfield LP is expected to be owned by Buckland Investment Pte. Ltd. (which is managed by GIC Special Investments Private Limited, which is in turn wholly owned by GIC Private Limited) (**Buckland Investment**) (22.5%),<sup>5</sup> Davis Investments Pte. Ltd. (**Davis Investments**) wholly owned by Temasek Holdings (Private) Limited (**Temasek**) (9.9%), potentially Reliance Industries (**Reliance**) (interest to be determined), and possibly other foundation co-investors (collectively, the **BGTF Consortium**). Any other foundation co-investors will be investors holding less than 9.9% and will not own, or have an interest in, any material East Coast electricity or gas assets.
- 11 MidOcean Bidco is currently a wholly owned subsidiary of MidOcean Energy, LLC. MidOcean Energy, LLC is an LNG company formed and managed by EIG to build a diversified, resilient, cost and carbon competitive LNG portfolio. It is intended that one or more EIG controlled funds will invest in MidOcean Energy. It is possible that additional co-investors will also invest in MidOcean Energy. With one exception, the potential passive investors with whom MidOcean Energy is currently in discussions are not participants in the East Coast domestic gas market and do not have East Coast gas reserves. One potential passive investor in MidOcean Energy is Senex Energy Limited (**Senex**), an Australian company that is privately owned by K-A Energy 1 Pty Ltd, a subsidiary of POSCO INTERNATIONAL Corporation (50.1%) and Hancock Energy Corporation Pty Ltd (49.9%). Senex is a small supplier of gas in the East Coast domestic market.

### 1.3 Rationale

#### ***Brookfield and the Brookfield Global Transition Fund***

- 12 BGTF is the world's largest private institutional investment fund dedicated specifically to investing in the transition to renewable energy globally. BGTF seeks to create value for investors by making investments that accelerate the global transition to a net zero carbon economy. This involves transforming carbon-intensive businesses, including by reducing their greenhouse gas

<sup>4</sup> For completeness, we note that BGTF is widely held, in a broad range of institutions operating both in Australia and internationally. There are only three 'founding investment partners' (Ontario Teachers' Pension Plan, Temasek Holdings (Private) Limited and New York State Common Retirement Fund) which have committed significant capital to BGTF. **Confidential to Brookfield.**

<sup>5</sup> GIC through Buckland Investment Pte. Ltd. will have no direct influence on the underlying investments with Brookfield retaining management of Brookfield LP.

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emissions and increasing low-carbon energy capacity. BGTF's purpose in acquiring the Origin Energy Markets business is to further this investment mandate.

- 13 Origin Energy Markets is an ideal investment opportunity for BGTF. It is currently a carbon intensive business. It has plans to close Australia's largest black coal-fired power station, Eraring, as early as August 2025, but making this plan a reality will require significant investment in renewable generation and firming capacity (batteries and pumped hydro). Furthermore, Origin is structurally short of electricity (ie, it generates significantly less electricity than it sells) even before the planned closure of Eraring. This creates an opportunity for BGTF to invest in significantly more renewable generation than Origin is planning to do on a standalone basis to meet Origin's customer demand 'in house'. As a result, the Proposed Acquisition will make a significant contribution towards Australia's net zero objectives, as well as generating value for BGTF's investors. BGTF is a closed-end fund, with an expected operating term of 12 years (with the option for two one-year extensions), at or prior to which point BGTF will exit the investments the fund has made, and return capital to investors. This incentivises Brookfield to execute the 'green build-out' plan for Origin Energy Markets so that BGTF can generate greater returns on exit having completed the material decarbonisation of Origin Energy Markets.

### ***MidOcean Energy***

- 14 MidOcean Energy is an LNG company formed in June 2022 and managed by EIG. MidOcean Energy and EIG believe that LNG will be a critical enabler of the energy transition and is of growing importance as a geopolitically strategic energy source. MidOcean Energy is seeking to build a diversified, resilient, cost competitive and carbon competitive LNG portfolio. The acquisition of Origin's existing integrated gas business, including in particular its 25.01% shareholding in APLNG, will create a strong foundation for the newly established company. MidOcean Energy, LLC and its affiliates are referred to in this Application as ***MidOcean Energy***.

## **1.4 The parties' assets in Australia and areas of overlap**

### ***Brookfield***

- 15 Certain Brookfield managed funds own or have interests in the following energy sector businesses in Australia.
- (a) A Brookfield managed and controlled consortium, that includes as investors Brookfield Super-Core Infrastructure Partners and Brookfield Infrastructure Partners, holds a combined 45.4% interest in AusNet Pty Ltd (***AusNet***). The remaining equity in AusNet is held by third party investors. AusNet owns Victoria's principal electricity transmission network, one of five Victorian electricity distribution networks, and one of three Victorian gas distribution networks.
  - (b) A separate Brookfield fund, Brookfield Infrastructure Fund IV (***BIF IV***), owns 50% of the Intellihub business. The remaining 50% is owned by a Pacific Equity Partners fund. Intellihub is a smart meter provider that delivers metering and data solutions, principally to electricity retailers.
  - (c) BIF IV also has a 50% ownership interest in Spanish company, X-Elio. The remaining 50% is currently held by KKR. On 21 March 2023, BIF IV agreed to acquire the remaining 50% it does not own from KKR. The transaction is subject to customary closing conditions and is expected to close during the second half of 2023. In Australia, X-Elio owns one operating solar power plant and has five other active solar farm pipeline projects.
- 16 In terms of horizontal overlap with Origin Energy Markets:
- (a) there is no overlap in any electricity generation market, except the overlap between Origin's generation business and X-Elio's small solar generation business and the

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minimal overlap between Origin and AusNet's (through Mondo) photovoltaic system commercial and industrial offering;

- (b) there is no overlap in relation to electricity or gas retail, except a minimal overlap in relation to virtual power plants; and
- (c) there is no overlap in relation to the provision of smart meters.

17 In terms of vertical relationships between Origin and the various Brookfield businesses:

- (a) AusNet owns Victoria's principal Victorian transmission network. Origin currently owns one electricity generator in Victoria, Mortlake, which is connected to the AusNet transmission system;
- (b) AusNet owns one of five Victorian electricity distribution networks and one of three Victorian gas distribution networks. Origin is one of the electricity and gas retailers whose customers are connected to those distribution networks; and
- (c) Intellihub supplies smart meters (and related data services) to Origin and other retailers for use in their electricity retail businesses. Intellihub also supplies an application programming interface to retailers, including Origin, for use in virtual power plants.

### ***Buckland Investment***

18 The infrastructure arm of GIC Special Investments Private Limited (***GIC Infra***), which manages the co-underwriting held under Buckland Investment Pte. Ltd. (***Buckland Investment***), has minority interests in two companies that have, or are developing, renewable assets in Australia – Intercontinental Energy and ACEN Corporation. Intercontinental Energy has solar generation and green hydrogen projects in Western Australia. ACEN has one newly operational asset and eleven pipeline projects including one advanced project in New South Wales, where Origin Energy Markets also has generation assets.

### ***Temasek***

19 Temasek has a 100% interest in Singapore Power Limited (***SP Group***). SP Group has interests in electricity and gas transmission and distribution businesses in Singapore and Australia, including a 40% interest in Jemena.<sup>6</sup> Jemena is an owner and operator of electricity and gas assets across eastern and northern Australia. Jemena's portfolio includes electricity distribution, gas distribution and gas transmission assets.

20 In terms of vertical relationships between Origin and Jemena:

- (a) Jemena owns or otherwise has interests in two Victorian electricity distribution networks, New South Wales gas distribution networks and the ACT electricity and gas distribution networks. Origin is one of the electricity and gas retailers who customers are connected to those distribution networks; and
- (b) Jemena owns a number of gas transmission pipelines on the East Coast of Australia.

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<sup>6</sup> The remaining 60% is owned by State Grid Corporation of China.

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### **MidOcean Energy**

- 21 EIG and MidOcean Energy currently own no assets in Australia. In October 2022, however, MidOcean Energy entered into an agreement to acquire Tokyo Gas' small interests in the Gorgon (1% interest), Ichthys (1.575% interest), Pluto (5% interest) and QCLNG (1.25% interest) LNG projects. That acquisition is expected to complete in **Confidential to MidOcean Energy**.
- 22 There is no competitive overlap between Origin's Integrated Gas business (including its interest in APLNG and Gorgon (WA), Pluto (WA) or Ichthys (NT) in relation to the supply of gas in Australia.
- 23 Both APLNG (in which MidOcean Energy will hold a 25.01% interest) and QCLNG (in which MidOcean Energy will hold a 1.25% interest) supply gas domestically into the East Coast wholesale gas market.

### **1.5 Test for authorisation**

- 24 The ACCC must be satisfied in all the circumstances that the Proposed Acquisition (under section 90(7) of the CCA):
- (a) would not have the effect, or would not have the likely effect, of substantially lessening competition; or
  - (b) would result, or be likely to result, in a benefit to the public and the benefit would outweigh the detriment to the public that would result, or be likely to result, from the Proposed Acquisition.
- 25 In reviewing the application for authorisation, it is useful to consider public benefits first, as an understanding of the broader context is also helpful when considering whether or not the Proposed Acquisition is likely to substantially lessen competition.
- 26 BGTF is the world's largest private fund raised in support of the global transition to a net zero economy. Its philosophy is to 'go where the emissions are' with a view to transforming carbon intensive companies like Origin. Origin Energy Markets and Brookfield will achieve much more together to implement Australia's transition to renewables than they could separately. In particular, Brookfield proposes to cause Origin Energy Markets to build 14 GW of new renewable generation and storage capacity over 10 years, rather than the estimated 4 GW rollout likely to be achieved by Origin in the period to 2033. To make this plan a reality Brookfield will draw on its available capital dedicated to the transition, its global procurement strength, and its renewables expertise and track record of success. A dramatically increased and accelerated investment in renewables will assist both Origin Energy Markets and Australia to achieve their net zero carbon emission goals, placing downward pressure on electricity prices and minimising the risks of market disruptions arising from the transition (see **section 1.6**).
- 27 In any event, no substantial lessening of competition will occur in any relevant market:
- (a) there is no ability or incentive for AusNet to leverage its position as owner of the principal Victorian **transmission system** to foreclose Origin's generation rivals and lessen competition in any **generation market**. The extensive regulation of the transmission sector, combined with the unique role of AEMO in Victoria, make this impossible. The fact that in Victoria Origin generates significantly less electricity than it sells means it does not have any incentive to see competition lessened and wholesale electricity and related derivative prices rise. This lack of ability or incentive is reinforced by the fact that different Brookfield funds and co-investors / co-underwriters will own AusNet and Origin Energy Markets. Although there is horizontal overlap between Origin Energy Markets' generation and the X-Elio solar generation business, X-Elio's share of generation in the National Energy Market (**NEM**) is currently 0.2% and is too small to impact competition (see **section 1.8**);

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- (b) there is no ability or incentive for AusNet to leverage its position as the owner of a Victorian **electricity distribution network** and **gas distribution network** to foreclose Origin's retail rivals and lessen competition in any **electricity or gas retail market**. The extensive regulation of the electricity and gas distribution sectors makes this impossible. The fact that retail customers are geographically dispersed also removes any ability or incentive to implement many theoretical foreclosure strategies. Again, this lack of ability or incentive is reinforced by the fact that different Brookfield funds and co-investors / co-underwriters will own AusNet and Origin Energy Markets (see **sections 1.9 and 1.10**);
- (c) there is no ability or incentive for AusNet to leverage its position as the owner of a **Victorian electricity distribution network** to foreclose Origin's embedded generation rivals and lessen competition in any **generation market**. The extensive regulation of the electricity distribution sector makes this impossible. The fact that Origin generates significantly less electricity than it sells also means that it does not have any incentive to see competition lessened in generation markets. Again, this lack of ability or incentive is reinforced by the fact that different Brookfield funds and co-investors / co-underwriters will own AusNet and Origin Energy Markets (see **section 1.11**);
- (d) there is no ability or incentive for Temasek to leverage its (purely indirect) interests in **Victorian electricity distribution networks, New South Wales gas distribution networks or ACT electricity and gas distribution networks** to foreclose Origin's retail rivals and lessen competition in any **electricity or gas retail market**. The extensive regulation of the distribution sector makes this impossible. The fact that retail customers are geographically dispersed removes any ability or incentive to implement many theoretical foreclosure strategies. This lack of ability or incentive is reinforced by the fact that SP Group only holds a 40% interest in Jemena and operates independently from Temasek (see **section 1.12**);
- (e) there is no ability or incentive for Intellihub to leverage its position in the Australian **smart meter market** to advantage the Origin electricity retail business and no ability for the Origin electricity retail business to advantage the Intellihub smart meter business. Essentially this is because both Intellihub and Origin retail business face significant competition and do not have market power. For example, if Intellihub refused to supply smart meters to Origin's retail rivals or offered them a higher price or lower quality the affected retailers would purchase smart meters from Intellihub's competitors, removing both the ability and incentive to foreclose (see **section 1.13**); and
- (f) MidOcean Energy will, once the Tokyo Gas acquisition completes, have only a 1.25% interest in QCLNG, meaning it will have no control or influence over the management of QCLNG. QCLNG will remain controlled in all respects by Shell. **Confidential to MidOcean Energy**. As a result, MidOcean Energy's acquisition of the Origin Integrated gas business will not substantially lessen competition in the **East Coast wholesale gas market** (see **section 1.14**).

### 1.6 Public benefits

- 28 The substantial public benefits that arise from the Proposed Acquisition far outweigh any possible public detriments.

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- 29 Australians accept that climate change is real and that urgent action is required on a scale that is possibly unprecedented for our country. The Prime Minister, has said:
- Australia has a once-in-a-lifetime chance to become a renewable energy superpower by transforming the country's old coal-dominated electricity grid, helping its regional allies to shift to net zero emissions and tapping booming green investments.<sup>7</sup>
- 30 Following its adoption of the Paris Agreement,<sup>8</sup> Australia committed to targeting net zero greenhouse gas emissions by 2050 and to reducing greenhouse gas emissions to 43% below 2005 levels by 2030.<sup>9</sup> How Australia achieves this commitment is a matter of intense importance and interest to the business and general communities.
- 31 The Hon Chris Bowen, Federal Minister for Climate Change and Energy has said: 'reducing emissions by 43% is an achievable but ambitious target and we are going to need a collective effort and determination across all of the economy to get there.'<sup>10</sup> It is clear that the energy sector, as the biggest emitting industry, has a critical role to play.
- 32 There is no single plan or roadmap for how Australia will meet its commitments. Action is required by government, regulators, the energy industry, and consumers (commercial, industrial and residential).
- 33 The current Commonwealth Government is committing significant funding to the energy transition including through: (i) the 'Rewiring the Nation' plan (\$20 billion low-cost finance for investments in Australia's electricity grids); (ii) the Commonwealth Capacity Investment Scheme (\$10 billion investment in clean dispatchable power);<sup>11</sup> (iii) the 'Powering the Regions Fund' (\$1.9 billion to support the decarbonisation of existing regional industries and the creation of clean energy industries and related jobs);<sup>12</sup> (iv) the 'Community Solar Banks' initiative (\$102 million for 85 solar banks)<sup>13</sup>; and (v) a community batteries initiative (\$224 million to deploy 400 community batteries across Australia).<sup>14</sup>
- 34 State Governments are putting in place programs to develop renewable energy zones. Victoria is investing in offshore wind. The newly elected NSW Government is investing in transition infrastructure. Regulators such as the Energy Security Board are proposing new regulatory frameworks to ensure system reliability by addressing technical challenges faced as a result of the transition. Australian consumers are embracing the shift to renewables, with Australia having the highest penetration of rooftop solar per capita in the world.<sup>15</sup>
- 35 AEMO estimates the need for over 125 GW of new renewable energy sources (principally solar and wind) by 2050 to meet demand as coal-fired generators are retired. This means maintaining

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<sup>7</sup> Mike Foley and Nick Toscano, *Albanese aims for superpower status in global energy transition* (11 July 2022) Sydney Morning Herald <<https://www.smh.com.au/politics/federal/albanese-aims-for-superpower-status-in-global-energy-transition-20220711-p5b0sq.html>>.

<sup>8</sup> United Nations, *The Paris Agreement* <<https://www.un.org/en/climatechange/paris-agreement>>.

<sup>9</sup> *Climate Change Act 2022* (Cth) <<https://www.legislation.gov.au/Details/C2022A00037>>; *Climate Change (Consequential Amendments) Act 2022* (Cth) <<https://www.legislation.gov.au/Details/C2022A00038>>.

<sup>10</sup> The Hon Chris Bowen MP, *First Annual Climate Change Statement* (1 December 2022) Department of Climate Change, Energy, the Environment and Water <<https://minister.dcceew.gov.au/bowen/media-releases/first-annual-climate-change-statement#:~:text=%E2%80%9CAustralia%20is%20one%20of%20the,the%20economy%20to%20get%20there.%E2%80%9D>>.

<sup>11</sup> The Hon Chris Bowen MP, *Capacity Investment Scheme to power Australian energy market transformation* (8 December 2022) Department of Climate Change, Energy, the Environment and Water <<https://minister.dcceew.gov.au/bowen/media-releases/capacity-investment-scheme-power-australian-energy-market-transformation>>.

<sup>12</sup> Alicia Payne MP, *Powering the Regions Fund* <<https://www.aliciapayne.com.au/policy-folder/powering-the-regions-fund/>>.

<sup>13</sup> Alicia Payne MP, *Solar Banks* <<https://www.aliciapayne.com.au/policy-folder/solar-banks/>>.

<sup>14</sup> Department of Climate Change, *Powering Australia* (2023) <<https://www.energy.gov.au/government-priorities/australias-energy-strategies-and-frameworks/powering-australia>>.

<sup>15</sup> Energy Training Group, *IEA Report Reveals Australia Ranks No. 1 in Solar PV Installations* (2023)

<<https://www.energytraininggroup.edu.au/iea-report-reveals-australia-ranks-no-1-in-solar-pv-installations/#:~:text=Countries%20With%20Highest%20Solar%20Per%20Capita&text=Not%20only%20this%2C%20the%20IEA%207s,Greece%20with%2011.6%25%2C%20respectively>>.



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- the current rate of renewables development every year to nearly treble the existing 16 GW by 2030, and then doubling that capacity by 2040, and again by 2050.<sup>16</sup>
- 36 AEMO suggests the total spend needed to develop, operate and maintain the generation, storage and transmission investments in the NEM to 2050 is around \$320 billion.<sup>17</sup> Most of this investment must come from industry, and it must occur quickly. Delay in the transition will likely result in price spikes, supply disruptions and the need for market interventions as occurred in mid-2022. It will also result in Australia not meeting its emissions targets.
- 37 The scale of the challenge was acknowledged by Origin CEO, Frank Calabria, in November 2022, where he stated publicly: 'no matter which way you look at it, the scale of the change over this decade is truly staggering.'<sup>18</sup>
- 38 While precise estimates of the quantity and cost to facilitate the energy transition vary, there is near universal agreement that a substantial amount of capacity and capital investment will be required in order to realise the energy transition. For example:
- (a) In a statement by Clean Energy Finance Corporation (**CEFC**) CEO Ian Learmonth in May 2023, the CEFC estimates that \$120 billion of capital expenditure is needed to finance new solar, wind, transmission, storage and ancillary services to 2030 in order to meet renewable and emissions targets. Further, in order to reach 82% renewables by 2030, the CEFC estimates that 29 GW of large-scale renewable generation will be required.<sup>19</sup>
  - (b) By 2030, AEMO and government data shows that \$76 billion will need to be invested in energy infrastructure in Australia, 44 GW of renewables will need to be built, 15 GW of firming will need to be installed, and 10,000km of new transmission will need to be built.
- 39 As one of the three largest energy retailers in eastern Australia and the owner and operator of Australia's largest black coal-fired power station, Eraring, Origin has a central role to play. Origin released its first Climate Transition Action Plan (**CTAP**) last year, outlining its strategy for the energy transition and associated risks. It is well advanced in its transition planning, having announced its intention to close Eraring as early as August 2025. Origin's CTAP sets a target for Origin to have 4 GW of renewable generation and storage capacity by 2030 (including both owned and contracted generation and storage).
- 40 Origin's CTAP identifies risks to achieving its 2030 emissions targets and 2050 emissions ambitions. These include: (i) difficulties accessing capital and carbon markets; (ii) challenges sourcing critical skills and supplies; (iii) a lack of timely and cost effective technology development, particularly in respect of green hydrogen; (iv) delay and uncertainty in renewable projects, leading to a slower transition; (v) issues accessing infrastructure and land; (vi) volatility in the energy market; and (vii) delay to the closure of the Eraring power station.
- 41 As a listed company, Origin is inherently constrained in its ability to raise substantial new equity and debt to fund a transformation program. The demands of listed company shareholders – notably the need to pay dividends and / or return capital and an aversion to dilutive capital raisings – can work well for a steady yield stock. However, they are challenging for a company in transformation, operating in an industry in a once-in-a-century transition, particularly where the scale of capital required is so significant and the required investment horizon is long term.

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<sup>16</sup> AEMO, *2022 Integrated System Plan – For the National electricity Market (June 2022)*, page 36 <<https://aemo.com.au/-/media/files/major-publications/isp/2022/2022-documents/2022-integrated-system-plan-isp.pdf?la=en>> (**AEMO 2022 ISP**) (**Annexure 8**).

<sup>17</sup> AEMO 2022 ISP, footnote 4 (**Annexure 8**).

<sup>18</sup> Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/delivering-the-biggest-infrastructure-challenge-in-a-century/>> (**Annexure 9**).

<sup>19</sup> Clean Energy Finance Corporation, *The Role of the CEFC in delivering the Rewiring the Nation program*, 15 May 2023 <<https://www.cefc.com.au/media/statement/the-role-of-the-cefc-in-delivering-the-rewiring-the-nation-program/>>.

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- 42 BGTF is the world's largest private fund raised in support of the global transition to net zero. Its philosophy is to 'go where the emissions are' with a view to transforming companies like Origin Energy Markets. However, it currently lacks a committed third party offtaker to maximise the decarbonisation impact of its capital which would make an investment in Australia on the scale contemplated commercially viable. Offtake arrangements are one of the most critical inputs to a greenfield development. When these are negotiated piecemeal and bespoke to an individual investment, the time taken to negotiate and the risks involved in reaching agreement, significantly add to the cost and risk that must be factored into a new project. Owning a large platform, such as Origin Energy Markets with ~2.73 million electricity customer accounts and a demand of ~36 TWh (FY22) that provides a ready-made offtaker, substantially eliminates this aspect of the development risk, increasing the certainty and speed of the development ultimately proceeding.
- 43 Origin Energy Markets and the BGTF Consortium will achieve much more together to effect Australia's transition to renewables than they could separately.
- 44 The BGTF Consortium intends to pursue a 'green build-out' plan for the Origin Energy Markets business, which will result in a substantial acceleration of Origin Energy Markets renewable generation development, making a significant contribution to achieving Australia's net zero targets.
- 45 A key feature of the BGTF Consortium's strategy is that, instead of relying on a combination of owned generation, electricity supply contracts and NEM wholesale market purchases, as Origin currently does, it will rapidly develop new internal renewable generation and storage capacity for approximately **Confidential to Brookfield: the significant majority** of Origin Energy Markets' aggregate customer load requirements by 2033.
- 46 The difference in approach is best illustrated by the relative commitments to developing new renewable generation and storage assets.
- 47 As discussed above, Origin's CTAP sets a target for Origin to have 4 GW of renewable generation and storage capacity by 2030 (including both owned and contracted generation and storage). Currently, Origin has 1,755 MW of renewable generation and storage, although this will decline to 1,668 MW<sup>20</sup> by 2030 (as renewable PPAs expire). To achieve the CTAP target, Origin would therefore need to develop 2,332 MW of new renewable generation and storage (both owned and contracted) between now and 2030.
- 48 The BGTF Consortium's 'green build-out' plan has a target date of 2033. To enable a like-for-like comparison, an estimate needs to be made of Origin's new renewable generation and storage by 2033. To enable this estimate to be made, the BGTF Consortium has assumed Origin would continue to develop new renewables and generation at approximately the same rate in the 2030 to 2033 period. The development of 2,332 MW in the seven year period between now and 2030 implies development per year of 333 MW. This implies that in the three years to 2033, Origin would build a further 999 MW, taking the total development of new renewable generation and storage between now and 2033 to 3,330 MW. For the purposes of this application, the BGTF Consortium has assumed that Origin accelerates this rate and develops new generation and storage of 4 GW between now and 2033.
- 49 In contrast, the BGTF Consortium's 'green build-out' plan for Origin Energy Markets, involves the BGTF Consortium developing – via Origin Energy Markets – up to 14 GW of new renewable generation and storage assets by 2033.
- 50 This acceleration of renewables development – 10 GW over and above business as usual by 2033 – will make a material difference to achieving Australia's net zero targets. This is a

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<sup>20</sup> This reflects a net change in position taking into account both the expiry of PPAs and the expansion of Origin's Shoalhaven pumped hydro storage scheme, which will add approximately 240 MW of new capacity.

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significant contribution to the estimated 29 GW of large-scale renewable generation required by 2030.<sup>21</sup>

- 51 This speaks to a core theme of BGTF's investment ethos – 'additionality'. BGTF will not make an investment where its capital does not meaningfully advance the impact outcomes over and above the status quo. In practice, this means that BGTF will not pursue an investment unless it is going to have a greater contribution to that company's net zero goals than would have been achieved absent an investment from BGTF. A prerequisite for BGTF's investment in Origin Energy Markets is BGTF's ability to improve the speed and certainty of Origin Energy Markets' transition to net zero.
- 52 To illustrate the scale of the financing task, it is worth noting that the BGTF Consortium proposes to invest between \$20 to \$30 billion in new renewable energy within the Origin Energy Markets business (ie, excluding the APLNG assets) over the next 10 years. That investment, over the balance of this decade, is substantially more than the value of Origin today. It is also substantial in the context of the estimated \$120 billion of capital needed in Australia by 2030 to fund new solar, wind, transmission, storage and ancillary services.<sup>22</sup>
- 53 There is a high degree of certainty that the BGTF Consortium will make the investment of \$20 - \$30 billion to materially decarbonise the Origin Energy Markets business by 2033. The 'green build-out' plan has been approved by Brookfield's Investment Committee, and contemplates an expected return based on the BGTF Consortium materially decarbonising the Origin Energy Markets business over the life of the investment (no more than the life of the BGTF Fund). GIC's and Temasek's investment is being made on the same basis. All parties in the BGTF Consortium therefore expect the same investments to be made in the Origin Energy Markets business. BGTF's reputation is also a key factor. It relies on BGTF delivering on expected returns to its shareholders, to attract investment in future versions of the BGTF fund (and in attracting co-investors for future projects). As a closed-end fund with an expected operating term of 12 years, BGTF will exit any investments, including in Origin Energy Markets, prior to the end of the fund's term. Brookfield is therefore incentivised to execute the 'green build-out' plan so that BGTF can generate better returns on exit having completed the material decarbonisation of the Origin Energy Markets business by that time.
- 54 The BGTF Consortium's plan is ambitious yet realistic. It has capital immediately available for investment in the transition and relationships with private co-underwriters seeking a home for capital that will promote the transition. The BGTF Consortium, through Brookfield, also has global renewables procurement and technical expertise, and a track record in Europe and other jurisdictions of delivering on equally ambitious plans.
- 55 Over and above the additional 10 GW renewables rollout, the Proposed Acquisition will benefit Australia and Australian consumers in a number of ways.
- 56 **First**, the Proposed Acquisition will facilitate more extensive decarbonisation in Australia through the development and expansion of sophisticated behind the meter solutions for consumers. Distributed energy resources (**DER**) have the potential to benefit energy security and reliability at the centralised grid level. These solutions are critical to Australia meeting its emissions targets. Under the Proposed Acquisition, the BGTF Consortium plans to transform Origin Energy Markets existing distributed energy platform to amplify its impact for residential and C&I customers, and meet growing consumer demand in this sector.

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<sup>21</sup> Clean Energy Finance Corporation, *The Role of the CEFC in delivering the Rewiring the Nation program*, 15 May 2023 <<https://www.cefc.com.au/media/statement/the-role-of-the-cefc-in-delivering-the-rewiring-the-nation-program/>>.

<sup>22</sup> Clean Energy Finance Corporation, *The Role of the CEFC in delivering the Rewiring the Nation program*, 15 May 2023 <<https://www.cefc.com.au/media/statement/the-role-of-the-cefc-in-delivering-the-rewiring-the-nation-program/>>.

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- 57 **Second**, the BGTF Consortium has ambitions, through the Proposed Acquisition, to support a local manufacturing industry that will contribute to manufacturing components and parts for renewables development in Australia, particularly wind and batteries, and building local expertise. In exploring this potential, the BGTF Consortium will be able to draw on Brookfield's experience of successfully creating new asset classes in jurisdictions around the world.
- 58 **Third**, the Proposed Acquisition will facilitate the growth of Australia's renewable power industry. The BGTF Consortium does not intend to develop the proposed 14 GW 'green build-out' by itself. It will be partnering with various third parties at different stages of the supply chain to make its 'green build-out' plan a reality. In so doing, the Proposed Acquisition facilitates the entry, expansion and development of industry participants.
- 59 **Fourth**, the Proposed Acquisition actively supports the development of new renewable technologies. Under ownership by the BGTF Consortium, Origin Energy Markets will have greater opportunity to develop new technologies at a commercially viable scale. The BGTF Consortium will draw on Brookfield's expansive market reach and involvement in a diverse range of projects focused on developing new renewable technologies.
- 60 **Fifth**, there is significant upside to Australian consumers if Australia's transition to renewables is achieved quickly. Ultimately, increasing the sources of renewable generation in the grid will place downward pressure on wholesale prices over time and consequently, energy bills. Another key benefit of accelerating the transition to renewable energy is the potential to insulate Australian energy prices from international markets, thereby making costs more predictable for businesses and consumers in Australia.
- 61 Assisting Origin Energy Markets and Australia to achieve their net zero emissions goals, while delivering on a range of other public benefits, far outweighs any possible public detriment.

### 1.7 Counterfactual

- 62 Brookfield's central business plan in Australia is to access a substantial direct customer load to underpin a rapid build-out of renewable electricity generation and storage and transition those customers towards net zero. The only viable path to achieve this in a timely manner is to acquire a significant retailer.
- 63 Renewable projects in Australia are rarely developed without a long term offtake agreement for a substantial portion, if not the vast majority of their production, from either a retailer or large energy user. Aligning an offtake commitment with other development activities to allow an investment decision to be taken is a highly complex task and acts as a key friction in renewables development, which constrains the ability of renewable projects to progress.
- 64 If Brookfield was unable to acquire Origin Energy Markets (or another major retailer), Brookfield would continue to seek out potential opportunities to develop and invest in renewables and storage in Australia, however, this would be on a more piecemeal basis and at a much smaller scale. Building renewables and storage absent the Proposed Acquisition would face significant challenges. It is highly uncertain what quantity of renewables and storage Brookfield Renewable may be able to construct absent the Proposed Acquisition. The only Brookfield project currently under development is scheduled to deliver approximately 420 MW of generation and storage by around 2028.
- 65 In addition, Brookfield is a global company (and BGTF a global fund). Absent the Proposed Acquisition, Brookfield has made no commitment to invest funds in Australia. The transition to net zero is a global challenge. BGTF will invest wherever in the world it can make the most attractive risk-adjusted returns and deliver the best contribution to the transition to net zero. Any possible

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renewables project in Australia competes with other opportunities across the globe for BGTF capital.

- 66 Origin's current ownership structure as a publicly listed company, and return requirements of its shareholders, limits Origin's ability to deploy capital on the scale proposed by BGTF to develop new renewable projects. Absent the Proposed Acquisition, Brookfield's best estimate is that Origin would either build itself or, through PPAs, underpin the building of an additional approximately 4 GW of renewables and storage capacity in Australia by 2033.
- 67 However, by combining BGTF's dedicated capital with a large retailer that has a short energy position and which can internally underwrite offtake from projects, the friction associated with third party contracting is removed which is likely to see renewable projects developed far more quickly than Brookfield (or any other standalone renewable developer) can achieve on its own.
- 68 The Proposed Acquisition is expected to deliver an additional approximately 10 GW of renewable generation and storage (less whatever capacity Brookfield may be able to develop in the counterfactual by 2033 on a standalone basis). Accordingly, the combination provides a net benefit to significantly accelerate renewable development compared to what each party could achieve acting independently.

### 1.8 No substantial lessening of competition in any electricity generation market through transmission system

#### 1.8.1 Introduction

- 69 As noted above, Origin currently owns one gas-fired electricity generator in Victoria, Mortlake, which is connected to the AusNet transmission system.<sup>23</sup> Mortlake produced only 0.6% of electricity generated in Victoria in 2021.<sup>24</sup> Nonetheless, given this vertical relationship in Victoria we expect the ACCC will wish to consider whether vertical competition issues may arise ie, whether AusNet has the ability and incentive to use its position as the owner of the principal Victorian electricity transmission system to advantage Origin's generation business and / or disadvantage Origin's generation rivals and thereby lessen competition in either a Victorian or NEM wide generation market (referred to in this Application as 'foreclosure'). For the reasons discussed below AusNet has neither the ability nor the incentive to do so.

#### 1.8.2 Ability

##### Overview

- 70 AusNet does not have any ability to use its position as the owner of Victoria's principal electricity transmission network to foreclose Origin's generation rivals as a result of a combination of the following:
- (a) electricity transmission systems in the NEM are very heavily regulated by the National Electricity Law (**NEL**) and National Electricity Rules (**NER**) to ensure that they cannot misuse any market power they may otherwise have without regulation. The transmission regulatory regime is continuing to evolve to reflect changes in the electricity market and to address emerging issues;
  - (b) the regulatory regime includes Transmission Ring-fencing Guidelines (**TRFG**) made by the AER that transmission businesses must comply with. The purpose of the guidelines is to ensure that where there is vertical integration between a transmission business and a

<sup>23</sup> Origin also has solar assets connected in Victoria, namely the Bendigo and Ballarat Solar Farms. They are all behind the meter PPAs.

<sup>24</sup> AER, *State of the Energy Market 2022*, page 49

<https://www.aer.gov.au/system/files/State%20of%20the%20energy%20market%202022%20-%20Full%20report.pdf> (*State of the Energy Market 2022 – Report*) (Annexure 12).

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contestable business, the transmission business is operated in a way that does not adversely affect competition in the contestable market. The guidelines include requirements in relation to no cross subsidisation, no taking advantage of information and no discrimination. It is important to observe that the regulatory regime, through the guidelines, contemplates that vertical integration may exist and establishes a regulatory tool intended to ensure that competition cannot be harmed as a result. The guidelines can be amended by the AER from time to time, as circumstances require;

- (c) unlike other states, in Victoria, Transmission Network Service Provider (**TNSP**) functions are split between AusNet and AEMO, with AEMO responsible for the activities likely to be most competitively sensitive, including system planning, augmentation and the provision of network services to users. AusNet has no ability to foreclose in areas controlled or overseen by AEMO in Victoria; and
- (d) there is a high level of transparency over all relevant aspects of AusNet's operation of the transmission network. There is no possibility of subtle forms of discrimination 'flying below the radar'.

71 Set out in **Figure 2** below is a summary of why the above factors mean AusNet would not be able to implement theoretical foreclosure strategies across the full range of transmission network activity. This is explained in further detail after **Figure 2**.

**Figure 2: AusNet has no ability to engage in foreclosure in any area of transmission activity**

Area of activity	Ability
<b>Pricing: prescribed transmission services</b>	<p>Prescribed transmission services are the core services provided by TNSPs and comprise: (i) prescribed common transmission services; (ii) prescribed transmission use of system (<b>TUOS</b>) services; (iii) prescribed entry services; and (iv) prescribed exit services.</p> <p>The most important of these are common transmission and TUOS services. Charges for these services are set by AEMO (albeit comprising a substantial AusNet component) in accordance with a methodology approved by the AER. They are paid by distributors and directly connected industrial customers (not generators).</p> <p>Prescribed entry services are grandfathered services provided to generators who had a connection agreement in place on or before 9 February 2006. Charges for these services are levied by AusNet in accordance with a methodology approved by the AER.</p> <p>Prescribed exit services are grandfathered services provided to distributors and industrial customers (not generators) who had a connection agreement in place on or before 9 February 2006. Charges for these services are levied by AusNet in accordance with a methodology approved by the AER.</p> <p>The only prescribed transmission services charged by AusNet and paid by generators are prescribed entry services. AusNet's pricing of prescribed entry services is heavily regulated by the AER. In particular, AusNet must comply with a pricing methodology that is approved by the AER and that must satisfy requirements set out in the NER. This removes any ability for AusNet to discriminate in the pricing of prescribed entry services against non-Origin generators.</p>
<b>Pricing: negotiated transmission services</b>	<p>Negotiated transmission services include, most importantly, non-contestable services related to the connection of new generators. Such services are non-contestable where the capital cost is not expected to exceed \$10 million or the augmentation is not separable from the rest of the AusNet network (eg, a substation upgrade or line 'cut in'.)</p>

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Area of activity	Ability
	<p>Any negotiation must be conducted in accordance with principles set out in the NER and negotiating service criteria set by the AER. These include requirements that:</p> <ul style="list-style-type: none"> <li>(a) price should be based on cost determined in accordance with an AER approved cost allocation methodology; and</li> <li>(b) the price must be the same for all generators unless there is a material difference in cost.</li> </ul> <p>AusNet must also prepare a negotiation framework that is approved by the AER which includes obligations in relation to the provision of information and obligations in relation to time periods. AEMO is centrally involved in these negotiations. Negotiations are ultimately subject to binding dispute resolution by a commercial arbitrator.</p> <p>In combination, the need to comply with detailed principles relating to price, the AER approved negotiating framework, the central role of AEMO in negotiations and the availability of commercial arbitration for any disputes, remove any ability for AusNet to discriminate in the pricing of negotiated transmission services.</p>
<b>Pricing: contestable transmission services</b>	<p>The pricing for contestable transmission services including connection is set through a market process, usually a competitive tender conducted by AEMO. AusNet has no ability to discriminate in relation to the pricing of contestable transmission services.</p>
<b>Connection and access</b>	<p>In Victoria, AEMO negotiates and contracts directly with generators seeking connection to the AusNet transmission network. Where connection requires augmentation of the AusNet transmission network, AEMO determines if the augmentation is contestable and, if it is, conducts a tender for that work (unless the generator wishes to assume responsibility for the augmentation). If the work is 'non-contestable' AusNet must negotiate to provide the service as a negotiated transmission service.</p> <p>To the extent AusNet is involved, it participates in a negotiation process prescribed by the NER and overseen by AEMO. That process is subject to binding dispute resolution in accordance with Chapter 8 of the NER.</p> <p>As a consequence, AusNet has no ability to refuse or delay non-Origin generators from connecting to the AusNet transmission network.</p>
<b>Planning the transmission network (augmentation)</b>	<p>In Victoria, AEMO is responsible for planning, authorising, contracting for, and directing, augmentation of AusNet's transmission network. As a result, AusNet has no ability to plan or augment the transmission network in a way that would foreclose non-Origin generators, whether by investing in augmentations that advantage an Origin generator, or by not investing in augmentations that would advantage a non-Origin generator.</p>
<b>Access: ongoing quality of connection (renewal and maintenance; outages)</b>	<p>AusNet is responsible for the renewal and maintenance of the AusNet transmission system.</p> <p>AusNet does not have the ability to selectively renew or maintain sections of the transmission network to discriminate against non-Origin generators for several reasons.</p> <p><b>First</b>, AusNet has numerous legal obligations that it would be in breach of if it failed to maintain and renew any part of the transmission network adequately, including obligations under electricity safety laws, electricity system code, its licence and power system performance and quality of supply standards in schedule 5.1A of the NER.</p> <p><b>Second</b>, there is a high degree of transparency and regulatory oversight from both the AER and AEMO in relation to maintenance and renewal.</p>

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Area of activity	Ability
	<p><b>Third</b>, failing to maintain so as to disadvantage non-Origin Generators would expose AusNet to a high degree of risk from claims from generators, class actions from consumers eg, arising from heightened bush fire risk, and to penalties under the AER's Service Target Performance Incentive Scheme (<b>STPIS</b>).</p> <p><b>Finally</b>, AusNet is required to comply with TRFG, which include a requirement not to discriminate in favour of affiliated entities such as Origin (including a specific obligation in relation to service quality).</p> <p>In relation to outages, planned outages, including their timing and duration, must be notified to and approved by AEMO. They cannot proceed without AEMO approval. Unplanned outages can only be taken in limited circumstances (eg, in response to an emergency) and must also be notified to AEMO. In all cases, outages are published by AEMO. Any attempt to 'manufacture' unplanned or prolonged outages targeting non-Origin generators would be easily detected and generators can raise objections to a planned outage with Ausnet and AEMO who will require the issue to be resolved for the outage to proceed. As a result, AusNet has no ability to use maintenance outages to discriminate.</p>
<b>Access: dispatch and curtailment</b>	AEMO runs the central dispatch process through which generators are instructed to supply electricity in response to offers they have made. AusNet has no role in this regard. As a result, AusNet has no ability to prevent non-Origin generators from being dispatched.
<b>Cross subsidisation</b>	The transmission pricing regulatory framework outlined above ensures that cross subsidisation is not possible. This is further reinforced by provisions of TRFG made by the AER, which require AusNet to: (i) be legally separated from other businesses providing contestable services; (ii) establish and maintain separate accounts for the regulated business; and (iii) establish and maintain the associated protocols to give effect to the TRFG.
<b>Information and discrimination</b>	<p>AusNet may obtain competitively sensitive information from non-Origin generators (eg, about connection enquiries). It has no ability, however, to provide that information to Origin or otherwise use it to benefit Origin. Both the NER and the TRFG would require such information to be kept confidential and not used for any purpose except that for which it was provided.</p> <p>AusNet will also hold information about its own network that may be of advantage to generators (eg, information about planned outages). The TRFG contain provisions to the effect that if such information is provided to an affiliate, it must also be available to others. In any event much of this information is publicly available (eg, in the case of outages via AEMO's PASA system).</p> <p>The TRFG also provide that AusNet must not discriminate between a related electricity service provider (which would include Origin) and a competitor (or potential competitor) of a related electricity service provider in connection with the provision of prescribed transmission services by AusNet. The non-discrimination obligation includes specific requirements that AusNet:</p> <ul style="list-style-type: none"> <li>(a) in dealing or offering to deal with a related electricity service provider, treat the related electricity service provider as if it were not a related electricity service provider (that is, as if it had no connection or affiliation with the AusNet);</li> <li>(b) in like circumstances, deal or offer to deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions;</li> <li>(c) in like circumstances, provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a</li> </ul>



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Area of activity	Ability
	<p>competitor (or potential competitor) of the related electricity service provider; and</p> <p>(d) subject to complying with laws, not disclose to a related electricity service provider information AusNet has obtained through its dealings with a competitor (or potential competitor) of the related electricity service provider where the disclosure would, or would be likely to, provide an advantage to the related electricity service provider.</p> <p>In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the TRFG. The AER also has a range of enforcement options to ensure compliance with the TRFG and to respond to and address potential non-compliance.</p>

### ***No ability to discriminate in relation to pricing***

- 72 Charges **for using** a transmission network are paid by distributors and industrial customers directly connected to the transmission network, not by generators who only pay **a connection** charge. Connection charges are either regulated by the AER, negotiated in accordance with a regulated negotiation framework that includes AER dispute resolution, or set through a contestable market process. As a result, there is no possibility of AusNet using the price charged for use of, or connection to, its transmission system as a means of discriminating against Origin's generation rivals.
- 73 There are three broad categories of transmission services for which charges are levied:
- (a) **prescribed transmission services:** prescribed transmission services are essentially the core services provided by TNSPs and comprise:
- (i) prescribed common transmission services;
  - (ii) prescribed TUOS services;
  - (iii) prescribed entry services (grandfathered entry connection services for generators who had a connection agreement in place on or before 9 February 2006); and
  - (iv) prescribed exit services (grandfathered exit connection services for customers who had a connection agreement in place on or before 9 February 2006).
- Of these charges, only charges for prescribed entry services are paid by generators. All other charges are paid by distributors and industrial customers. All charges are levied by AEMO, other than for prescribed entry services and prescribed exit services which are levied by AusNet;
- (b) **negotiated transmission services:** these services include, most relevantly, non-contestable services related to connecting a new generator or generators to the transmission network at a connection point. The price for such connection services is paid by the relevant generator and is negotiated under a regulated negotiation framework; and
- (c) **contestable transmission services:** these services are provided on a contestable basis and include augmentation for the purposes of connection, such as the construction of a new line connecting a new generator to the transmission network. Prices are set by the market through contestability rather than being subject to regulation.
- 74 **Prescribed transmission services:** in Victoria the charges for prescribed common transmission services and TUOS services are calculated, set and levied by AEMO. The charges for prescribed entry services and prescribed exit services are levied by AusNet. Of the four charges only

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charges for prescribed entry services are paid by generators. All other charges are paid by distribution network service providers and industrial customers directly connected to the transmission network. As a result, the only prescribed transmission service charge that could conceivably be used by AusNet to discriminate against non-Origin generators is the charge for prescribed entry services.

- 75 AusNet's pricing of prescribed entry services is heavily regulated by the AER. In particular:
- (a) the AER makes a five yearly transmission pricing determination in which sets the maximum allowable revenue AusNet may earn;
  - (b) as part of the five yearly transmission determination, AusNet must propose, and the AER must approve (or revise) a pricing methodology that allocates its allowed revenue to prescribed transmission services and to the connection points of network users;
  - (c) AusNet's pricing methodology must comply with detailed rules contained in Chapter 6A of the NER; and
  - (d) AusNet must comply with the pricing methodology approved by the AER in setting prices that may be charged for the provision of prescribed entry services.
- 76 This AER regulation removes any ability for AusNet to discriminate in the pricing of prescribed entry services against non-Origin generators.
- 77 We also note that there are eight generator customers receiving prescribed entry services. By definition they are already connected to the transmission system and are participating in the NEM. Many are coal-fired power stations and are likely to close in the near-medium term. As a result, even if price discrimination in charging for prescribed entry services was possible (which it is not), it is most unlikely to have an effect on competition in any relevant generation market.
- 78 We understand that AusNet provides **negotiated transmission services** entirely, or almost entirely, in the context of connecting a new generator to the transmission network. AusNet negotiates the price for negotiated transmission services where those services are non-contestable. Non-contestable negotiated transmission services are services where the capital cost is not expected to exceed \$10 million or the augmentation is not separable from the rest of the AusNet network (eg, a substation upgrade or line 'cut in'). AusNet is not able to discriminate in relation to pricing for negotiated transmission services for several reasons.
- 79 **First**, in negotiating prices AusNet must apply 'negotiated transmission service criteria' set by the AER as part of its five yearly transmission determination. Those negotiated transmission service criteria must in turn give effect to negotiated transmission service principles set out the NER. The negotiated transmission service criteria must also be applied by any commercial arbitrator in resolving a dispute.<sup>25</sup> They include requirements that:
- (a) prices should be based on costs incurred by AusNet in providing access, determined in accordance with a cost allocation methodology approved by the AER; and
  - (b) the price of negotiated transmission services must be the same for all generators seeking access, unless there is a material difference in the cost of providing the service to a generator.
- 80 **Second**, AusNet must prepare a negotiating framework that sets out procedures for negotiating terms and conditions for access to the Victorian transmission network. This is reviewed and approved by the AER as part of the AER's five yearly pricing determinations.<sup>26</sup> The negotiating framework includes requirements that:

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<sup>25</sup> AEMC, National Electricity Rules (version 109), cl 6A.9.4. See also AER, Final Decision – AusNet Services Transmission Determination 2022 to 2027 Overview (January 2022), page 37 (**Annexure 10**).

<sup>26</sup> AEMC, National Electricity Rules (version 109), cl 6A.9.5.

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- (a) AusNet and the generator seeking access negotiate in good faith;
- (b) AusNet provide all commercial information reasonably required by the generator seeking access so as to facilitate effective negotiations;
- (c) AusNet identify and inform the generator seeking access of the reasonable costs of providing the service, and to demonstrate that charges reflect costs;
- (d) the generator seeking access provide all commercial information reasonably required for AusNet to engage in effective negotiation;
- (e) there is a process for dispute resolution that complies with the dispute resolution requirements in the NER;
- (f) there is a reasonable period of time for commencing, progressing and finalising negotiations, with requirements for each party to use reasonable endeavours to adhere to these time periods in negotiations;
- (g) AusNet specify arrangements for the payment of AusNet's reasonable direct expenses incurred in processing the application by the generator; and
- (h) AusNet determine the potential impact of the provision of a negotiated transmission service on other network users.

81 **Third**, AEMO is centrally involved in negotiations for access to the Victorian transmission network, providing a further layer of protection against discrimination.

82 **Fourth**, negotiations are ultimately subject to a dispute resolution process under which the AER can appoint a commercial arbitrator who can resolve the dispute.

83 In combination, the need to comply with detailed principles relating to price, including the requirement that prices be based on the costs incurred in providing that service, the AER approved negotiating framework, including provision of information, the central role of AEMO in negotiations and the availability of commercial arbitration for any disputes, remove any ability for AusNet to discriminate in the pricing of negotiated transmission services including non-contestable connection services.

84 **Contestable transmission services** are services, including services related to new connections, provided on a contestable basis (ie, where the cost would exceed \$10 million and the work is separable, eg, a new line connecting a generator to the transmission network). The price for contestable connection services will be set by the market through the competitive tender process that is used to select the party to construct the relevant connection assets (which may or may not be AusNet). As a result, there is no ability for AusNet to discriminate in the pricing of contestable transmission services.

### ***No ability to discriminate in relation to connection and access***

85 The Victorian transmission network is an open access system and new generators have a right to connect to that transmission network. AusNet has no ability to refuse to connect a non-Origin generator or to unreasonably delay connection for a non-Origin generator:

86 In Victoria, AEMO rather than AusNet manages the connection process and is the main point of contact for any connection applicant. The process involves a number of stages including:

- (a) **Enquiry.** An applicant makes an enquiry to AEMO and AEMO formally responds including with information about technical studies, proposed connection program and connection options, and system strength assessment. It is AEMO not AusNet that receives and responds to enquiries;

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- (b) **Application:** An applicant applies to AEMO for connection and provides prescribed information. AEMO assesses the application. It is at this stage that AEMO determines if an augmentation is required for a connection and, if so, if the works required are contestable. If they are contestable, AEMO conducts a competitive tender for the construction of that augmentation (unless the generator wishes to assume responsibility for appointing the party to construct); and
- (c) **Contracting:** AEMO makes an offer to connect to the applicant, which is documented in a Use of System Agreement (**UoSA**) between AEMO and the new generator. AEMO in turn enters a Network Services Agreement with AusNet allowing AEMO to perform its obligations under the UoSA. The applicant would also enter into a connection agreement with the DTSO providing the connection services, which may or may not be AusNet where the connection works are contestable. Depending on whether works are required and, if so, whether they are contestable, a number of construction related agreements may also be required, including a project construction coordination deed between the generator, AEMO, AusNet and any third party constructing a contestable augmentation. As discussed above, charges in relation to connection are negotiated in accordance with a negotiation framework approved by the AER, subject to dispute resolution.

87 AusNet assists in the AEMO led process by providing information to AEMO, performing any necessary non-contestable works and, in some cases, entering connection and construction related agreements, pursuant to a process prescribed by the NER and under the supervision of AEMO. In the event of a dispute, the NER provides a dispute resolution process including ultimately arbitration with decisions binding on the parties.

88 The combination of AEMO oversight of an NER mandated process, contestability, dispute resolution and the transparency of the process, remove any ability for AusNet to refuse or delay connections for non-Origin generators.

### **No ability to discriminate in relation to augmentation**

89 As a result of AEMO's planning role and the contestability regime, AusNet has no ability to use augmentation to discriminate against non-Origin generators, whether by investing in augmentations that advantage an Origin generator or project, or by not investing in augmentations that would advantage a non-Origin generator or project.

90 AEMO (and not AusNet) is responsible for planning and procuring the augmentation of the Victorian shared transmission network. An 'augmentation' refers to any work to enlarge the system or to increase its capacity to transmit electricity.

- (a) **Planning:** AEMO is the national transmission planner and every two years publishes an Integrated System Plan, establishing a plan for the efficient development of the power system. In Victoria, AEMO publishes the Victorian Annual Planning Report (**VAPR**),<sup>27</sup> which sets out at a more granular level new, emerging or changing constraints on capacity and specific investment needs. In other states this document is prepared by the local transmission network owner, not AEMO.
- (b) **Timing and Procurement:** Decisions to invest in the Victorian transmission network are made by AEMO rather than AusNet. AEMO identifies and defines the need for network augmentation and undertakes a Regulatory Investment Test Transmission (**RIT-T**) process to assess the preferred option for that augmentation. AEMO, not AusNet, determines the timing of any investment that is required to augment the Victorian transmission network. The contestability regime in Victoria means that, at the conclusion

<sup>27</sup> AEMO, *Victorian Annual Planning Report* (October 2021) <[https://aemo.com.au/-/media/files/electricity/nem/planning\\_and\\_forecasting/vapr/2021/2021-victorian-annual-planning-report.pdf?la=en](https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/vapr/2021/2021-victorian-annual-planning-report.pdf?la=en)>.

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of the RIT-T process, instead of applying to the AER for a revenue allowance for the augmentation, AEMO instead conducts a competitive tender process to procure a party (which may or may not be AusNet) to build, own and operate the augmentation. It is this competitive tender process, rather than a revenue determination by the AER, that determines the payments that the asset owner will receive from AEMO for the use of the asset; and

- (c) **Construction:** Contestability places competitive pressure on AusNet and other bidders for augmentation projects to develop transmission capacity in a timely and cost effective manner. Further, if AusNet is the successful proponent of a contestable project and then causes delays, AusNet would be exposed to significant liquidated damages under its arrangements with AEMO as the body responsible for procuring the augmentation.

### **No ability to discriminate in relation to maintenance and renewal**

91 AusNet is responsible for the maintenance and renewal of the AusNet transmission system. In theory there are two ways it could use maintenance or renewal to discriminate against non-Origin generators: (a) it could fail to adequately maintain and renew parts of the transmission network serving non-Origin generators or prefer renewal and maintenance of parts of the transmission network serving Origin generators; or (b) it could take unnecessary or prolonged maintenance outages on lines that serve non-Origin generators.

92 There are a number of reasons why the first theory of harm – failing to maintain and renew selected lines – is implausible.

93 **First**, AusNet has numerous legal obligations that it would be in breach of if it failed to maintain and renew any party of the transmission network adequately. These obligations include obligations:

- (a) under the *Electricity Safety Act 1998* (Vic) (the **Electricity Safety Act**), including an obligation to submit an electricity safety management scheme to Energy Safe Victoria (**ESV**). ESV regularly audits AusNet safety and maintenance management;
- (b) under its licence, which is administered by the Essential Services Commission (**ESC**). The licence in turn requires compliance with the Victorian Electricity System Code;
- (c) under the NER, to arrange maintenance to minimise interruptions, ensure ongoing transmission to agreed capabilities and restore agreed capabilities following an interruption as soon as reasonably practicable; and
- (d) under the NER, to comply with system standards and power system performance and quality of supply standards in schedule 5.1 of NER, which are reflected in connection service agreements with generators.

94 **Second**, AusNet's maintenance and renewal activities are subject to a high degree of transparency and regulatory scrutiny. As part of its five yearly pricing proposal AusNet sets out a renewal and operating proposal, which would be subject to review and submissions by interested parties and ultimately AER approval. Although the AER approves an overall renewal capital allowance and operating expenditure allowance how those allowances are applied is transparent and subject to AEMO oversight.

95 In relation to renewal, AusNet works with AEMO to jointly identify and plan for required upgrades, replacements, refurbishments, or retirement of existing network assets. This joint process is reflected in AEMO's VAPR and, alongside this, in a detailed Asset Renewal Plan published by AusNet. As the network operator, AusNet is primarily involved in assessing the condition of its network and making replacement, retirement or de-rating decisions but it does so in accordance with an AER approved asset renewal guide and in consultation with AEMO. AusNet must conduct

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a RIT-T process for renewals over \$7 million. This process, coupled with clear standards and obligations owed to affected generators and AEMO oversight, would remove any ability to fail to renew assets serving non-Origin generators or to prefer renewal of assets serving Origin generators.

96 Similarly, in relation to maintenance, AEMO is very closely involved in maintenance planning, given it approves all planned outages. This role of AEMO, and clear standards and obligations owed to affected generators (including the involvement of generators in assessing planned outages before they proceed), would again remove any ability to fail to maintain assets serving non-Origin generators. Non-Origin generators will of course be highly aware if failures to renew or maintain are disproportionately affecting them.

97 **Third**, failing to adequately maintain a transmission line would involve very significant risks for AusNet. A breach of standards required to be met under connection agreements with generators would expose AusNet to claims for damages. It could also exacerbate bushfire and other risks and so expose AusNet to class action claims. This is particularly so if AusNet is doing so to benefit Origin generation and not acting in good faith. It is also likely to result in AusNet incurring penalties under the AER's STPIS that forms part of AusNet's pricing determination. A breach of AusNet's Electricity Safety Act obligations would expose it to significant penalties. It is inconceivable that responsible officers at AusNet would deliberately neglect any issue relating to renewal or maintenance to attempt to confer a financial benefit on Origin.

98 **Finally**, and as discussed in more detail in below, AusNet is required to comply with TRFG, which include a requirement not to discriminate in favour of affiliated entities such as Origin. This non-discrimination obligation includes a specific obligation:

in like circumstances to provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider.

99 In relation to the second possible theory of harm, AusNet could not take unnecessary or prolonged maintenance outages on select lines that serve non-Origin generators. Planned outages, including their timing and duration, must be notified to and approved by AEMO. They cannot proceed without AEMO approval. Generators are informed of planned outages before they proceed and can raise objections or queries with AusNet or AEMO. Unplanned outages can only be taken in limited circumstances (eg, in response to an emergency) and must also be notified to AEMO. In all cases outages are published by AEMO and are, of course, highly visible to affected generators. It is implausible to think a strategy of deliberately taking or prolonging planned or unplanned outages affecting non-Origin generators could be implemented. It should also be borne in mind that taking unnecessary outages or prolonging them is likely to result in AusNet incurring penalties under the STPIS and could result in legal liability to affected generators and consumers.

### ***No ability to discriminate in relation to dispatch and curtailment***

100 AEMO is responsible for determining which generators are dispatched in the NEM. Generators make bids to AEMO to supply defined quantities of electricity at defined prices. AEMO uses those bids, forecast electricity demand and network capability to determine which generators should be dispatched to produce electricity. It repeats this exercise every five minutes for every region. AEMO generally dispatches the cheapest generator bids first then progressively more expensive offers until enough electricity can be produced to meet demand. In some circumstances, however, dispatching the lowest cost generator may overload the network or risk system security. To cater for these circumstances, AEMO has developed a constraint relaxation procedure allowing it to establish a dispatch priority order that is the next best solution. Critically, AusNet has

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no role in these decisions about dispatch and curtailment meaning it has no ability to discriminate against non-Origin generators in relation to these matters.

### ***No ability to cross subsidise, misuse information or otherwise discriminate***

- 101 The NEL and the NER provide for the AER to make TRFG, which are intended to ensure natural monopoly TNSPs are not able to leverage any market power they may have in relation to transmission into contestable markets in which they participate. Importantly, the guidelines can be amended by the AER to reflect changes in industry structure, including changes arising from the growth of renewables and any changes in ownership structure. The AER has recently conducted a full review of the guidelines and issued Version 4 of the guidelines, which came into effect on 1 March 2023. The energy regulatory framework, by allowing for the guidelines to be made, implicitly acknowledges that TNSP's affiliates may participate in generation (and retail) and establishes a regime to address any risks of anticompetitive conduct.
- 102 The TRFG contain provisions that are designed to ensure there is ***no cross subsidisation, no misuse of information*** and ***no discrimination***.
- 103 In relation to no cross subsidisation, the guidelines reinforce the price regulatory regime by requiring legal separation (ie, a TNSP such as AusNet must not provide 'Other Services' including generation, although a related corporation may do so). Furthermore, separate accounts must be kept for a transmission business, which must comply with a cost allocation methodology approved by the AER. This ensures that there can be no cross subsidisation of a contestable business by the transmission business.
- 104 In relation to information, AusNet must not provide confidential information it obtains from non-Origin generators (eg, about connection enquiries) to Origin or otherwise use it to benefit Origin. Both the NER and the TRFG require such information to be kept confidential and not used for any purpose except that for which it was provided.
- 105 The TRFG contain provisions to the effect that if information about the transmission system is provided to an affiliate it must also be available to others. Most relevant information about the transmission network is publicly available in any event (eg, in the case of outages via AEMO's PASA system).
- 106 The TRFG also impose general non-discrimination obligations. It provides that a TNSP such as AusNet must not discriminate (either directly or indirectly) between a related electricity service provider (which would include Origin Energy Markets) and a competitor (or potential competitor) of a related electricity service provider in connection with the provision of prescribed transmission services.
- 107 The non-discrimination obligation includes specific requirements that a TNSP such as AusNet:
- (a) in dealing with a related electricity service provider (eg, Origin Energy Markets), must treat the related electricity service provider as if it were not related;
  - (b) in like circumstances, must deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions;
  - (c) in like circumstances, must provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider; and
  - (d) subject to complying with laws, must not disclose to a related electricity service provider information the TNSP has obtained through its dealings with a competitor (or potential

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competitor) of the related electricity service provider where the disclosure would, or would be likely to, provide an advantage to the related electricity service provider.<sup>28</sup>

- 108 In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the TRFG, including binding reporting obligations, compliance audits and compulsory notices under the TRFG; information from consumers, regulated businesses and other stakeholders; market data; and information requests and targeted reviews.
- 109 The AER also has a range of enforcement options to ensure compliance with the TRFG and to respond to and address potential non-compliance, including infringement notices (for civil penalty provisions under the NER), court enforceable undertakings and civil proceedings.
- 110 The requirements described above impose obligations that will ensure AusNet cannot discriminate in favour of Origin Energy Markets or against competing generators. Both the general non-discrimination obligation and the more specific obligations are relevant to the consideration, in particular, of whether AusNet has any ability to discriminate in relation to either pricing or the renewal or maintenance of the transmission network.

### 1.8.3 Incentive

- 111 Even if AusNet had the ability to foreclose, Brookfield LP has no incentive to seek to cause Brookfield Infrastructure to, in turn, seek to cause AusNet to foreclose Origin's generation rivals in any of the following ways that would substantially lessen competition in any relevant generation market.

#### ***No incentives to cause AusNet to engage in occasional short-term acts of foreclosure***

- 112 Putting financial hedging to one side, whether the Brookfield LP will have incentives to cause AusNet to engage in occasional short-term acts of foreclosure will depend on whether Origin generates less or more electricity than its retail operation acquires. If Origin Energy Markets generates less than its retail operation purchases (structurally short in electricity), Brookfield LP does not have incentives to cause AusNet to engage in occasional short-term acts of foreclosure that increase wholesale prices. This is because doing so will cost Origin Energy Market's retail arm more than the benefits its generation arm will gain.
- 113 Origin is significantly structurally short electricity in Victoria and across the NEM (although not as significantly as in Victoria). The Mortlake power station produced 0.6% of electricity generated in Victoria in 2021 (0.3 TWh out of 47 TWh).<sup>29</sup> In contrast, Origin has an electricity retail market share in Victoria of approximately 15.6%.<sup>30</sup> Origin's share of generation output in the NEM in 2021 was approximately 9%,<sup>31</sup> compared to a retail market share in the NEM of approximately 24%.<sup>32</sup> We understand that around half of Origin's energy requirement, and around two thirds of maximum peak customer demand, is covered by Origin's generation fleet. Origin has to cover this shortfall through a combination of acquiring electricity in the NEM and entering into derivative contracts, including with other generators.

<sup>28</sup> AER, *Electricity Transmission Ring-Fencing Guideline Version 4* (March 2023), cl 4.1.

<sup>29</sup> *State of the Energy Market 2022 – Report*, page 49. In 2021-2022, Origin's share of Victorian generation output increased to 1.9%. This reflects Mortlake, a gas fired generator being dispatched more often due to the higher electricity prices (**Annexure 12**).

<sup>30</sup> *State of the Energy Market 2022 – Report*, Data Figure 6.19 based on 2021-2022 data (**Annexure 12**). <See underlying data: <https://www.aer.gov.au/publications/state-of-the-energy-market-reports/state-of-the-energy-market-2022-data>>.

<sup>31</sup> *State of the Energy Market 2022 – Report*, Figure 2.22 page 49 (**Annexure 12**).

<sup>32</sup> *State of the Energy Market 2022 – Report*, page 49; market shares are calculated based on data from (i) AER retail energy market performance update for Quarter 2, 2022-23 <<https://www.aer.gov.au/retail-markets/performance-reporting/retail-energy-market-performance-update-for-quarter-2-2022%E2%80%9323>> for customers in Queensland, New South Wales, South Australia, Tasmania and the Australian Capital Territory and (ii) ESC Energy market dashboard, Q2, 2022-23 <<https://www.esc.vic.gov.au/electricity-and-gas/market-performance-and-reporting/victorian-energy-market-report/energy-market-dashboard>> for customers in Victoria.



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114 There is no basis to think that Origin Energy Markets will become structurally long electricity in the foreseeable future given the expected closure of Origin's largest generation asset Eraring (2,880 MW) in 2025 at the earliest. Origin Energy Markets would continue to be structurally short electricity even after the implementation of Brookfield's 'green build-out' plan (which seeks to have **Confidential to Brookfield: the significant majority** of Origin Energy Markets' aggregate customer load requirements by 2033).

115 Given that Origin Energy Markets is a significant net purchaser of electricity in the NEM and of financial hedges, Brookfield LP does not have an incentive to cause AusNet to engage in occasional short-term acts of foreclosure of Origin Energy Markets' generation rivals that increase wholesale prices.

### ***No incentives to cause AusNet to engage in longer-term acts of foreclosure***

116 If foreclosure occurs over a longer term, there is a greater potential for any increase in wholesale electricity costs to be passed through to higher retail prices. With no financial hedging, whether Brookfield LP will have incentives to cause AusNet to engage in frequent or long-term acts of foreclosure depends on their *net* effects on the operations of Origin Energy Markets from the resulting higher wholesale prices.

117 The immediate consequences of acts of foreclosure by AusNet are a net loss when Origin Energy Markets is structurally short. While pass-through will reduce Origin Energy Markets' retail loss to a certain extent, given Origin is significantly structurally short, one would expect a very high pass-through rate would be required before Brookfield LP would have an incentive to cause AusNet to engage in acts of foreclosure.

### ***No incentives to cause AusNet to engage in acts of foreclosure despite financial hedging***

118 From the outset, it is worth noting that the potential for an electricity network operator to have incentives to engage in sabotage to exploit financial agreements is not transaction specific. In the absence of the Proposed Acquisition and assuming an electricity network owner has the ability (which they do not for the reasons set out in other parts of this application) to engage in acts of foreclosure, any such network owner (including those without generation or retail operations) can hold a long position in forward contract and could in theory benefit from acts of foreclosure in the form of higher payoffs under those contracts.

119 Even if regard is had to financial hedge related gains from acts of foreclosure, this does not mean that Brookfield LP has the incentive to cause AusNet to engage in acts of foreclosure. This is because:

- (a) **First**, hedge-related gains would need to outweigh the net losses arising from Origin Energy Markets' structurally short position.
- (b) **Second**, Brookfield LP would need to take into account that there are likely to be long-term consequences of acting on any immediate incentive to cause AusNet to engage in acts of foreclosure. Where foreclosure occurs in one period, it is likely to affect what counterparties of Origin Energy Markets believe about the likelihood of foreclosure in future periods and hence the future prices that Origin Energy Markets will have to pay for hedging its structurally short exposure to the NEM pool prices. In particular, if Brookfield LP causes AusNet to engage in acts of foreclosure, counterparties are likely to develop or maintain expectations of foreclosure in future periods and Origin Energy Markets may then have to pay high prices for hedging its exposure potentially for an unknown future period. This could be very costly to Origin Energy Markets' retail operation, as in each period higher prices would have to be paid for Origin Energy Markets' entire structurally short exposure.

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### 1.8.4 Separate ownership and management of AusNet and Origin Energy Markets

- 120 AusNet and Origin Energy Markets will remain separate companies with different ownership. The Brookfield Infrastructure-controlled portion of AusNet (45.4%) is owned by two Brookfield infrastructure affiliated entities and a separate Brookfield-managed pool of syndicated passive co-investors. The balance of AusNet is held by a group of independent superannuation funds (Australian Retirement Trust: 15%, Alberta Investment Management Corporation: 9.9%, Investment Management Corporation of Ontario: 9.9%, Health Care of Ontario Pension Plan: 9.9% and Canada's Public Sector Pension Investment Board: 9.9%). The Brookfield-controlled portion of Origin Energy Markets is expected post-syndication to be somewhere between **Confidential to Brookfield: 40 – 50%** and 67.6%. This group will be comprised of BGTF, BEP and other Brookfield-managed co-investors. The balance of Brookfield LP is expected to be owned by Buckland Investment (22.5%),<sup>33</sup> Temasek (9.9%), potentially Reliance (interest to be determined), and possible other foundation co-investors. The continued separation and different ownership of AusNet and Origin Energy Markets means that in practice, there is very little scope for vertical cooperation. Four points illustrate this.
- 121 **First**, both portfolio companies are managed day-to-day at the portfolio company level by dedicated employees of each portfolio company. The board of AusNet comprises AusNet management and the Origin Energy Markets board will be structured in the same way.
- 122 The Chief Executive Officers of AusNet and Origin Energy Markets will make their own business decisions day-to-day pursuant to a delegated authority. The AusNet CEO has significant operational authority to take decisions on key business activities up to certain thresholds. Expenditure above these thresholds requires the approval of AusNet Holdings board.
- 123 The boards of both AusNet and Origin Energy Markets will perform their obligations in line with their fiduciary duties in accordance with the *Corporations Act 2001* (Cth), law and applicable constituent documents.
- 124 While their respective holding company boards will include Brookfield representatives, there will be no overlapping directors, **and** the remaining seats on these boards will be held by representatives of Brookfield's co-underwriters (being as at the date of this application, Buckland Investment, Temasek and potentially Reliance). Brookfield's co-investors / co-underwriters in both AusNet and Origin Energy Markets are all large, sophisticated investors.
- 125 **Second**, in relation to AusNet, more than 50% of the equity is held by independent, non-Brookfield co-investors and the position in Origin Energy Markets is expected to be similar, with approximately half of the equity in Origin Energy Markets held by independent, non-Brookfield co-underwriters. These co-investors / co-underwriters (and the directors they nominate) will have a strong incentive to monitor closely any transaction between AusNet and Origin Energy Markets that comes before the Board.
- 126 Brookfield and its co-investors hold their interests in AusNet through a holding company, Australian Energy Holdings No 1 Pty Ltd (**AusNet Holdings**). AusNet Holdings holds the interests in AusNet and its subsidiaries. It is rare that the AusNet Holdings board is asked to approve AusNet's day to day business decisions. The Governance Agreement for AusNet Holdings includes protocols which prevent an AusNet group entity from entering into a material<sup>34</sup> arrangement with Brookfield or any of its affiliates unless the arrangement is approved by a majority of the non-Brookfield investors. Following completion of the Proposed Acquisition, the Origin Energy Markets will become an affiliate and as such, AusNet will not be able enter into

<sup>33</sup> GIC through Buckland Investment Pte. Ltd. will have no direct influence on the underlying investments with Brookfield retaining management of Brookfield LP.

<sup>34</sup> AusNet Shareholders Governance Agreement (entered 9 February 2022) page 36 requires that certain agreements **Confidential to Brookfield: exceeding a threshold amount are approved by non-interested investors** (Annexure 11).

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material arrangements with Origin Energy Markets without approval from the non-Brookfield investors. The remaining AusNet shareholders comprise one Australian and four Canadian pension funds all of whom are required to act in the best interests of their members. These co-investors have no interest in Origin Energy Markets and for this reason, the non-Brookfield investors are not likely to agree to arrangements that preference Origin Energy Markets. The governance Term Sheet in respect of the Brookfield LP includes a similar regime for approval of affiliate transactions.

- 127 **Third**, each of the funds within the Brookfield Infrastructure and the Brookfield Renewable Power and Transition business units are managed by separate individuals in different business units within Brookfield, reporting to different global chief executives.
- 128 While affiliates of BAM will manage all relevant funds, the management teams of AusNet and Origin Energy Markets will sit within different business units of BAM, have different leadership, investors and general partners. The general partner of the entity invested in AusNet will make decisions which benefit AusNet without regard to what may be in the interests of investors in BGTF / Origin Energy Markets and vice versa. There is also practical separation between the business units. For instance, the Infrastructure and Renewable Power and Transition teams in Australia are located on different floors of Brookfield's offices and have separate electronic drives. There are only a very small number of people who work across business units as part of shared service teams that sit across units (such as IT and compliance).
- 129 In considering the above it is important to bear in mind that the Proposed Acquisition does not give rise to material horizontal merger concerns. This is not a case where two competitors may both benefit from reduced competition and the sharing of confidential information. Rather competition concerns can only arise if AusNet has both the ability and incentive to foreclose Origin Energy Markets' generator competitors. This is made inherently less likely by the ownership structure described above. To illustrate:
- (a) some of the possible foreclosure strategies require action to be taken by employees of AusNet in 'hands on' roles. For example, any strategy of taking unnecessary or prolonged maintenance outages directed at Origin Energy Markets' generation competitors would have to be implemented by AusNet engineers and maintenance crews with no connection to Origin or its management, making it inherently unlikely even if the regulatory regime and role of AEMO permitted it;
  - (b) as discussed above, any foreclosure strategy that involved AusNet entering a favourable contract with a new Origin Energy Markets generator (eg, a connection related agreement) would require the approval of the non-Brookfield AusNet directors;
  - (c) many foreclosure strategies that might benefit Origin Energy Markets may harm AusNet, eg failing to maintain or renew infrastructure in a way that harms Origin Energy Markets' generator competitors is likely to come at a cost and cause significant risk for AusNet. Neither the non-Brookfield directors nor the fiduciary duties of the Brookfield directors are likely to allow this to occur; and
  - (d) compliance with key aspects of the ring-fencing guidelines will occur as a matter of course as a result of the separate companies and management structures involved.
- 130 **Fourth**, to provide the ACCC further comfort that AusNet and Origin Energy Markets will remain separate companies in practice following the Proposed Acquisition, Brookfield is prepared to provide an enforceable undertaking to the ACCC to ensure that while Brookfield controls simple majority decisions of the boards of AusNet Holdings and Origin Energy Markets:
- (a) To ensure there are separate boards of AusNet and Origin Energy Markets:

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- (i) Brookfield Manager will not appoint to an AusNet board, a person who is a director or secretary or employee of Origin Energy Markets; and
  - (ii) Brookfield LP will procure that no person is appointed to the Origin Energy Markets board, who is a director or secretary or employee of AusNet.
- (b) To ensure that AusNet and Origin Energy Markets have separate employees and ring-fencing of information, Brookfield Manager and Brookfield LP will procure that:
- (i) no person will be employed by AusNet who is also employed by Origin Energy Markets, and vice versa;
  - (ii) AusNet will have a separate information technology system from Origin Energy Markets; and
  - (iii) an employee of Origin Energy Markets will not be able to access the information technology system of AusNet or information stored on that system, and vice versa.
- (c) To ensure ring-fencing within Brookfield of individuals responsible for managing Brookfield's interests in AusNet and Origin Energy Markets, Brookfield Manager and Brookfield LP will procure that:
- (i) no person involved in the management of Brookfield's interest in AusNet on a day-to-day basis is also involved in the management of Brookfield LP's interest in Origin Energy Markets and *vice versa*. There will be an exception for senior management personnel with oversight roles and personnel primarily involved in administrative, accounting, legal, treasury and other ancillary service functions;
  - (ii) individuals responsible for managing Brookfield's interests in Origin Energy Markets are not able to access competitively sensitive information of AusNet and vice versa; and
  - (iii) an effective information technology system and security measures will be established and maintained to safeguard competitively sensitive information.

131 In summary the lack of any ability or incentive for AusNet to foreclose Origin Energy Markets' generation competitors is reinforced by their separate ownership and management and the enforceable undertaking that Brookfield is prepared to offer.

### 1.8.5 X-Elio and ACEN Corporation

132 Although there is horizontal overlap between Origin Energy Markets' generation and the X-Elio solar generation business, X-Elio's share of generation in the NEM is currently 0.2% and is too small to impact competition.

133 Likewise, while there is a horizontal overlap between ACEN and Origin Energy Markets' generation, ACEN's share of generation in the NEM is less than 1% and is too small to impact competition. In any event, GIC Infra has only a 16.87% interest in ACEN, which is listed on the Philippines stock exchange.

134 While both X-Elio and ACEN have plans to grow their generating capacities, their development pipelines remain small in the context of the NEM's forecast growth. AEMO has identified potential new generation and storage projects in the NEM totalling approximately 209 GW from 652 energy projects. X-Elio and ACEN are responsible for just 18 of these pipeline projects. X-Elio is currently responsible for five active pipeline projects.<sup>35</sup> ACEN's pipeline of active projects is also small,

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<sup>35</sup> X-Elio's pipeline projects include (i) Willaville Solar Farm (NSW); (ii) Glen Royal Solar Farm (NSW); (iii) Sixteen Miles Solar Farm (Qld); (iv) Forest Glen (NSW); (v) Boulka Park Solar Farm (Victoria)

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being responsible for 13 active projects, of which only two are currently well-advanced<sup>36</sup> Further information about the X-Elio and ACEN's respective pipeline projects is set out in **Figure 34**, **Figure 35** and **Figure 36**.

- 135 For completeness we note that Brookfield Renewable Power and Transition is exploring opportunities to invest in new renewables generation. In early April 2023, it announced it had entered an agreement with Greenleaf Renewables to develop, build and take ownership of the 420 MW Moonlight Range Wind Farm in central Queensland. The Moonlight Range Wind Farm is in the development phase and is expected to be ready for construction in 2025, subject to the approvals being received. Moonlight Range and other opportunities Brookfield is exploring would become part of the Origin Energy Markets 'green build-out' plan if the Proposed Acquisition proceeds. Again, the early stage of both Moonlight Range and Brookfield's other opportunities means no horizontal competition issues should arise.

### 1.9 No substantial lessening of competition in any electricity retail market

#### 1.9.1 Introduction

- 136 Origin is an electricity retailer in Victoria and in other NEM states. AusNet is not an electricity retailer. As a result, no horizontal competition issues arise in any electricity retail market.
- 137 AusNet owns one of five Victorian electricity distribution networks. Origin is one of many retailers whose customers are connected to those distribution networks. Given this vertical relationship, we expect the ACCC will wish to consider whether vertical competition issues may arise, ie, whether AusNet has the ability and incentive to use its position as the owner of a Victorian electricity distribution network to foreclose Origin's retail rivals and thereby lessen competition in either a Victorian or NEM wide electricity retail market.

#### 1.9.2 Ability and incentive

##### Overview

- 138 AusNet does not have any ability or incentive to use its position as the owner of a Victorian electricity distribution network to foreclose Origin's retail rivals as a result of a combination of the following:
- (a) electricity distribution systems are very heavily regulated to ensure AusNet cannot misuse any market power it may otherwise have absent the regulations. The electricity distribution regulatory regime is continuing to evolve to reflect changes in electricity markets and to address emerging issues;
  - (b) the electricity regulatory regime includes distribution ring-fencing guidelines (**DRFG**) made by the AER. Their purpose is to ensure where there is vertical integration between a distribution business and a contestable business, the distribution business is operated in a way that does not adversely affect competition in the contestable market. It is important to observe that the regulatory regime contemplates that vertical integration may exist and establishes a regulatory tool intended to ensure that competition cannot be harmed as a result. The guidelines can be amended by the AER from time to time, as circumstances require;
  - (c) the fact that retail customers are geographically dispersed across a distribution network makes many theoretical foreclosure strategies impossible. It is difficult to imagine, for

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<sup>36</sup> ACEN's advanced pipeline projects include (i) New England Solar and Battery and (ii) Stubbo Solar. ACEN's other pipeline projects include: (i) Birriwa Solar (NSW), (ii) Valley of the Winds (NSW), (iii) Aquila Wind (NSW), (iv) Narragamba Solar (NSW), (v) Phoenix Pumped Hydro (NSW), (vi) Baroota Pumped Hydro (SA), (vii) Birdle Track Solar Project (SA), (viii) Robbins Island (TAS), (ix) Jim's Plain Wind (TAS), (x) North East Wind (TAS), and (xi) Axedale Solar (VIC).

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example, how selectively upgrading one part of a distribution network (say, a particular suburb) could advantage an associated retailer; and

- (d) there is a high level of transparency over relevant aspects of AusNet's operation of its distribution networks. There is no possibility of subtle forms of discrimination not being detected.

139 Set out in **Figure 3** below is a summary of why the above factors mean AusNet would not be able to implement theoretical foreclosure strategies across the full range of distribution network activity. This is explained in further detail after **Figure 3**.

**Figure 3: AusNet has no ability or incentive to engage in a foreclosure strategy in any area of distribution network activities**

Area of activity: Distribution	Ability
<b>Pricing: Direct control services (standard and alternative)</b>	<p>Direct Control Services are the core services provided by electricity distributors and include both use of system and connection. The pricing of Direct Control Services is subject to AER regulation. Every five years the AER makes a distribution pricing determination imposing controls over the prices of Direct Control Services and approving a tariff structure statement proposed by the distributor. The distributor must comply with the approved tariff structure statement in setting annual prices in an annual pricing proposal that must also be approved by the AER. This eliminates any possibility of AusNet charging an Origin retailer or its customers less than a non-Origin retailer or its customers. There is also no ability to discriminate in relation to tariff trials or individually calculated customers for the reasons discussed below.</p> <p>Connection services are a type of direct control service and so are subject to price regulation by the AER. The price for basic and standard connection services (ie, connection services that do not require significant augmentation) are set through an annual pricing process described above. Furthermore, AusNet must have a model standing offer for such services, which must be approved by the AER. In the case of negotiated connection services (eg, where an augmentation is required) there is no ability for AusNet to discriminate in relation to price for reasons discussed below.</p>
<b>Pricing: Negotiated distribution services</b>	<p>Negotiated distribution services are services the AER accepts can fall outside price regulation and are rare. AusNet will have no negotiated distribution services in the 2021-2026 regulatory period. Where there are such services, the price for them must be negotiated in accordance with a regulated negotiation framework including binding dispute resolution by the AER.</p>
<b>Access: Energisation and Connection</b>	<p>Where a customer only requires energisation, AusNet is required to use best endeavours to energise the customer's supply address within one business day, if the request is made by 3pm, or within two business days if the request is made after 3pm. The DRFG prohibits AusNet from discriminating between a related electricity service provider and a competitor of a related electricity service provider.</p> <p>In relation to new connections involving minimal or no augmentation, AusNet is required to have a model standing offer to provide basic connection. The model standing offer must be approved by the AER and the offer to connect must be made within 10 business days. For other types of connections (negotiated service connections) AusNet must comply with a negotiating framework set out in the NER. Further any dispute may be resolved under the AER dispute resolution processes under the NEL and Chapter 5A of the NER.</p>
<b>Access: Planning the distribution network</b>	<p>Origin's retail customers are dispersed across the AusNet distribution network, and it would not be possible to undertake targeted augmentations that would benefit only Origin's retail customers.</p> <p>In any event, there is considerable transparency and regulatory oversight of planning</p>

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Area of activity:	Ability
<b>Distribution (augmentation)</b>	<p>and augmentation, for example, through the distribution annual planning review, the distribution determination process and the Regulatory Investment Test – Distribution (<b>RIT-D</b>) process.</p> <p>AusNet also has incentives to maintain reliability of supply and quality of supply as a result of the incentive scheme that forms part of the AER's price determination. Under this scheme AusNet's revenue is increased (or decreased) based on changes in service performance.</p> <p>AusNet has an incentive to meet the minimum service levels set out in the Electricity Distribution Code of Practice (<b>Electricity Distribution Code</b>) in connection with reliability, otherwise it is required to make specified payments to retail customers.</p>
<b>Access: Quality of connection (renewal and maintenance; outages)</b>	<p>As per above for augmentation, AusNet does not have any ability to selectively maintain parts of its distribution network in a manner that would advantage Origin by providing a better quality of service to Origin's retail customers. This is because these customers are dispersed across the AusNet distribution network, and it would not be possible to undertake targeted maintenance activities (or fail to undertake maintenance activities) that would benefit only Origin's retail customers (or penalise only non-Origin retail customers). In addition, renewal and maintenance are subject to regulation and transparent processes.</p> <p>The above observation also applies to planned outages - it is not possible for AusNet to target an outage that would affect only non-Origin retail customers. In any event, as per transmission, there is considerable transparency around planned outages (published in AEMO's medium term projected assessment of system adequacy), such that any attempt to 'manufacture' outages targeting non-Origin retail customers would be easily detected. AusNet is required to provide AEMO with an outline of planned network outages some three years in advance and to update that information as frequently as changes occur.</p> <p>The reliability of supply and quality of supply components of the STPIS apply to AusNet in relation to its distribution network. Under these components, AusNet's revenue is increased (or decreased) based on changes in service performance.</p> <p>AusNet has an incentive to meet the minimum service levels set out in the Electricity Distribution Code in connection with supply restoration and reliability, otherwise it is required to make specified payments to retail customers. Failure to meet guaranteed service levels can easily be identified by customers and their retailers. Failure to make those payments or make those payments on time both attract civil penalties under the ESC Act.</p>
<b>Load shedding</b>	<p>In Victoria, AEMO works with government to determine the priority order of load shedding. Therefore, AusNet does not have the ability to target non-Origin retail customers in the event load shedding is required.</p>
<b>Cross subsidisation, information and discrimination</b>	<p>As an electricity distributor, AusNet is subject to the DRFG. Those rules:</p> <ul style="list-style-type: none"> <li>(a) require legal separation of the distribution business from the contestable businesses to ensure there is no cross subsidisation;</li> <li>(b) impose obligations in relation to confidential information and / or separation of staff; and</li> <li>(c) contain general non-discrimination obligations that prohibit AusNet from discriminating between a related electricity service provider and a competitor of a related electricity provider.</li> </ul> <p>In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the DRFG. The AER also has a range of</p>

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Area of activity: Distribution	Ability
	enforcement options to ensure compliance with the DRFG and to respond to and address potential non-compliance.

### ***Pricing***

- 140 AusNet could not use the price charged for use of, or connection to, its electricity distribution systems as a means of discriminating against Origin's retail rivals.
- 141 Electricity distribution in the NEM is achieved by distributors providing a variety of distribution services through their respective distribution networks. Distribution services may be provided by a distributor either as direct control or negotiated services:
- (a) **Direct Control Services:** these services comprise 'standard control services' and 'alternative control services'. In practice, all or nearly all distribution services are Direct Control Services, which includes both use of system and connection; and
  - (b) **Negotiated distribution services:** negotiated distribution services are essentially services the AER accepts can fall outside price regulation and are rare. AusNet will have no negotiated distribution services in the 2021-2026 regulatory period.
- 142 Direct Control Services are subject to price regulation by the AER. As with transmission, the AER makes five yearly price determinations. The costs associated with providing Direct Control Services are recovered through a variety of charges and tariffs which differ depending on the type of Direct Control Service provided and the type of customer receiving the service. For this reason, instead of imposing a revenue cap a distribution determination imposes controls over the prices of Direct Control Services. A tariff structure statement must be proposed by the distributor and approved by the AER as part of the five yearly AER determination. The distributor must comply with the approved tariff structure statement in setting annual prices in an annual pricing proposal that must also be approved by the AER. This eliminates any possibility of AusNet charging an Origin retailer or its customers less than a non-Origin retailer or its customers.
- 143 As noted above, negotiated distribution services are rare (AusNet has none for the 2021-2026 regulatory period). Where they exist the price for them must be negotiated in accordance with a regulated negotiation framework including binding dispute resolution by the AER.
- 144 There are three pricing special cases that also need to be considered.
- 145 **First**, distributors can include in their tariff structure statement a tariff class for 'individually calculated customers'. This would need to be approved by the AER. AusNet currently does not have such a tariff class. Individually calculated customers are likely to be large commercial or industrial customers. The AER is only likely to approve such a tariff class if satisfied the customers have the necessary bargaining power to mean regulation is unnecessary. Such customers can deal separately with the distributor and retailers. Further any negotiations are ultimately subject to AER dispute resolution. In combination, these factors mean there is no ability for AusNet to offer more favourable terms to an individually calculated customer if they also acquire electricity from Origin.
- 146 **Second**, distributors can conduct tariff trials with retailers to test new tariff structures. These tariff trials need not be covered by a tariff structure statement but generally cannot represent more than 1% of a distributor's revenue (currently 5% on a transitional basis). Tariff trials are overseen by the AER and are highly transparent, meaning there is no ability for AusNet to run a favourable trial with Origin only. This is because tariff trial notifications must be given to the AER four months in advance and are published on the AER website. Additionally, the distribution ring-fencing



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guidelines mean in practice an attractive deal provided to an affiliated retailer must also be provided to other retailers.

- 147 **Third**, connection services are a type of Direct Control Service and so are subject to price regulation by the AER.
- 148 The price for basic and standard connection services (ie, connection services that do not require significant augmentation) are set through the annual pricing process, and are approved by the AER, as described above. Furthermore, AusNet must have a model standing offer for such services, which must be approved by the AER.
- 149 In the case of negotiated connection services (eg, where an augmentation is required) there is no ability for AusNet to discriminate in relation to price for a number of reasons.
- 150 **First**, the Electricity Distribution Code published by the ESC states that augmentations required as part of a connection to the distribution network in Victoria are contestable services. The contestability of augmentations necessary for connections significantly removes any ability for AusNet to price discriminate. The BGTF Consortium understands that AusNet itself constructs very few connection augmentations. Usually they are constructed by the developer concerned, which will then contribute the connection assets to AusNet free of charge for AusNet to operate and maintain.
- 151 **Second**, under the AER's connection charge guidelines, capital contributions for standard and negotiated connections are subject to a cost revenue test set out in those guidelines. No capital contributions can be sought for basic connection services. The cost revenue test provides that a distribution network service provider may seek a capital contribution if the incremental cost of the connection service exceeds the estimated incremental revenue expected to be derived from the connection services. The objective nature of this test again significantly removes any ability for AusNet to price discriminate in relation to capital contributions.
- 152 **Third**, negotiations for negotiated connection services must be carried out in accordance with the negotiating framework set out in Chapter 5A of the NER. The negotiating framework includes the potential for dispute resolution by the AER.
- 153 **Finally**, the DRFG (discussed further below) require distributors not to discriminate between a related electricity service provider (which would include Origin) and a competitor, or potential competitor, of a related electricity service provider in connection with the provision of direct control services, which would include each type of connection service, including negotiated connection services. The non-discrimination obligation includes a requirement that distributors in like circumstances deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms. In combination, these factors would remove any ability for AusNet to price discriminate in relation to charges for negotiated connection services.

### ***Connection and access***

- 154 AusNet will not be able to discriminate against retail competitors of Origin in relation to providing access or connection to its distribution system.
- 155 When a customer's premises already have a pre-existing connection to the distribution network, AusNet is required to use its best endeavours to energise the premises within one business day of the request if the request is made by 3pm, or within two business days if the request is made after 3pm. The DRFG also prohibit AusNet from discriminating between a related electricity service provider (eg, Origin's retail electricity business) and a competitor when providing such services.

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- 156 Where a new connection is required, AusNet must comply with requirements aimed at ensuring access to the distribution network. The requirements differ depending on the type of connection:
- (a) In relation to basic or standard connections (essentially those that do not require substantial augmentation to the distribution network), AusNet must make an offer to connect the customer to the network within 10 days of the connection request on the basis of a model standing offer approved by the AER.
  - (b) In relation to negotiated service connections (such as to new residential developments that require augmentation of the distribution network), use best endeavours to make an offer to connect the customer to the network within 65 business days of the request. AusNet must comply with the negotiation framework set out in clause 5A.C.3 of the NER which (amongst other things) imposes obligations on a DNSP to:
    - (i) negotiate in good faith;
    - (ii) provide connection applicants with information the connection applicant reasonably requires in order to negotiate on an informed basis;
    - (iii) consult with other users of the distribution network who may be adversely affected by the proposed new connection or connection alteration;
    - (iv) take into account prescribed factors when assessing a connection application;
    - (v) make reasonable endeavours to make a connection offer that complies with the connection applicant's reasonable requirements; and
    - (vi) comply with its connection policy.
- 157 Should AusNet fail to provide connection and access, it may also be compelled to do so under the AER dispute resolution processes under the NEL and Chapter 5A of the NER.
- 158 There are also specific requirements under the Electricity Distribution Code to comply with the distribution connection rules of the NER. A DNSP's failure to provide access to the distribution network following a customer request can result in enforcement action by the ESC including civil penalties under the *Essential Services Commission Act 2001* (Vic) (the **ESC Act**).
- Augmentation, renewal and maintenance**
- 159 AusNet would not have the ability to discriminate against third party electricity retailers or favour Origin's retail electricity business in relation to augmenting, renewing or maintaining its Victorian distribution network. For example, AusNet could not target maintenance to benefit distribution capabilities where it believes Origin has greater numbers of retail customers, or reduce maintenance in areas where Origin has fewer retail customers, so as to advantage Origin's retail electricity business.
- 160 **First**, there is no feasible way in which AusNet could ensure such a strategy was sufficiently targeted. Retail electricity customers are able to choose their electricity retailer from among a range of competing providers. This means Origin's retail customers are dispersed among the customers of other retail electricity suppliers. If AusNet were to focus on augmenting, renewing or maintaining electricity distribution capabilities in a particular part of its network (for example in one suburb), this would inevitably benefit both Origin and non-Origin customers. Similarly, any attempts to reduce distribution renewal or maintenance in a particular area would harm customers of Origin as well as non-Origin customers. Even if an area could be identified with a significant number of Origin customers it is always possible for those customers to switch retailers irrespective of any maintenance or investment by AusNet in an area. It is therefore not possible for such a strategy to limit benefits to any one retailer in a particular area.

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- 161 **Second**, AusNet has numerous legal obligations that it would be in breach of if it failed to maintain and renew any part of the distribution network adequately. These obligations include obligations:
- (a) under the Electricity Safety Act, including an obligation to submit an electricity safety management scheme to ESV. ESV regularly audits AusNet safety and maintenance management;
  - (b) under its licence, which is administered by the ESC; and
  - (c) under the NER, to comply with system standards and power system performance and quality of supply standards in schedule 5.1 of NER.
- 162 **Third**, augmentation, renewal and maintenance are subject to regulation and transparent processes. In particular:
- (a) the AER's five yearly price determination would include allowances for investment and maintenance which would be subject to public review and comment and AER approval at an aggregate level;
  - (b) in relation to augmentation, AusNet undertakes joint planning with other Victorian DNSPs and AEMO; and
  - (c) any augmentation or renewal works that involve an investment of greater than \$6 million, AusNet is required to follow the RIT-D process, a public process that includes a dispute resolution process overseen by the AER.
- 163 **Fourth**, failing to adequately maintain a distribution network would involve very significant risks for AusNet.
- 164 As noted above, AusNet's compliance with electricity safety requirements is regularly audited by the ESV and a failure to comply may result in AusNet incurring significant financial and reputational penalties.
- 165 The reliability of supply and quality of supply components of the STPIS also apply to AusNet's distribution network as well as its transmission network. Under these components, AusNet's revenue is increased (or decreased) based on changes in AusNet's service performance. A failure to maintain the quality of distribution services and to minimise outages and interruptions to service through lack of maintenance would cause financial harm to AusNet through the STPIS.
- 166 AusNet is also subject to technical obligations under the Electricity Distribution Code, including as to good asset management and quality of supply. AusNet is subject to guaranteed service levels under the Electricity Distribution Code. AusNet must make payments to customers whose annual electricity consumption is 160MWh or less where they experience a particular number or length of unplanned sustained interruptions per year. Failure to meet guaranteed service levels can easily be identified by customers and their retailers. Failure to make those payments or make those payments on time both attract civil penalties under the ESC Act.
- 167 Most fundamentally AusNet would not jeopardise its social licence to operate by deliberately failing to renew and maintain a section of the network so as to attempt to provide a financial benefit to Origin.
- Cross subsidisation and misuse of confidential information***
- 168 The NEL and the NER provide for the AER to make DRFG, which are intended to ensure natural monopoly distribution owners are not able to leverage any market power in relation to distribution into contestable markets in which an affiliate participates. Importantly, the DRFG can be amended by the AER to reflect changes in industry structure including changes arising from the growth of renewables and changes in ownership structure. By imposing ring-fencing obligations and giving

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the AER the power to impose additional ring-fencing requirements, the energy regulatory framework implicitly acknowledges that distributors and their affiliates may participate in retail (and generation) and establishes a regime to address risks of anticompetitive conduct.

- 169 The DRFG contains provisions that are designed to ensure there is **no cross subsidisation, no misuse of information** and **no discrimination**.
- 170 In relation to no cross subsidisation, the DRFG reinforces the price regulatory regime by requiring legal separation (ie, a distributor such as AusNet must not provide 'Other Services' including retail). Furthermore, separate accounts must be kept for a distribution business that comply with a cost allocation methodology approved by the AER. This ensures that there can be no cross subsidisation of a contestable business by the distribution business.
- 171 The DRFG also imposes obligations that will ensure AusNet cannot discriminate in favour of Origin or against competing retailers, whether by providing unequal access to information, misusing competing retailers' confidential information or otherwise discriminating against Origin's competitors. The non-discrimination obligation includes specific requirements that a distributor (ie, AusNet):
- (a) in dealing with a related electricity service provider (ie, Origin Energy Markets), treat the related electricity service provider as if it were not related;
  - (b) in like circumstances, deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions;
  - (c) in like circumstances, provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider; and
  - (d) subject to complying with laws, not disclose to a related electricity service provider information the distributor has obtained through its dealings with a competitor (or potential competitor) of the related electricity service provider where the disclosure would, or would be likely to, provide an advantage to the related electricity service provider.<sup>37</sup>
- 172 In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the DRFG, including binding reporting obligations, compliance audits and compulsory notices under the DRFG; information from consumers, regulated businesses and other stakeholders; market data; and information requests and targeted reviews.
- 173 The AER also has a range of enforcement options to ensure compliance with the DRFG and to respond to and address potential non-compliance, including infringement notices, court enforceable undertakings and civil proceedings.

### ***Separate ownership and management of AusNet and Origin Energy Markets***

- 174 As discussed above in relation to transmission, the lack of any incentive or ability for AusNet to foreclose Origin Energy Markets' retail competitors is reinforced by the presence of separate ownership and management of AusNet and Origin Energy Markets.

### **1.9.3 Virtual Power Plants, PV systems and batteries**

- 175 Origin provides VPP services to its retail customers. Intellihub does not provide VPP services to retail customers, but it does provide API software to both VPP providers and original equipment

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<sup>37</sup> AER, *Ring-fencing Guideline Electricity Distribution Version 3* (November 2021), cl 4.2  
<<https://www.aer.gov.au/system/files/AER%20-%20Ring-fencing%20Guideline%20Version%203%20-%20%28electricity%20distribution%29%20%20-%203%20November%202021.pdf>> (**DRFG**).

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manufacturers (eg, manufacturers of solar panels, hot water systems, etc). AusNet has two VPP trials underway focused on providing network stability services. There is no horizontal overlap between Origin and Intellihub's VPP activities and either no or de minimus overlap between Origin and AusNet's VPP activities. Although Intellihub provides its VPP product – deX – to retailers such as Origin, the Proposed Acquisition does not give rise to vertical competition issues because deX is not an essential input for VPP offerings. Intellihub also has no incentive to foreclose Origin's VPP competitors' access to deX because deX exists to achieve interoperability between a VPP platform and DER devices and a strategy to only supply deX to Origin Loop is not viable.

176 Origin and Mondo both supply PV systems to commercial and industrial customers. However, Mondo's business (revenue **Confidential to AusNet** per annum) is too small for the Proposed Acquisition to have an impact on competition in a very competitive market.

177 For completeness it is noted that Origin is seeking to develop large scale batteries to provide firming capacity to its generation fleet and AusNet / Mondo has developed, or is in the process of developing, three smaller batteries. There is little competitive overlap between the batteries being developed by Origin and AusNet / Mondo and in any event, the development of batteries is a vigorously competitive activity with existing generators, new renewables generators and others competing to develop batteries. In addition, AusNet's roles in relation to VPPs and PV systems as a DNSP are limited to technical aspects of their connection to its distribution network. No additional approvals or consents are required from AusNet in relation to the installation and operation of VPPs and PV Systems outside of the connection process.

### 1.10 No substantial lessening of competition in any gas retail market

#### 1.10.1 Introduction

178 Origin is a gas retailer in Eastern Australia. AusNet (and other relevant parties) are not gas retailers. As a result, no horizontal competition issues arise in any gas retail market.

179 AusNet owns one of three Victorian gas distribution networks. Origin is one of many retailers whose customers are connected to those distribution networks. Given this vertical relationship, we expect the ACCC will wish to consider whether vertical competition issues may arise, ie, whether AusNet has the ability and incentive to use its position as the owner of a Victorian gas distribution network to foreclose Origin's retail rivals and thereby lessen competition in either a Victorian or Eastern Australia wide gas retail market.

#### 1.10.2 Ability and incentive

##### *Overview*

180 AusNet does not have any ability or incentive to use its position as the owner of a Victorian gas distribution network to foreclose Origin's retail rivals as a result of a combination of the following:

- (a) gas distribution systems are very heavily regulated to ensure AusNet cannot misuse any market power it may otherwise have without regulation. The gas distribution regulatory regime is continuing to evolve to reflect changes in gas markets and to address emerging issues;
- (b) the gas regulatory regime includes ring-fencing rules. Their purpose is to ensure where there is vertical integration between a gas distribution business and a contestable business, the distribution business is operated in a way that does not adversely affect competition in the contestable market. It is important to observe that the regulatory regime contemplates that vertical integration may exist and establishes a regulatory tool

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intended to ensure that competition cannot be harmed as a result. The ring-fencing rules can be amended from time to time, as circumstances require;

- (c) the fact that retail customers are geographically dispersed across a gas distribution network makes many theoretical foreclosure strategies impossible. It is difficult to imagine, for example, how selectively upgrading one part of a distribution network (say, a particular suburb) could advantage an associated retailer; and
- (d) there is a high level of transparency over relevant aspects of AusNet's operation of its gas distribution networks. There is no possibility of subtle forms of discrimination not being detected.

181 Set out in **Figure 4** below is a summary of why the above factors mean AusNet would not be able to implement theoretical foreclosure strategies across the full range of gas distribution network activity. This is explained in further detail after **Figure 4**.

**Figure 4: AusNet has no ability or incentive to engage in a foreclosure strategy in any area of gas distribution network activities**

Area of activity: Distribution	Ability
<b>Pricing: Reference services and non-reference services</b>	<p>AusNet is a covered pipeline service provider (<b>CPSP</b>) with its entire gas distribution asset regulated by the AER. The AER approves reference tariffs for reference services which applies unless otherwise agreed. Gas ring-fencing requirements prevent AusNet from discriminating in favour of an associated retailer (which would include Origin) through lower pricing / better access terms.</p> <p>Non-reference services which are subject to dispute resolution process under Chapter 5 of the NGL and potential AER binding determination.</p>
<b>Access: Connection and access</b>	<p>Under the NGR, gas distributors (whether CPSPs or operators of non-scheme pipelines), including AusNet cannot refuse connection services to gas distribution networks. In relation to basic or standard connections services, a DNSP must make an offer to connect the customer to the network within 10 business days of the connection request.</p> <p>In relation to a negotiated service connection, a gas distributor must negotiate in accordance with the negotiation framework set out in Rule 119K of the NGR and use best endeavours to make an offer to connect the customer to the network within 65 business days of the request.</p>
<b>Access: Augmentation and investment</b>	<p>AusNet would not have the ability to discriminate against third party gas retailers or favour Origin's retail gas business in relation to investing in its Victorian distribution network given:</p> <ul style="list-style-type: none"> <li>(a) there is no feasible way in which AusNet could ensure such a strategy was sufficiently targeted given that Origin's retail customers are dispersed among the customers of other retail electricity suppliers and customers can and do switch between retailers.</li> <li>(b) augmentation is subject to regulation and transparent processes.</li> </ul>
<b>Access: maintenance and outages</b>	<p>AusNet would not have the ability to discriminate against third party gas retailers or favour Origin's retail gas business in relation to maintaining its Victorian distribution network given:</p> <ul style="list-style-type: none"> <li>(a) There is no feasible way in which AusNet could ensure such a strategy was sufficiently targeted given that Origin's retail customers are dispersed among the customers of other retail electricity suppliers and customers can and do switch between retailers.</li> </ul>

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Area of activity: Distribution	Ability
	<p>(b) Maintenance is subject to regulation and transparent processes.</p> <p>(c) Gas Distribution System Code of Practice (<b>Gas Distribution Code</b>) places positive obligations on AusNet to maintain its gas distribution network to ensure ongoing delivery of gas to all customers.</p>
<b>Cross subsidisation, information and discrimination</b>	<p>AusNet is subject to the gas ring-fencing requirements (GRFR). Those rules:</p> <p>(a) Require legal separation of the distribution business from the contestable businesses to ensure there is no cross subsidisation.</p> <p>(b) Impose obligations in relation to confidential information and / or separation of staff.</p> <p>(c) Contain rules about associate contracts including a requirement to comply with the competitive parity rule, which requires AusNet to ensure that any pipeline services that it provides to an associate are provided as if that associate were a separate unrelated entity.</p>
<b>Enforceability and penalties of NGL and NGR</b>	<p>In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the NGL and NGR. The AER also has a range of enforcement options to ensure compliance with the NGL and NGR and to respond to and address potential non-compliance.</p>

### **Pricing**

- 182 AusNet could not use the price charged for use of its gas distribution system as a means of discriminating against Origin's retail rivals.
- 183 AusNet operates one of the three gas distribution networks in Victoria. AusNet is a CPSP meaning it is subject to full price regulation by the AER.
- 184 AusNet provides the following types of services:
- (a) **Reference services:** in the case of AusNet, these services currently comprise:
- (i) **haulage reference services** which involve transporting gas through a distribution pipeline to end-use customers; and
- (ii) **ancillary reference services** which include on-site meter and gas installation test, disconnection service, reconnection service and special meter reading service.
- (b) **Non-reference services:** non-reference services are made available as agreed or as determined by an arbitrator in accordance with Part 12A of the NGR.
- 185 Reference services are subject to revenue regulation by the AER. AusNet's tariff classification and guidance provided by the NGR on how revenue should be allocated between tariff classes removes any ability for AusNet to set prices to target individual customers by reference to who their gas retailer is.
- 186 It is possible for AusNet to charge more or less than the reference tariff if its customer agrees. In any access dispute, however, the reference tariff for a reference service must be applied, essentially removing any ability for AusNet to charge above the reference tariff for a reference service. In theory AusNet could charge less than the reference tariff for a reference service to Origin. The gas ring-fencing requirement set out in the NGL / NGR would, however, prevent AusNet from doing so because it prohibits discriminating in favour of an associated retailer.

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187 While AusNet may offer other non-reference services which are not subject to ex ante price regulation, those services are subject to dispute resolution process under Chapter 6 of the NGL and, subject to limited exceptions, the AER can make a binding determination about any matter relating to the provision of a pipeline service to a prospective user or user, including price. Non-reference services also represent only 1% of AusNet's gas distribution revenue.

188 Accordingly, the AER's price regulation of reference services and the ability to make a final determination in relation to non-reference services means there is no ability for AusNet to discriminate in pricing against Origin's retail competitors.

### **Connection and access**

189 Under the NGR, gas distributors (CPSPs and operators of non-scheme pipelines), including AusNet, cannot refuse to provide connection services to gas distribution networks:

- (a) In relation to basic or standard connections, AusNet must make an offer to connect the customer to the network within 10 business days of the connection request.
- (b) In relation to a negotiated service connection, AusNet must negotiate in accordance with the negotiation framework set out in Rule 119K of the NGR<sup>38</sup> and use best endeavours to make an offer to connect the customer to the network within 65 business days of the request.<sup>39</sup>

190 After an offer is accepted by a connecting applicant, clause 3.1(b) of the Gas Distribution Code sets out customers' 'connection entitlement' which requires a DNSP to use its best endeavours to connect a customer's gas installation.

### **Augmentation, investment and maintenance**

191 AusNet would not have the ability to discriminate against third party gas retailers or favour Origin's retail gas business in relation to augmenting, renewing, or maintaining its Victorian distribution network.

192 **First**, as with electricity, there is no feasible way in which AusNet could ensure such a strategy was sufficiently targeted given that Origin's retail customers are dispersed among the customers of other retail gas suppliers and customers can and do switch between retailers.

193 **Second**, augmentation, renewal and maintenance are subject to regulation and transparent processes. In particular, the AER's five yearly price determination would include allowances for investment and maintenance which would be subject to public review and comment and AER approval at an aggregate level.

194 **Third**, AusNet's operation and maintenance program is routinely audited by ESV pursuant to the *Gas Safety Act 1997* (Vic), *Pipelines Act 2005* (Vic) and the *Gas Industry Act 2001* (Vic) to prevent any operation and maintenance failures. In addition, the Gas Distribution Code places positive obligations on AusNet to maintain its gas distribution network to ensure ongoing delivery of gas to all customers, and to do so within parameters prescribed by the ESC. The need to comply with these requirements removes any ability to fail to maintain pipelines servicing non-Origin customers.

### **Cross subsidisation and misuse of confidential information**

195 Chapter 4, Part 2 of the NGL and Part 5 of the NGR set out ring-fencing requirements in relation to pipelines and pipeline services (including both covered pipelines and non-scheme pipelines).

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<sup>38</sup> AEMC, National Gas Rules (NGR) rule 119K sets out the negotiation framework that a DNSP must follow before making an offer in relation to a negotiated service connection, including providing information regarding the commercial terms and engineering requirements for a connection in a timely manner, and requiring that a DNSP conduct negotiations for a negotiated connection in good faith.

<sup>39</sup> NGR, r119V.



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AusNet must comply with both the NGL and NGR. Similar to the TRFG and DRFG, the purpose of the gas ring-fencing requirements is to ensure natural monopoly gas distributors are not able to leverage any market power they may have in relation to distribution into contestable markets in which they participate.

196 The gas ring-fencing requirements contain provisions designed to ensure that:

- (a) there is **no cross subsidisation** between a gas distributor and a contestable business such as gas retail; and
- (b) there is **no misuse of confidential information or discrimination in contracts** against a competing contestable business such as gas retail.

197 In relation to no cross subsidisation, the gas ring-fencing requirements reinforces the price regulatory regime by requiring legal separation. Furthermore, separate accounts must be kept for a distribution business. This ensures that there can be no cross subsidisation of a contestable business by the distribution business.

198 In relation to misuse of information and other forms of discrimination, the gas ring-fencing requirements impose obligations in relation to separation of staff and associate contracts. In particular, if AusNet enters a contract with an associate (which would include Origin Energy Markets), it must comply with the 'competitive parity rule', which requires AusNet to ensure that any pipeline services that it provides to an associate are provided as if that associate were a separate unrelated entity.

### ***Enforceability and penalties of NGL and NGR***

199 In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the NGL and NGR, including binding reporting obligations; compulsory notices; information from consumers, regulated businesses and other stakeholders; market data; and information requests and targeted reviews.

200 The AER also has a range of enforcement options to ensure compliance with the NGL and NGR and to respond to and address potential non-compliance, including infringement notices, court enforceable undertakings and civil proceedings.

### ***Separate ownership and management of AusNet and Origin Energy Markets***

201 As discussed above in relation to electricity transmission, the lack of any incentive or ability for AusNet to foreclose Origin Energy Markets' retail competitors is reinforced by the presence of separate ownership and management of AusNet and Origin Energy Markets.

## **1.11 No substantial lessening of competition in any electricity generation market through electricity distribution system**

202 Although large scale generators are generally connected to the transmission network, some smaller generators may connect to a distribution system (referred to as 'embedded generation'). This may include wind and solar generators.

203 AusNet owns one of five Victorian electricity distribution networks, to which such embedded generators may connect. As discussed above, Origin participates in the wholesale generation market and we expect the ACCC will wish to consider whether vertical competition issues may arise, in particular whether AusNet may have the ability and incentive to use its position as owner of one of the Victorian electricity distribution systems to foreclose Origin's embedded generation competitors.

204 For similar reasons to those discussed in relation to electricity distribution and retail, AusNet does not have any ability or incentive to foreclose embedded generation rivals. In particular:

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- (a) electricity distribution systems are very heavily regulated to ensure they cannot misuse any market power they may otherwise have without regulation;
  - (b) the electricity regulatory regime includes distribution ring-fencing guidelines made by the AER that ensure where there is vertical integration between a distribution business and a contestable business, the distribution business is operated in a way that does not adversely affect competition in the contestable market; and
  - (c) there is a high level of transparency over relevant aspects of AusNet's operation of its distribution networks.
- 205 In relation to the key questions of pricing and connection, negotiated connections with a capacity of  $\geq 5\text{MVA}$  (eg, a wind farm connected to a distribution system) are regulated under Chapter 5. Connections of  $< 5\text{MVA}$  (eg, a virtual power plant comprising solar and batteries) are regulated under Chapter 5A. Chapter 5A connections are discussed above in section 1.8.
- 206 AusNet would not have any ability to discriminate in relation to the pricing of Chapter 5 connections for a number of reasons.
- 207 **First**, as discussed above under the Electricity Distribution Code published by the ESC, augmentations required as part of connections to the distribution network in Victoria are contestable. In particular, AusNet is specifically required to call for tenders for any construction works it proposes to augment its distribution network in connection with a connection service. Where an extension and / or augmentation is contestable in this manner there is no ability for AusNet to discriminate in relation to the capital costs of such extension or augmentation.
- 208 **Second**, Rule 5.3A of the NER establishes a framework for the negotiation of the connection of embedded generators. That framework provides for the provision of information in a way that is designed to facilitate agreement on charges.
- 209 **Third**, disputes in relation to charges that may be levied on an embedded generator can be referred to the AER for resolution in accordance with the dispute resolution procedures in Part L of Chapter 6 of the NER. In determining an access dispute about access charges, or involving access charges, the AER must give effect to the principle that access charges should be based on costs reasonably incurred by the DNSP in providing distribution network users access.
- 210 **Fourth**, the DRFG obligations not to discriminate would apply in relation to a connection of an embedded generator.
- 211 The combination of the above factors means there is no ability for AusNet to discriminate against non-Origin embedded generators in relation to the pricing of negotiated connections with a capacity  $\geq 5\text{MVA}$ .
- 212 AusNet will also not be able to discriminate against non-Origin embedded generators in relation to providing or delaying providing connection and access to AusNet's Victorian distribution networks.
- 213 For negotiated embedded generation connections with a capacity  $\geq 5\text{MVA}$ , AusNet as a DNSP is required to comply with detailed steps prescribed under the NER when responding to a connection application including a defined timeframe within which AusNet must respond to a connection query. AEMO is closely involved during key stages of the process including the detailed enquiry and connection application stages.
- 214 Furthermore, the DRFG non-discrimination obligations would apply so as to make it unlawful for AusNet to deliberately delay a non-Origin embedded generator connecting as compared to an Origin embedded generator connecting.
- 215 There is also no ability to discriminate in relation to augmentations, renewal, maintenance or confidential information essentially for the reasons discussed in section 1.9.

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216 As discussed in section 1.8, in relation to transmission and generation, the fact that Origin generates significantly less electricity than it sells also means that it does not have any incentive to see competition lessened in generation markets, including by foreclosing embedded generators. Again, this lack of ability or incentive is reinforced by the fact that different Brookfield funds and co-investors / co-underwriters will own AusNet and Origin Energy Markets.

### 1.12 No substantial lessening of competition in gas and electricity markets through Jemena's transmission and distribution assets

#### *Introduction*

217 SP Group, an independently operated company owned by Temasek, owns a 40% interest in Jemena. Jemena is an owner of gas pipelines and distribution systems and electricity distribution systems. Jemena also has a 50% interest in the ActewAGL Distribution Partnership (trading as Evoenergy) which owns the ACT gas and electricity distribution network and a 34% interest in United Energy which owns a Victorian electricity distribution network.

218 We expect the ACCC will wish to consider whether vertical competition issues arise, in particular, whether Jemena has the incentive and ability to use its position as a transmission and distribution system owner to anti-competitively foreclose Origin's retail rivals.

219 In summary:

- (a) Temasek will have only a 9.9% indirect interest in the Origin Energy Markets business, meaning it has limited incentive to engage in vertical foreclosure;
- (b) Temasek's interest in Jemena (which in turn has a 50% interest in Evoenergy and a 34% interest in United Energy) is only 40%, an indirect through SP Group, which operates independently from Temasek, such that it has limited ability to engage in vertical foreclosure. As a matter of long-standing governance policy, Temasek does not direct the business decisions or operations of its portfolio companies and therefore its portfolio companies operate independently of Temasek on day-to-day basis, including SP Group; and
- (c) The Jemena, Evoenergy and United Energy assets are, in any event, regulated removing any ability to engage in vertical foreclosure.

#### *New South Wales gas retail market*

220 Jemena has no ability or incentive to foreclose Origin's retail rivals in the New South Wales gas retail market by virtue of its ownership of transmission and distribution assets. Temasek's 9.9% interest in Origin Energy Markets means that it has limited incentive to engage in vertical foreclosure and its 40% interest in Jemena means it has limited ability to engage in foreclosure.

#### *Transmission / retail*

221 In addition, as regards transmission assets – specifically the Eastern Gas Pipeline – Jemena does not have market power and any foreclosure strategy would result in customers switching to an alternative transmission route and / or source of gas supply. Also, the Eastern Gas Pipeline is a non-scheme pipeline and is regulated as such under the NGR. This means that Jemena must publish information that will allow pipeline customers to negotiate access and is subject to arbitration if a commercial agreement cannot be reached.

#### *Distribution / retail*

222 In addition, as regards the Jemena New South Wales Gas Network and the Evoenergy networks in New South Wales, all gas distributors are subject to the NGL and NGR and are regulated by the AER. Therefore – like AusNet – Jemena and Evoenergy do not have the ability under the regulatory regime to use their position to foreclose Origin's rivals.

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### **Victorian gas retail market**

#### *Transmission / retail*

- 223 Jemena is considering upgrades to the Eastern Gas Pipeline to make it bi-directional – allowing flows from New South Wales to Victoria. If such upgrades are executed, Jemena will have no ability or incentive to foreclose Origin's retail rivals in the Victorian gas retail market. In relation to flows from Victoria to New South Wales, any foreclosure strategy would result in customers switching to an alternative transport route and / or source of gas supply. Also, an upgraded Eastern Gas Pipeline would remain a non-scheme pipeline regulated as such under the NGR, meaning that Jemena would be under disclosure obligations, with disputes able to be resolved by arbitration, removing any ability to foreclose or refuse access or price discriminate.

### **ACT gas retail market**

#### *Distribution / retail*

- 224 All gas distributors are subject to the NGL and NGR and are regulated by the AER. Therefore – like AusNet – Evoenergy does not have the ability under the regulatory regime to use its position to foreclose Origin's rivals in the ACT.

### **Victorian electricity retail market**

#### *Distribution / retail*

- 225 All electricity distributors are subject to the NEL and NER and are regulated by the AER. Therefore – like AusNet – Jemena and United Energy do not have the ability under the regulatory regime to use their position to foreclose Origin's rivals nor do they have any incentive to do so.

### **ACT electricity retail market**

#### *Distribution / retail*

- 226 Like AusNet and Jemena – Evoenergy is subject to the NEL and NER and does not have the ability under the regulatory regime to use its position to foreclose Origin's rivals nor does it have any incentive to do so.

## **1.13 No substantial lessening of competition in relation to smart meters**

- 227 Intellihub (in which Brookfield Infrastructure funds hold a 50% interest) is a smart meter provider. Origin, in its capacity as an electricity retailer, procures smart meters (and related services) for use in its downstream retail business including from Intellihub. As a result, we expect the ACCC will wish to examine whether vertical competition issues may arise, ie, whether Intellihub has the ability and incentive to use its position in the Australian smart meter industry to anticompetitively foreclose Origin's retail rivals and thereby lessen competition in a relevant electricity retail market or *vice versa*.
- 228 In its merger guidelines the ACCC notes that:
- an integrated merged firm would only be able to engage in foreclosure strategies against rival downstream firms if it had sufficient market power in the upstream market — that is, where its downstream rivals faced insufficient viable supply alternatives.
- 229 Intellihub does not have market power. It is only one of a number of suppliers of smart meters in Australia and faces significant competitive constraint from large suppliers like PlusES, Vector and Yurika with significant existing scale, as well as a number of smaller suppliers. Demand for metering services is also expected to grow materially in the next five to ten years (in line with the AEMC's recommendation of a 100% smart meter rollout in the NEM by 2030), creating further opportunity for expansion and new entry. The purchasers of mass market smart meters are electricity retailers who possess significant buyer power and who conduct highly structured

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competitive tenders on an episodic basis to appoint a company (or several companies) for the supply and installation of smart meters. The nature of competition, with episodic competitive tenders for long term deployment contracts, and the presence of sophisticated buyers with countervailing power, reinforce Intellihub's lack of market power.

- 230 In relation to competitive tenders to supply and install new smart meters, if Intellihub sought to charge Origin's competitors a higher price or to provide a lower quality of service or less attractive terms and conditions, it would simply lose the competitive tender to a competitor.
- 231 In relation to existing contracts to supply and install smart meters, the contracts entered into between Intellihub and its customers protect the energy retailer against Intellihub providing poor service or misusing their confidential information. In addition, as no retailers have yet awarded 100% of their smart meter requirements until 2030, providing poor service to a retailer is likely to result in the loss of future opportunities with that retailer (and potentially others if Intellihub's reputation is affected). In addition, when customers switch, the Intellihub meter will transition with the customer.
- 232 In combination, the above factors mean Intellihub has no ability to discriminate against Origin's retail competitors. It also means it has no incentive to do so. Any such discrimination is likely to significantly damage Intellihub's business, which is reliant on being able to win new contracts with non-Origin retailers. Origin is only one of Intellihub's customers, and there remain significant, uncontracted available volumes within the NEM (excluding Victoria) for which Intellihub will compete vigorously. Equally, discrimination is unlikely to materially assist Origin given that its competitors can acquire smart meters from other suppliers.
- 233 The lack of any ability or incentive to discriminate is again reinforced by the fact that different Brookfield funds and different co-investors / co-underwriters will hold interests in Intellihub and Origin Energy Markets (each with their own separate boards and management teams).
- 234 Origin also has no ability or incentive to discriminate against Intellihub's competitors for a number of reasons. **First**, Origin has already contracted **Confidential to Origin and Intellihub** of its smart meter roll out to Intellihub (the Intellihub business was originally owned by Origin before it was sold by Origin together with a long term supply agreement). This arrangement is not merger specific. Origin also has a contract with Vector. **Second**, Origin has a retail market share in the NEM states (by customer accounts) of approximately 24%<sup>40</sup> **and** is one of a number of energy retailers in Australia seeking to acquire smart meters. Others include AGL, EnergyAustralia, Red Energy, Simply Energy, Aurora and Alinta. Origin does not have market power in relation to the acquisition of smart meters. **Third**, there are currently at least three other suppliers of smart meters (Yurika, Plus ES and Vector) that have sufficient scale to compete effectively in Australia. Not being able to supply Origin would not affect these suppliers' ongoing ability to compete. Intellihub's competitors will continue to compete for the business of other retailers as they do today particularly as they are not capacity constrained and have sufficient scale to compete.
- 235 In summary, no substantial lessening of competition is likely to arise from Brookfield having an interest in both Intellihub and Origin Energy Markets.

### 1.14 No substantial lessening of competition in the East Coast gas wholesale market

- 236 EIG and MidOcean Energy currently own no assets in Australia. MidOcean Energy has recently entered an agreement to acquire Tokyo Gas' small interests in the Gorgon (1% interest), Ichthys (1.575% interest), Pluto (5% interest) and QCLNG (1.25% interest) LNG projects. MidOcean

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<sup>40</sup> Calculated based on data from (i) AER retail energy market performance update for Quarter 2, 2022–23 <<https://www.aer.gov.au/retail-markets/performance-reporting/retail-energy-market-performance-update-for-quarter-2-2022%E2%80%9323>> for customers in Queensland, New South Wales, South Australia, Tasmania and the Australian Capital Territory and (ii) ESC Energy market dashboard, Q2, 2022-23 <<https://www.esc.vic.gov.au/electricity-and-gas/market-performance-and-reporting/victorian-energy-market-report/energy-market-dashboard>> for customers in Victoria.

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Energy's transaction with Tokyo Gas is expected to complete **Confidential to MidOcean Energy**.

- 237 There is no competitive overlap between Origin's integrated gas business (including its interest in APLNG) and the Tokyo gas interests in the Gorgon and Pluto projects (WA) or the Ichthys Project (NT) in relation to the wholesale supply of gas in Australia. The Gorgon and Pluto projects are not connected to pipelines servicing the East Coast and do not supply gas into Eastern Australia. The Ichthys Project is connected to pipelines servicing the Northern Territory for emergency supply purposes only and otherwise produces gas solely for export.
- 238 EIG is in discussions with Senex regarding it (or its shareholders Hancock Energy / POSCO) investing in MidOcean Energy as a limited partner with an equity commitment equivalent to **Confidential to MidOcean Energy: a minority investment**. This investment will give Senex an indirect interest in the Origin Integrated Gas business and the Tokyo Gas assets being acquired by MidOcean Energy. Senex owns two operational natural gas assets in the Surat Basin in Australia, which produced approximately 17.3 PJ of natural gas per year. This represents less than 1% of the annual production of the East Coast wholesale gas market. Neither Hancock Energy nor POSCO currently have any other ownership interests in East Coast gas production assets other than Senex, such that the competition analysis remains the same whether the potential investment was made by Senex or its shareholders.
- 239 Both APLNG and QCLNG, as well as Senex, supply gas domestically into the East Coast wholesale gas market. The Proposed Acquisition will, however, not lessen competition in that market for several key reasons. In relation to MidOcean Energy's proposed investment in the Origin Integrated Gas business and the Tokyo Gas assets:
- 240 **First**, MidOcean Energy will have only a de minimis 1.25% interest in QCLNG overall. This interest will not give it control or meaningful influence over the conduct of QCLNG operations. Shell, as the majority owner (with a 73.5% interest in the project overall) is the project operator. **Confidential to MidOcean Energy**.
- 241 **Second**, MidOcean Energy will not have a role in the marketing of domestic gas produced by QCLNG and will not receive competitively sensitive marketing information, and therefore will not be in a position to control or influence marketing of gas produced by that project. Tokyo Gas sells its gas entitlement to a gas sales company owned by Shell and CNOOC, which then sells gas to end customers. Tokyo Gas has no interest in the gas sales company and does not participate in any way in its marketing activities. **Confidential to MidOcean Energy**.
- 242 **Third**, given that MidOcean Energy will have only a 1.25% interest in QCLNG, will not have control or meaningful influence over QCLNG operations, will have no involvement in QCLNG marketing **Confidential to MidOcean Energy**, the acquisition by MidOcean Energy of a 25.01% interest in APLNG cannot lessen competition in the East Coast wholesale gas market. These minority interests will not give MidOcean Energy, nor its investors, the ability to control QCLNG or APLNG's operations.
- 243 In relation to Senex's proposed investment in MidOcean Energy:
- 244 **First**, the structure of Senex's investment in MidOcean Energy remains subject to commercial negotiation between the parties, however it is currently intended that Senex will invest at the MidOcean Energy, LLP level. Senex, may, however, invest at the MidOcean LNG Australia, LLP level. Any governance rights arising by virtue of Senex's investment in either MidOcean Energy, LLP or MidOcean LNG Australia, LLP will be akin to those of a limited partner only, save for the limited right **Confidential to MidOcean Energy: of appointment to the board of a MidOcean Energy entity**. Relevantly, Senex's position will not provide it with any rights to appoint a director to the board of APLNG or QCLNG or to any committees which exist under the joint venture

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arrangements for those projects. In this respect, if Senex (or Hancock and POSCO) do ultimately take a minority interest in MidOcean Energy, MidOcean Energy would be prepared to provide an enforceable undertaking that it will procure that no person from Senex, Hancock or POSCO will be appointed to the board of APLNG.

245 As set out at paragraphs 240 to 242 above, MidOcean Energy will not control APLNG or QCLNG. This means that there is no ability for Senex to use its position as a limited partner in one of the EIG controlled funds invested in MidOcean Energy to lessen competition in the East Coast wholesale gas market. In relation to QCLNG, MidOcean Energy will have only a de minimis 1.25% interest in the QCLNG joint venture overall, and will not be responsible for the marketing, sale or contracting of domestic gas produced by QCLNG. In relation to APLNG, MidOcean Energy will have only a 25.01% interest in the APLNG joint venture overall, and post-Proposed Acquisition **Confidential to MidOcean Energy**. Therefore, MidOcean Energy, and in turn Senex, will not have the ability to control APLNG or QCLNG's operations in a way that would lessen competition in the East Coast wholesale gas market.

246 **Second**, Senex is not a major supplier of gas to the East Coast wholesale gas market. As at 30 June 2021, Senex produced approximately 17.3 PJ of natural gas per year.<sup>41</sup> This represents less than 1% of the annual production of the East Coast wholesale gas market, which will have an annual production of approximately 1,996 PJ in 2023.<sup>42</sup> Senex's share of reserves is also small, with Senex's shares of East Coast gas market 2P and 2C reserves as at 30 June 2022 assessed by the ACCC as being approximately 2% of 2P reserves and less than 1% of 2C reserves.<sup>43</sup> There are also various other non-LNG project suppliers and smaller domestic gas suppliers that will continue to compete vigorously with Senex, APLNG and QCLNG post-Proposed Acquisition.

247 **Third**, the majority of Senex's gas production is committed under long-term sales agreements. This means that Senex has no ability to reprice its supply based on any information it could potentially obtain from its investment in MidOcean Energy, or divert material current gas production to LNG instead of the East Coast wholesale gas market. Even if Senex was able to do one of those things, this would not result in any lessening of competition in the East Coast wholesale gas market given that Senex's total production represents a very small amount of the annual production of the East Coast wholesale gas market.

### 1.15 Conclusion and structure of this Application

248 In summary, the Proposed Acquisition will not substantially lessen competition in any relevant market. The Proposed Acquisition will, however, materially facilitate the transition to a zero carbon economy by facilitating significant and timely investment and ameliorating some of the risks transition creates.

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<sup>41</sup> Senex, *Annual Report 2021* page 17 <[https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021\\_FA-WEBVERSION-1.pdf](https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021_FA-WEBVERSION-1.pdf)>.

<sup>42</sup> ACCC, *Gas Inquiry 2017 – 2030: Interim update on east coast gas supply-demand outlook for 2023* (March 2023) page 8 <[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20March%202023%20interim%20report\\_1.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20March%202023%20interim%20report_1.pdf)>.

<sup>43</sup> ACCC, *Gas Inquiry 2017 – 2030: Interim update on east coast gas supply demand outlook for 2023* (January 2023), pages 149-151) <[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL\\_0.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL_0.pdf)>

## Structure of this Application

The balance of this Application is structured as follows:

**A. Background**

**Section 2 Proposed Acquisition:** describes the Proposed Acquisition including the parties' rationale.

**Section 3 Counterfactual:** provides an outline of the future with and without the Proposed Transaction for Brookfield, Origin, MidOcean Energy, GIC, Temasek and third parties.

**Section 4 Parties:** provides information about the parties, related entities and their respective businesses.

**Section 5 Industry Context:** provides background information about the electricity and gas industries.

**B. Public Benefits**

**Section 6 Public benefits:** sets out the significant public benefits the Proposed Acquisition will generate.

**C. No substantial lessening of competition**

**Section 7 Market Definition:** defines the markets relevant to the ACCC's consideration of whether the Proposed Acquisition will substantially lessen competition in any market.

**Section 8 No substantial lessening of competition in electricity generation markets through AusNet's Victorian transmission system:** outlines why the Proposed Acquisition will not substantially lessen competition in any electricity generation market through AusNet's Victorian **transmission system**.

**Section 9 No substantial lessening of competition in electricity retail markets:** outlines why the Proposed Acquisition will not substantially lessen competition in any **electricity retail** market.

**Section 10 No substantial lessening of competition in gas retail markets:** outlines why the Proposed Acquisition will not substantially lessen competition in any **gas retail** market.

**Section 11 No substantial lessening of competition in electricity generation markets through AusNet's electricity distribution system:** outlines why the Proposed Acquisition will not substantially lessen competition in any electricity generation market through AusNet's Victorian **distribution system**.

**Section 12 No substantial lessening of competition in gas and electricity retail markets through Jemena's transmission and distribution assets:** outlines why the Proposed Acquisition will not substantially lessen competition in any **gas or electricity retail** markets through Jemena's **transmission and distribution assets**.

**Section 13 No substantial lessening of competition in relation to smart meters:** outlines why the Proposed Acquisition will not substantially lessen competition in any **smart meter or electricity retail** market as a result of Brookfield's 50% interest in Intellihub.

**Section 14 No substantial lessening of competition in the East Coast wholesale gas market:** outlines why the Proposed Acquisition will not substantially lessen competition in the East Coast wholesale gas market.



## **Public Version**

***Annexure A: Overview of the electricity and gas regulatory regimes.***

***Annexure B: Brookfield's global renewables experience.***

***Annexure C: AusNet competitor, customer and trade / industry association details***

***Annexure D: Intellihub competitor, customer and trade / industry association details***

***Annexure E: MidOcean competitor, customer and trade / industry association details***

***Annexure F: Jemena competitor, customer and trade / industry association details***

***Annexures G - J: Brookfield and MidOcean Declarations and Undertakings***

***Annexure K: Proof of filing fee***

***Annexure L: Filings in other jurisdictions***

***Annexure M: Origin Energy declaration***

## Background

### 2 Proposed Acquisition

#### 2.1 Details of the applicants and other parties to the Proposed Acquisition

249 Key information relating to the applicant acquirers and target is set out below in **Figure 5** and **Figure 6** below.

*Figure 5: Applicant Acquirers' key information*

	<b>Brookfield LP (Eos Aggregator (Bermuda) LP)</b>	<b>MidOcean Reef Bidco Pty Ltd</b>
<b>Address (registered office)</b>	73 Front Street, Hamilton HM12, Bermuda	'Gateway' Level 20, 1 Macquarie Place, Sydney NSW 2000
<b>Telephone number:</b>	+1 441 294 3309	02 9338 2100
<b>ACN</b>	Not applicable	665 950 318
<b>Contact Person</b>	<p>Michael Ryan, Managing Director and Counsel, Brookfield</p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p>Brookfield LP also requests that all correspondence be copied to its legal advisors: <a href="mailto:fiona.crosbie@allens.com.au">fiona.crosbie@allens.com.au</a></p>	<p>David Edgar, Senior Vice President</p> <p><b>Confidential to MidOcean Energy</b></p> <p>MidOcean Energy also requests that all correspondence be copied to its legal advisors: <a href="mailto:fiona.crosbie@allens.com.au">fiona.crosbie@allens.com.au</a></p>
<b>Business Activities</b>	<p>Brookfield LP is a newly established limited partnership, currently wholly owned by Brookfield Global Transition Fund GP, L.P. in its capacity as general partner, and Brookfield Global Transition Fund GP S.à.r.l in its capacity as general partner.</p> <p>Brookfield LP currently has no business activities.</p>	<p>MidOcean Energy does not currently own any assets in Australia. However, on 7 October 2022, MidOcean Energy entered into definitive documentation to acquire interests in the Gorgon, Pluto, Ichthys and Queensland Curtis LNG projects from the Tokyo Gas Group for US\$2.15 billion.</p>
<b>Company Structure Chart</b>	Please see <b>Annexures 1.1 to 1.7</b>	Please see <b>Annexure 4.1</b>
<b>Organisation Structure Chart</b>	Please see <b>Annexures 1.11 and 1.12</b>	Please see <b>Annexure 4.3</b>

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**Figure 6: Target's key information**

Origin Energy	
<b>Address (registered office)</b>	Level 32, Tower 1 100 Barangaroo Avenue Barangaroo, New South Wales 2000
<b>Telephone number:</b>	+61 2 8345 5000
<b>ACN</b>	000 051 696
<b>Contact Person</b>	Kate Jordan General Counsel and Executive General Manager, Company Secretariat, Risk & Governance <b>Confidential to Origin</b> <b>Confidential to Origin</b> Origin also requests that all correspondence be copied to its legal advisors: <a href="mailto:linda.evans@hsf.com">linda.evans@hsf.com</a>
<b>Business Activities</b>	Origin is an ASX-listed Australian integrated energy company. Its key activities include electricity generation and electricity and gas retailing across Australia and interests in APLNG. It also operates, or has interests in, a range of other businesses in energy and non-energy adjacent sectors.
<b>Company Structure Chart</b>	Origin will provide directly to the ACCC.
<b>Organisation Structure Chart</b>	Origin will provide directly to the ACCC.

## 2.2 Structure of Proposed Acquisition

- 250 A consortium comprising Brookfield and MidOcean Bidco (the **Scheme Consortium**) has offered to acquire all of the shares in Origin Energy Limited (**Origin**) for \$8.912 per share<sup>44</sup> by way of a scheme of arrangement. This price, values Origin at \$18.7 billion<sup>45</sup> on an enterprise value basis. Origin's announcement dated 27 March 2023 is attached as **Annexure 6**. The Scheme Consortium's announcement dated 27 March 2023 is attached as **Annexure 7**.
- 251 To implement the acquisition, a binding Scheme Implementation Deed was signed on 27 March 2023 by Origin, MidOcean Reef Bidco Pty Ltd (**MidOcean Bidco**) and Brookfield Renewable Group Australia Pty Ltd (see **Annexure 5.1**).<sup>46</sup> Under the Scheme Implementation Deed, MidOcean Bidco will acquire 100% of the ordinary shares in Origin (the **Scheme Acquisition**). The parties are targeting implementation of the Scheme Acquisition by early in the 2024 calendar year, subject to customary conditions precedent, including FIRB approval, ACCC merger authorisation and requisite shareholder approval.
- 252 The Origin Board has unanimously recommended that Origin shareholders vote in favour of the Scheme Acquisition in the absence of a superior proposal, and subject to an independent expert concluding the Scheme Acquisition is in the best interests of shareholders.

<sup>44</sup> The price offered is \$5.78 per share, and US\$2.19 per share. Based on an assumed AUD/USD exchange rate of 0.70, this implies a total consideration of \$8.912 per share. The total consideration payable will be reduced by any dividends paid by Origin prior to implementation of the Scheme Acquisition. A 4.5 cents per month ticking fee, accruing on a daily basis, will be payable if implementation of the Scheme Acquisition is delayed beyond 30 November 2023.

<sup>45</sup> Based on 1,728,724,644 diluted shares outstanding, net debt of \$3.3 billion as disclosed in Origin's 2023 half year report and an assumed AUD/USD exchange rate of 0.70.

<sup>46</sup> For completeness, Brookfield Renewable Group Australia Pty Ltd will novate the Scheme Implementation Deed to EOS Brookfield Holdco GP Limited, a wholly owned Brookfield subsidiary.

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- 253 The proposed acquisition of Origin Energy Limited (**Origin**) will comprise two interdependent acquisitions:
- (a) **Scheme Acquisition:** It is proposed that MidOcean Bidco will acquire 100% of the ordinary shares in Origin pursuant to a scheme of arrangement under the *Corporations Act 2001* (Cth) (**Corporations Act**) (the **Scheme Acquisition**). To implement the Scheme Acquisition, a binding Scheme Implementation Deed was signed on 27 March 2023 by Origin, MidOcean Bidco and Brookfield Renewable Group Australia Pty Ltd. The Scheme Acquisition is subject to various conditions precedent, as set out in the Scheme Implementation Deed (see **Annexure 5.1**), including FIRB approval, ACCC authorisation, Origin shareholder approval and Court approval.
  - (b) **On-Sale Acquisition:** Conditional upon, and as soon as possible following implementation of the Scheme Acquisition, MidOcean Bidco will procure that Origin and its interests are divided into two separate businesses, being the Origin Energy Markets business and the Origin Integrated Gas business. Origin's Energy Markets business comprises Origin's energy retailing business, electricity generating assets, energy wholesale and trading business, development assets relating to energy production and storage, its investment in Octopus Energy and its LPG business and domestic gas trading business. Origin's Integrated Gas Business comprises Origin's upstream gas interests and shareholding in Australia Pacific LNG. The division of Origin will be implemented by MidOcean Bidco procuring the sale of the various Origin subsidiaries and assets comprising the Origin Energy Markets business to various entities wholly owned by Brookfield LP. MidOcean Bidco will retain 100% of the shares in Origin which, following completion of the sale of the Origin Energy Markets business, will own only the Origin Integrated Gas business. The terms of Brookfield LP's acquisition of the Origin Energy Markets business are set out in the Commitment Deed (see **Annexure 5.3**) and the steps that MidOcean Bidco and Brookfield LP will take to prepare for the implementation of the Scheme Acquisition and the On Sale Acquisition are set out in the Bid Conduct Deed (see **Annexure 5.2**).
- 254 The Scheme Acquisition and the On-Sale Acquisition are interdependent in the sense that once the conditions precedent to the Scheme Acquisition are satisfied, both the Scheme Acquisition and the On-Sale Acquisition must occur. There are no additional conditions precedent to the On-Sale Acquisition. Conversely, if the conditions precedent to the Scheme Acquisition are not satisfied, neither the Scheme Acquisition nor the On-Sale Acquisition can occur. Either both acquisitions occur, or neither does.
- 255 To implement the On-Sale Acquisition, various agreements were entered into on or around 27 March 2023. These include:
- (a) **Bid Conduct Deed:** The Bid Conduct Deed was entered into by EIG Management Company LLC, Brookfield Corporation, and MidOcean Bidco on 27 March 2023. This Deed sets out the steps that the parties have agreed to take to prepare and implementation of the inter-connected and inter-related Scheme Acquisition and On-Sale Acquisitions (see **Annexure 5.2**); and
  - (b) **Commitment Deed:** The Commitment Deed was entered into by Brookfield LP, MidOcean Bidco and MidOcean Energy, LLC on 27 March 2023. This Deed sets out the terms and conditions on which MidOcean Bidco and Brookfield LP will undertake the On-Sale Acquisition (see **Annexure 5.3**). Schedule 1 to this Deed is the Energy Markets Share Sale Purchase and Sale Agreement.

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- 256 The Scheme Acquisition and the On-Sale Acquisition are referred to collectively in this Application as the **Proposed Acquisition**.
- 257 Brookfield will invest in and control Brookfield LP via the Brookfield Global Transition Fund I (**BGTF**), Brookfield Renewable Partners L.P (**BEP**) and certain other Brookfield-managed co-investors. The Brookfield-controlled portion of Brookfield LP is expected post-syndication to be somewhere between **Confidential to Brookfield: 40 – 50%** and 67.6%. The balance of Brookfield LP is expected to be owned by Buckland Investment Pte. Ltd. (which is managed by GIC Special Investments Private Limited, which is in turn wholly owned by GIC Private Limited) (**Buckland Investment**) (22.5%), Davis Investments Pte. Ltd. (**Davis Investments**) wholly owned by Temasek Holdings (Private) Limited (**Temasek**) (9.9%), potentially Reliance Industries (**Reliance**) (interest to be determined), and possible other foundation co-investors (collectively, the **BGTF Consortium**).<sup>47</sup> Any other foundation co-investors will be investors holding less than 9.9% and will not own, or have an interest in, any material East Coast electricity or gas assets.
- 258 MidOcean Bidco is currently a wholly owned subsidiary of MidOcean Energy, LLC. MidOcean Energy, LLC is an LNG company formed and managed by EIG to build a diversified, resilient, cost and carbon competitive LNG portfolio. It is intended that one or more EIG controlled funds will invest in MidOcean Energy. It is possible that additional co-investors will also invest in MidOcean Energy. With one exception, the potential passive investors with whom MidOcean Energy is currently in discussions are not participants in the East Coast domestic gas market and do not have East Coast gas reserves. One potential passive investor in MidOcean Energy is Senex Energy Limited (**Senex**), an Australian company that is privately owned by K-A Energy 1 Pty Ltd, a subsidiary of POSCO INTERNATIONAL Corporation (50.1%) and Hancock Energy Corporation Pty Ltd (49.9%). Senex is a small supplier of gas in the East Coast domestic market.
- 259 Immediately following implementation of the Proposed Acquisition, MidOcean Bidco intends to sell part of Origin's 27.5% interest in APLNG (which forms part of the Origin Integrated Gas business) to ConocoPhillips which will see ConocoPhillips acquire an additional 2.49% in APLNG. **Confidential to MidOcean Energy**.
- 260 The relevant transaction steps are set out below:
- (a) Brookfield LP **Confidential to Brookfield: and certain special purpose vehicles have or will be established**.
  - (b) MidOcean Bidco has been established as a special purpose vehicle, which is ultimately wholly owned (via a series of intermediary holding vehicles) by MidOcean Energy. MidOcean Bidco has entered into the Scheme Implementation Deed as Bidder.
  - (c) Funding for the scheme consideration will be provided to MidOcean Bidco by MidOcean Energy, Brookfield LP and ConocoPhillips **Confidential to Brookfield: in various forms**.
    - (i) **Confidential to Brookfield**
    - (ii) **Confidential to Brookfield**
    - (iii) **Confidential to Brookfield****(Pre-scheme Implementation)**.
  - (d) Following the Pre-Scheme Implementation, MidOcean Bidco will acquire all of the ordinary shares in Origin under a scheme of arrangement, becoming a wholly owned subsidiary of MidOcean Bidco. Following that, Origin will be delisted from ASX (**Scheme Implementation**).

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<sup>47</sup> GIC through Buckland Investment Pte. Ltd. will have no direct influence on the underlying investments with Brookfield retaining management of Brookfield LP.

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- (e) Immediately following Scheme Implementation and an internal Origin restructure, the EM Co's will acquire the Energy Markets business from the Origin Group in accordance with the terms of the Bid Conduct Deed and Commitment Deed.

261 Following that,

- (a) MidOcean Energy will hold 100% of Origin's Integrated Gas business (through MidOcean Bidco's 100% ownership of Origin, which owns the Integrated Gas business); and
- (b) ConocoPhillips will acquire an additional 2.49% of the membership interests in APLNG from Origin, with MidOcean Energy retaining a 25.01% interest in APLNG.

262 The Proposed Acquisition is subject to a number of regulatory conditions precedent, including:

- (a) approval under the *Foreign Acquisitions and Takeovers Act 1975* (Cth) (**FATA**), by or on behalf of the Treasurer; and
- (b) approval for the purposes of Section 50 of the *Competition and Consumer Act 2010* (Cth) (**CCA**), whether by way of ACCC clearance, ACCC authorisation under Section 88 of the CCA, Australian Competition Tribunal authorisation or Federal Court declaration.

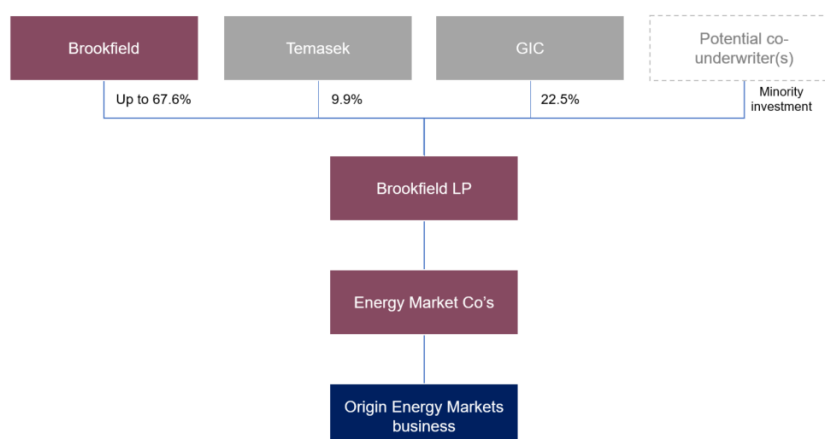
263 The consideration payable to Origin's shareholders is \$8.912 per share<sup>48</sup> which values Origin at an enterprise value of \$18.7 billion.

### 2.3 The change in ownership structure post transaction

#### **Origin Energy Markets business**

264 The Origin Energy Markets business will be owned by BGTF Consortium. BGTF, the proposed majority holder in BGTF Consortium, is managed and operated by an affiliate of Brookfield Corporation. The proposed ownership structure is set out below in **Figure 7**.

**Figure 7: Origin Energy Markets' Ownership post Proposed Acquisition**



Source: Brookfield

265 Brookfield, Buckland Investment and Temasek have entered into a binding Term Sheet which sets out the governance arrangements to apply to the holding company for the Origin Energy Markets business – the Brookfield LP - following completion of the Proposed Acquisition (see **Annexure 5.9**). The parties are required to negotiate in good faith to agree to a full form governance agreement (consistent with the Term Sheet) prior to completion, and until such full form agreement is entered into, the Term Sheet will regulate the governance arrangements that

<sup>48</sup> The price offered is \$5.78 per share, and US\$2.19 per share. Based on an assumed AUD/US\$ exchange rate of 0.70, this implies a total consideration of \$8.912 per share.

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apply between the parties. Under the Term Sheet,<sup>49</sup> each of Buckland Investment and Davis Investments are entitled to appoint one director for each **Confidential to Brookfield**% of equity held. **Confidential to Brookfield: Each investor gets a number of directors proportionate to their equity investment.** Other than 'reserved matters' and 'fundamental matters', decisions will be taken by the board by a simple majority vote **Confidential to Brookfield**. However, as long as Brookfield holds more than 40% of the equity, it shall have the majority of votes on simple majority matters). 'Reserved matters' and 'fundamental matters' would require: (i) 'reserved matters' (such as the approval of the annual budget and business plan, appointment or termination of the CEO and material acquisitions or divestments exceeding **Confidential to Brookfield**: Brookfield plus **Confidential to Brookfield: one or more co-underwriter(s)** to vote in favour and (ii) 'fundamental matters' (such as a material change to the nature of the business or any merger, consolidation or restructuring): the support of **Confidential to Brookfield: one or more co-underwriter(s)**.

- 266 In addition, it is expected that Buckland Investment will retain certain 'founder rights' for as long as it holds **Confidential to Brookfield: a specific interest.**
- 267 The Term Sheet also includes a regime for approval of all affiliate transactions under which any transaction between the Origin Energy Markets business and an investor or its affiliates (including BEP / BGTF and their affiliates): (i) must be on arm's length terms; and (ii) requires the approval of **Confidential to Brookfield**. For this purpose, other Brookfield-managed investment vehicles and their portfolio companies, including AusNet and Intellihub, would be considered affiliates of BEP and BGTF. As a result, any transaction between the Origin Energy Markets business and AusNet or Intellihub that is put before the Brookfield LP board will require the approval of **Confidential to Brookfield**. If another co-investor joins the Brookfield LP, it will enter into the same governance arrangements.
- 268 It is expected that, in line with Brookfield's investment thesis, the Origin Energy Markets business will be managed day to day at the portfolio company level. The board of the operating company is expected to comprise management of the Origin Energy Markets business and the CEO will have delegated authority to manage the business in accordance with the budget and business plan approved by Brookfield LP.

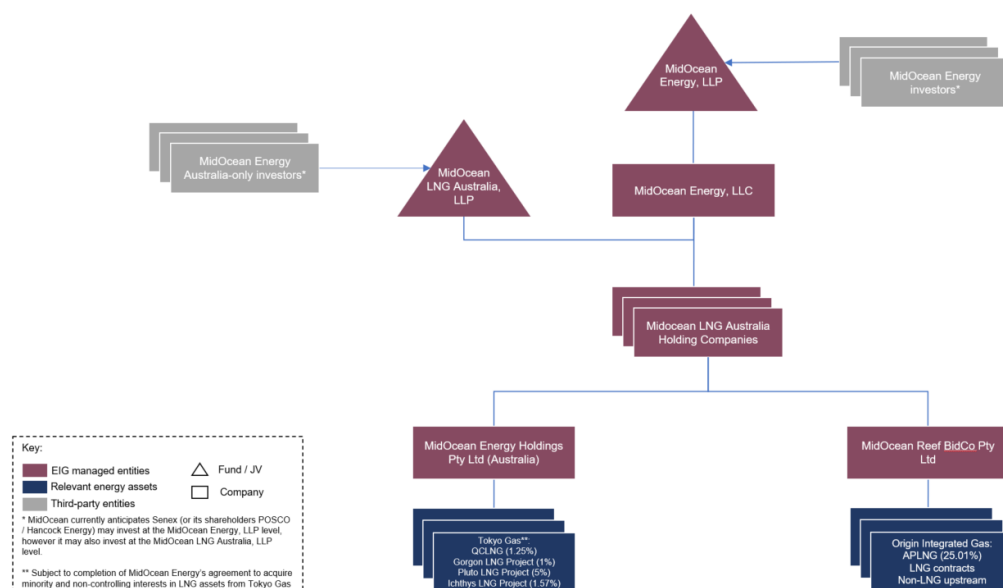
### ***Origin Integrated Gas business***

- 269 MidOcean Energy will acquire 100% of Origin's Integrated Gas business.
- 270 Immediately following completion of the Proposed Acquisition, MidOcean Energy intends to sell part of Origin's current 27.5% interest in APLNG to ConocoPhillips which will see ConocoPhillips acquire an additional 2.49% in APLNG. Following ConocoPhillips' acquisition of an additional 2.49% stake in APLNG, MidOcean Energy will hold 25.01% of the shares in APLNG and ConocoPhillips would hold 49.99%. **Confidential to MidOcean Energy.**
- 271 **Figure 8** below sets out MidOcean Energy's LNG interests in Australia following the Proposed Acquisition.

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<sup>49</sup> Brookfield Global Transition Fund Co-Underwriter Term Sheet Project EOS, *Schedule A – Governance Terms (Annexure 5.9)*.

Figure 8: MidOcean Energy's Australian LNG interests, post-transaction



Source: MidOcean Energy

## 2.4 Expected completion date

272 The Proposed Acquisition is expected to complete by early in the 2024 calendar year, subject to the satisfaction of conditions precedent including FIRB approval and ACCC authorisation.

## 2.5 Key transaction documents

273 A copy of the Scheme Implementation Deed is attached as **Annexure 5.1**. A copy of the Bid Conduct Deed and Commitment Deed giving effect to the On-Sale Acquisition are attached as **Annexures 5.2 and 5.3**. Copies of related agreements are attached as **Annexures 5.4 to 5.14**.

274 The scheme booklet to be provided to Origin shareholders has not yet been prepared. A copy of the scheme booklet will be provided to the ACCC when available.

275 Copies of documents submitted to BGTF's Investment Committee and the board of BEP in relation to the Proposed Acquisition are attached as **Annexures 1.13 to 1.15**. As Brookfield LP is a newly established limited partnership, no separate board documents have been prepared.

276 A copy of the document submitted to MidOcean Energy's Investment Committee in relation to the Proposed Acquisition is attached as **Annexure 4.5**.

277 Origin will provide copies of any documents submitted to its board or prepared by or for senior management in respect of the Proposed Acquisition directly to the ACCC.

## 2.6 Rationale for Proposed Acquisition

### (a) Brookfield

278 As at the date of this Application, BGTF is the world's largest private institutional investment fund dedicated specifically to investing in the transition globally. BGTF focuses on creating value for investors through investments that accelerate the global transition to a net zero carbon economy. A key aspect of this is transforming carbon-intensive businesses, which includes reducing greenhouse gas emissions, increasing low-carbon energy capacity and developing renewable solutions.



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- 279 The Proposed Acquisition is consistent with BGTF's global investment mandate, in particular through the responsible decommissioning of Origin's existing coal generation asset and building new clean generation for the benefit of all stakeholders.
- 280 Origin Energy Markets is an ideal investment opportunity for BGTF. It is currently a carbon intensive business. It has plans to close Australia's largest black coal-fired power station, Eraring, as early as August 2025 but making this plan a reality will require significant investment in renewable generation and firming capacity (batteries and pumped hydro). Furthermore, Origin Energy Markets is structurally short of electricity (ie, it generates significantly less electricity than it sells, even before the planned closure of Eraring). This creates an opportunity for the BGTF Consortium to invest in significant additional renewable generation to meet Origin Energy Markets' customer demand. As a result, the Proposed Acquisition will make a significant contribution towards Australia's net zero objective, as well as generating value for BGTF's investors. BGTF is a closed-end fund, with an expected operating term of 12 years (with option for two one-year extensions), at which point BGTF will exit the investments the fund has made, and return capital to investors. This incentivises Brookfield to execute the 'green build-out' plan for Origin Energy Markets so that BGTF can generate greater returns on exit having completed the material decarbonisation of Origin Energy Markets.
- 281 In its press release (see **Annexure 7**) announcing the signing of the Scheme Implementation Deed, Brookfield noted the following investment highlights:
- (a) **Market-leading:** Origin Energy Markets is Australia's largest integrated power generator and retailer (by customer accounts) with low customer turnover and industry-leading cost to serve. The business benefits from a strong management team that is focused on the transition and is well positioned to respond to evolving energy markets.
  - (b) **Scale decarbonization opportunity:** Brookfield intends to accelerate the build out of significant renewables and storage, enabling the retirement of Eraring, Australia's largest coal-fired power plant, reducing reliance on a carbon-intensive grid, and reducing emissions<sup>50</sup> produced by the business by more than 70% by 2030.
  - (c) **\$20 to \$30 billion investment in clean energy:** Brookfield's access to capital and renewable development capabilities will enable investment of between \$20 to \$30 billion of additional investment during the next decade to build out up to 14 GW of new renewable generation and storage facilities resulting in a more cost effective and flexible portfolio of power generation assets that will benefit Origin Energy Markets' energy retail customers.
  - (d) **Earnings visibility and stable margins:** The regulated price setting regime together with Origin Energy Markets' position as the largest and lowest cost to serve electricity retailer in Australia provides earnings visibility and stable margins.
  - (e) **Significant value creation opportunities:** Origin Energy Markets is uniquely positioned to benefit from the electrification of the Australian economy, providing customers with an enhanced choice of low-cost services and products such as an expanded retail and distributed energy offerings and other decarbonization services, such as electric vehicle chargers, heat pumps and rooftop solar.
- 282 Mr Mark Carney, Chair, Brookfield Asset Management and Head of Transition Investing, said:
- As the energy transition gathers pace, what's needed is increasingly clear: faster deployment of large-scale renewables, the accelerated, responsible retirement of coal generation, and an interim, supportive role for gas as the dependable back-up fuel. Brookfield is determined that the new Origin Energy Markets will lead the way in all respects at this critical moment for the Australian economy.

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<sup>50</sup> Absolute emissions and emissions intensity in accordance with SBTi.

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283 Mr Stewart Upson, Brookfield Asia Pacific CEO, said:

The acquisition of Origin Energy presents Brookfield with a unique opportunity to invest at least \$20 billion and make a material difference to achieving Australia's net zero targets. We will build on the success of our global renewable power and transition business where we have a mandate to 'go where the emissions are' in putting billions of dollars behind an executable plan to reduce emissions at Origin. Brookfield has the capital, expertise, supply chain strength and global track record that's needed to transform Origin's generation fleet to greener sources and accelerate Australia's energy transition while ensuring network security and reliability.

**(b) MidOcean Energy**

284 MidOcean Energy is an LNG company formed in June 2022 and managed by EIG. MidOcean Energy and EIG believe that LNG will be a critical enabler of the energy transition and is of growing importance as a geopolitically strategic energy source. MidOcean Energy is seeking to build a diversified, resilient, cost competitive and carbon competitive LNG portfolio. The acquisition of Origin's existing integrated gas business, including in particular its shareholding in APLNG, will create a strong foundation for the newly established company.

285 In its press release (see **Annexure 7**) announcing the signing of the Scheme Implementation Deed, MidOcean Energy noted the following investment highlights:

- (a) **Building an attractive portfolio of world-class assets:** APLNG is a tier one, well-capitalized integrated LNG project that is ideally positioned to supply key customers in the Asia-Pacific region and across the globe. Since its inception, the project has seen approximately US\$30 billion of capital investment into high-quality gas reserves as well as downstream processing and associated infrastructure. This transaction complements MidOcean Energy's existing portfolio of Australian LNG assets recently acquired from Tokyo Gas.
- (b) **Enabling the energy transition:** This acquisition fits MidOcean Energy's belief that gas and LNG are critical bridge fuels between the energy systems of today and tomorrow. MidOcean Energy believes that LNG is vital to achieving global energy transition targets, with coal-to-gas switching being a key pathway for top regional carbon emitters to meet both near-and longer-term emissions reduction targets. Natural gas also enables much deeper renewable penetration in power grids whilst ensuring grid resilience. This supports the deeper electrification of economies, which in turn is a crucial element of any roadmap to net zero.
- (c) **Leveraging deep operating experience:** MidOcean Energy's management team and Board have deep Australian and global LNG experience. CEO De la Rey Venter is a 25-year industry veteran, and EIG has more than 20 years' experience in the global LNG sector. MidOcean Energy's operating experience and credibility, together with its long-term investment horizon, demonstrate its commitment to the safe and sustainable operation of these project interests for the long term.
- (d) **High quality long-term contracts with advantaged position to key customers:** The project primarily sells LNG under long-dated take or pay contracts to investment grade counterparties in Asia. It operates at globally competitive breakeven costs and is well positioned to meet growing LNG demand in the Asia-Pacific region.

286 Mr Blair Thomas, EIG CEO, said:

LNG will be critical in delivering energy transition targets, and this transaction is a compelling opportunity to accelerate EIG's strategy of gaining exposure to high quality LNG assets around the globe. We have long been attracted to the Australian market, with an established presence in Australia since 2000, and look forward to playing a pivotal role in meeting Australia's transition targets by enabling broader decarbonization efforts at APLNG.

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287 Mr De la Rey Venter, MidOcean Energy CEO, said:

We're thrilled to join forces with Brookfield and Origin in this transaction and to further expand our footprint in Australia. Origin's Integrated Gas business adds world-class assets to our portfolio - assets that fit our strategy to create a high quality, diversified, global 'pure play' integrated LNG company. We look forward to working with all stakeholders to help facilitate Australia's energy transition, to bring stable and affordable gas supply to the domestic market and to provide a reliable supply of LNG to the region for decades to come.

**(c) Origin**

288 Origin considers the Proposed Acquisition is in the best interests of its shareholders representing a significant premium to Origin's share price prior to the announcement of the Proposed Acquisition. It will result in Origin being brought into private ownership, which would remove the limitations associated with public shareholder capital and enable acceleration of its capital investment in new renewable energy and storage assets.

289 Brookfield's large-scale capital allocated to invest in the energy transition (including the announcement of at least an additional \$20 billion in funding for Origin Energy Markets to build the required renewable capacity and storage) will enable Origin to materially increase and accelerate its direct investments into renewable and storage assets. This is in contrast to Origin's current approach, which in many instances involves contracting for renewables offtake or storage capacity, or in some cases seeking to partner with third party capital providers under complex partnering arrangements to support the capital requirements of such developments.

290 The Proposed Acquisition will also provide Origin with access to Brookfield's significant international renewable development expertise and global supply chain relationships allowing renewable and storage projects to be developed more economically and more quickly, increasing the likelihood that more of these developments will proceed in a timely manner.

291 It is the combination of Origin's existing platform of retail and generation assets, combined with Brookfield's global capital, supply chain relationships in a de-listed setting which will allow for the acceleration and increased scale of investment in renewable and storage assets than may otherwise be the case in the absence of the Proposed Acquisition.

292 Mr Frank Calabria, Origin CEO, said:

We believe this transaction also stands to benefit the broader Australian community as it will unlock significant capital that can help accelerate the energy transition and deliver benefits in the form of cleaner, smarter and lower cost energy for our nation over time.

### 3 Counterfactual

293 This section provides an outline of the future with and without the Proposed Acquisition, ie the counterfactual, in respect of Brookfield ([section 3.1](#)), Origin ([section 3.2](#)), MidOcean Energy ([section 3.3](#)), GIC ([section 3.4](#)), Temasek ([section 3.4](#)), and third party market participants ([section 3.5](#)).

#### 3.1 Counterfactual: Brookfield

##### 3.1.1 Overview

294 Brookfield Renewable's central business plan in Australia is to access a substantial direct customer load (ie, Origin Energy Markets' customer load) to underpin a rapid build-out of renewable electricity generation and storage and transition those customers towards net zero. The only viable path to achieve this in a timely manner is to acquire a significant Australian gentailer.

295 If BGTF was unable to acquire Origin Energy Markets (or another major gentailer), Brookfield would continue to seek out potential opportunities to develop and invest in renewables and storage in Australia, however, this would be on a more piecemeal basis and at a much smaller scale. Building renewables and storage absent the Proposed Acquisition would face significant challenges. It is highly uncertain what quantity of renewables and storage Brookfield Renewable may be able to construct in the NEM absent the Proposed Acquisition.

##### 3.1.2 Brookfield Renewable's current business in Australia

###### *Current business*

296 Brookfield (including BGTF) does not currently own any operating generation or storage assets (renewable or non-renewable) in Australia, other than through X-Elio<sup>51</sup> and AusNet (the Ballarat Battery). X-Elio has five active pipeline projects in early stages of development:<sup>52</sup>

- (a) Sixteen Miles Solar Farm (QLD) (420 MW installed capacity);
- (b) Forest Glen (NSW) (110 MW installed capacity);
- (c) Willaville Solar Farm (NSW) (**Confidential to Brookfield**);
- (d) **Confidential to Brookfield**;
- (e) **Confidential to Brookfield**.

297 Absent the Proposed Acquisition, X-Elio will continue developing and building new solar farms globally. Brookfield has entered into an agreement with KKR to acquire KKR's 50% interest in X-Elio. Brookfield's core objective for doing so is to execute X-Elio's development and construction pipeline in several global markets, including Spain, Italy, Australia, USA and Japan. In Australia, X-Elio will continue to work on its five active pipeline projects in accordance with its business plan.

298 Brookfield has been present in Australia since 2007 and has been considering investments in renewables since at least 2012. BIF III took a small toehold interest of ~9% in Infigen in 2018 with the hope that a more substantive transaction may be able to be negotiated. This did not happen, however, and the stake was sold in 2020. Other than this, and the investment in Moonlight Range (discussed below), Brookfield has not made any direct investments in renewables in Australia.

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<sup>51</sup> On 16 March 2023, BIF IV agreed to acquire the remaining 50% it does not own in X-Elio from KKR. The transaction is subject to customary closing conditions and is expected to close during the second half of 2023.

<sup>52</sup> X-Elio, *X-Elio's renewable and sustainable energy projects*, <[https://www.x-elio.com/projects-archive/?sort\\_by=country\\_asc](https://www.x-elio.com/projects-archive/?sort_by=country_asc)>.

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299 Since BGTF was established in 2021, BGTF has been the primary arm through which Brookfield has explored renewable and transition investment opportunities in Australia. This began with Brookfield considering a possible acquisition of AGL in partnership with Grok Investments, which did not proceed. As noted above, Brookfield Renewable's central business plan is to acquire a gentailer whose position could underpin investment in renewables and assist with Australia's transition to net zero. Since 2021, Brookfield has established a team in Australia to look at renewable and transition opportunities in relation to through acquisitions (M&A) and single project development opportunities. The intention is for any development opportunities that might be identified that relate to BGTF's clean energy investment theme described in paragraph 300(b) below would be contributed to any gentailer (or retail) business that might be acquired. Failing that, such opportunities could conceivably be developed on a standalone basis.

300 The Brookfield Renewable and Transition team has a dedicated M&A team of four people in Australia whose focus is to identify potential investment opportunities for BGTF, being:

- (a) **Business transformation investments:** investments in utility, industrial and energy businesses that are currently classified as 'brown' energy businesses (for example, coal-fired power generation), so that BGTF can invest in transforming those businesses into 'green' energy businesses (for example, by reducing the carbon emissions of those businesses);
- (b) **Clean energy investments:** investments that result in the development of clean energy assets (for example renewable power generation assets) across different technologies;
- (c) **Sustainable solutions:** investments in businesses focused on scaling proven low carbon technology solutions and services that accelerate decarbonisation across sectors or for a broad range of customers.

301 Brookfield Renewable and Transition also has a separate team of at least four people in Australia whose focus is to identify and screen new greenfield development projects in which BGTF could potentially invest, manage the development of those projects, and speak to commercial customers who could be potential offtake counterparties. BGTF's investment mandate is to invest in projects which are at a stage where an investment from BGTF will provide optimal impact and create additionality. These typically include projects which are at the early stages of the development lifecycle and can benefit from Brookfield's deep expertise at all stages of renewable development and where long term capital commitment is required, by providing access to that capital.

302 The Brookfield Renewable and Transition team in Australia does not actively pursue operating renewable assets for BGTF because these projects do not have the required component of additionality.

### ***Renewable opportunities currently being pursued***

303 BGTF is currently pursuing two opportunities in new renewables generation and storage. Of these, Moonlight Range is the most advanced and active project. It is at the development (land negotiation) stage of the process, and is expected to come online around 2028. Greenleaf Renewables, the other opportunity BGTF is actively exploring, is still in the land negotiation stage. Each is briefly discussed below.

### **Moonlight Range, QLD.**

- (a) Brookfield entered into an agreement with Greenleaf Renewables in April 2023 to develop, build and take ownership of the Moonlight Range Wind Farm Project in central Queensland with an expected generation capacity of up to 315 MW. Under that agreement, **Confidential to Brookfield: summary of responsibilities for various**

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**activities under the agreement. Brookfield will contribute knowledge and expertise in procurement and commercialisation.**

- (b) The Moonlight Range Wind Farm is in the development phase and is expected to be ready for construction in 2025, subject to the necessary approvals being received. If approvals are received on time, the project is expected to be connected to the grid and operating around 2028.
- (c) Moonlight Range is also expected to include 105 MW of storage (BESS), with this expected to follow a similar timeframe to the wind farm.
- (d) **Confidential to Brookfield: summary of terms of confidential agreement between Brookfield and Greenleaf.**
- (e) If the Proposed Acquisition proceeds and Brookfield remains invested in the Moonlight Range project, Brookfield intends to integrate it into Origin Energy Markets' development pipeline. This will contribute ~1 TWh per annum (representing **Confidential to Brookfield**% of Origin Energy Markets' projected wholesale electricity demand by FY29, **Confidential to Brookfield**% of the BGTF Consortium's QLD business plan wind capacity, and **Confidential to Brookfield**% of the BGTF Consortium's overall business plan wind capacity).

### **Greenleaf Renewables, QLD.**

- (a) Brookfield is also working in partnership with Greenleaf Renewables to explore two additional development opportunities in Queensland, which could provide an additional 600 MW of wind generation, and an additional **Confidential to Brookfield: 150 - 250** MW of storage.
  - (b) These projects are currently at the 'land negotiation' stage, **Confidential to Brookfield.**
- 304 Absent the Proposed Acquisition, the development of both the Moonlight Range and Greenleaf Renewables opportunities is dependent on the Brookfield Investment Committee approving a final investment decision. This will require the local team to secure an offtake agreement with retailers and/or industrial customers.
- 305 Under the Proposed Acquisition, both opportunities would be contributed to Origin Energy Markets and form part of the up to 14 GW build-out proposed by the BGTF Consortium for Origin Energy Markets. The Proposed Acquisition gives Brookfield confidence that it has a guaranteed offtaker, making it more likely to underwrite (and continue underwriting) the above investments.
- 306 The Proposed Acquisition will significantly improve the forward economics assessment when Brookfield's Investment Committee considers each new project, because any PPA uncertainty that would otherwise be required as part of the projects' development, is removed. This significantly increases the likelihood that projects will be approved and, if approved, would increase the speed with which they are able to be developed.

### **Areas of focus for further renewable opportunities**

- 307 Brookfield does not have other projects that are at the same level of development as the Queensland projects outlined in this Application. However, in addition to the renewable generation and storage projects BGTF is pursuing in Queensland outlined above, it is also considering renewable energy projects across Queensland, New South Wales, Victoria and South Australia, if the Proposed Transaction proceeds to further the 14 GW build-out.
- 308 The planned investment for the 14 GW build-out, by state or territory within the NEM, is in **Figure 9** below.

**Figure 9: Forecast areas for 14 GW of new renewable generation and storage**

**Confidential to Brookfield**

Source: Brookfield

**Figure 10** and **Figure 11** show the areas of focus for future development within the relevant parts of the NEM. The areas identified in the below are based on projects that are at various stages of early development according to AEMO databases. They do not show sites where there is current development (ie, construction) by Brookfield, and are preliminary opportunities only. Given the lead time in developing projects, including securing sites and necessary approvals, the question of whether projects will actually proceed in these locations is inherently uncertain and relies on these projects being progressed by their existing proponents and in some cases development of the relevant transmission network projects (for example, the Central West Orana and New England REZs).

**Figure 10: Brookfield future wind farm project opportunities in the NEM**

**Confidential to Brookfield**

Source: Brookfield

**Figure 11: Brookfield future storage project opportunities in the NEM**

**Confidential to Brookfield**

Source: Brookfield

***Renewables opportunities previously considered that did not proceed***

309 Over the last 18 months, BGTF has assessed over **Confidential to Brookfield: 60** GW of potential renewables and storage opportunities across Australia. Of those:

- (a) Brookfield screened and assessed and chose not to pursue projects totalling **Confidential to Brookfield: over 50** GW (for various reasons including location, access to interconnection infrastructure and level of actionability). Also in this total is **Confidential to Brookfield: 4 - 6** GW of operating assets that do not fit BGTF's mandate for additionality.
- (b) Brookfield is currently assessing potential opportunities totalling **Confidential to Brookfield: up to 6** GW.
- (c) Brookfield has actively pursued **Confidential to Brookfield: up to 5** GW of projects. Of the **Confidential to Brookfield: up to 5** GW, Brookfield –
  - (i) was unsuccessful in bidding for **Confidential to Brookfield: up to 4** GW;
  - (ii) is actively pursuing **Confidential to Brookfield: 600 - 850** MW (see Greenleaf Renewables above); and
  - (iii) has ~420 MW under development (see Moonlight Range discussed above).

310 A key project under Brookfield's consideration in its renewables pipeline until very recently, related to an opportunity to partner with **Confidential to Brookfield**, a specialist solar developer based in **Confidential to Brookfield: summary of key terms of potential project being considered by Brookfield**. Brookfield spent considerable time and money (approximately **Confidential to Brookfield** since January 2022) assessing the viability of the project.

311 **Confidential to Brookfield: reasons Brookfield did not pursue the potential project**. This project and its outcome are a good example of why the acquisition of a platform such as Origin

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Energy Markets can be decisive in the determination of the viability of individual projects. Offtake arrangements are one of the most critical inputs to a greenfield development. When these are negotiated piecemeal and bespoke to an individual investment, the time taken to negotiate and the risks involved in reaching agreement, significantly add to the cost and risk that must be factored into a new project. Owning a large platform, such as Origin Energy Markets with ~2.73 million electricity customer accounts and a demand of ~36 TWh (FY22) that provides a ready-made offtaker, substantially eliminates this aspect of the development risk, increasing the certainty and speed of the development ultimately proceeding. This is discussed below.

**Confidential to Brookfield.**

312 A brief timeline of Brookfield's engagements with **Confidential to Brookfield** is set out below.

- (a) **Confidential to Brookfield**
- (b) **Confidential to Brookfield**
- (c) **Confidential to Brookfield**
- (d) **Confidential to Brookfield**
- (e) **Confidential to Brookfield**
- (f) **Confidential to Brookfield**
- (g) **Confidential to Brookfield**
- (h) **Confidential to Brookfield**
- (i) **Confidential to Brookfield: evolution of a potential transaction between Brookfield and a renewables developer.**

313 In addition, BGTF has considered a number of opportunities over the last two years in Australia. Two examples are set out below.

- (a) **Confidential to Brookfield.** At that time, the project was ready to proceed to construction, but did not have an offtake agreement. Based on the information available at the time, however, **Confidential to Brookfield: reasons why BGTF did not pursue the proposed project.** BGTF ultimately decided not to submit an offer.
- (b) In December 2022, BGTF approached **Confidential to Brookfield** again with a view to reconsidering a possible investment in the project. BGTF was in the process of putting together a business plan for Origin Energy Markets' potential renewables build-out should the Proposed Acquisition proceed, and thought the **Confidential to Brookfield** opportunity may be worth revisiting as an actionable opportunity for the Origin Energy Markets pipeline. **Confidential to Brookfield: outcome of the proposed project.** As at February 2023, the project is shown in the AEMO Generation List as 'publicly announced', the earliest stage.
- (c) **Confidential to Brookfield:** In parallel with its Moonlight Range project, Greenleaf was developing a wind farm in **Confidential to Brookfield: summary of key terms of a proposed project considered by Brookfield.** Greenleaf had obtained land options and state approvals for the project.
- (d) Brookfield ultimately decided not to pursue this opportunity as a result of **Confidential to Brookfield: reasons why Brookfield did not pursue the proposed project further.** Brookfield's risk criteria for the project may have been lower, however, if the project were being undertaken through Origin Energy Markets. **Confidential to Brookfield: explanation of how having a proposed portfolio of renewables and storage investments with different attributes can encourage investment.**



### 3.1.3 Uncertainties and challenges for Brookfield in Australia

#### Overview

314 While Brookfield has a goal of developing renewables and storage in Australia as an alternative to the Proposed Acquisition, this goal is subject to a number of uncertainties and challenges, which are discussed below.

315 In particular, like most other renewables generators, Brookfield will seek to fund its renewables development pipeline via a combination of equity and project finance debt. **Confidential to Brookfield: Brookfield's challenges in Australia when assessing single asset opportunities.**

316 In addition, BGTF is a global fund and, absent the Proposed Acquisition, has made no commitment to invest funds in Australia. The transition to net zero is a global challenge. BGTF will invest wherever in the world it can make the most attractive returns and deliver the best contribution to the transition to net zero. Any possible renewables project in Australia compete with other opportunities across the globe for BGTF capital.

317 As a result, it is highly uncertain what renewable capacity, if any, Brookfield Renewable will have built in Australia by 2033 absent the Proposed Acquisition. **Confidential to Brookfield: detail on Brookfield's decision to build a presence in the Australian market.** The purpose was to highlight the attractiveness of the Australian market, what could be achieved, and obtain approval to establish a dedicated Australian team. It was not based on any specified or likely opportunities in Australia.

318 Since introducing a team in Australia, Brookfield has an aspiration to develop 5 GW of renewables and storage in Australia in the medium term. It is important to note that there is no specific plan to achieve this build-out and no performance incentives are attached to achieving it.

319 All that can be said with confidence at the moment is that Brookfield has one project in development which would, if it proceeds, see up to 315 MW of generation and 105 MW of storage built by around 2028. Brookfield Renewable hopes that absent the Proposed Acquisition it would have achieved more than this by 2033, but it is not possible with any degree of confidence to predict what might actually be achieved.

#### Challenges in developing renewables

320 In Australia, the conventional approach to developing and financing renewables and storage projects involves three key steps.

- (a) **Step 1** is to source development opportunities. This could be by identifying prospective sites directly or, more commonly, partnering with developers who have prospected existing sites.
- (b) **Step 2** is to develop the project. This step, which is the most complex and capital intensive phase of the project, is described in more detail below.
- (c) **Step 3** is the operations phase. From an investment perspective, a project that has reached commercial operation is regarded as significantly de-risked and is attractive to a wider range of equity investors.

321 This development pathway has a number of significant challenges, which are discussed further below.

322 Absent the Proposed Acquisition, Brookfield would seek to pursue its renewables and storage development goal via this conventional approach and would face all of these challenges.

***Development pathway***

- 323 While there is no mandated development pathway, most renewables and storage projects follow a pathway linked principally to procuring finance (equity and debt commitments) and reaching financial close.
- 324 There are enough common features in the renewables development pathway that, for the purposes of system planning, AEMO assesses each project against a common set of five commitment criteria and then classifies proposed generation in the NEM by reference to 'Commitment Status'.
- 325 The five commitment criteria are set out in **Figure 12** below.

**Figure 12: AEMO commitment criteria**

Criterion	AEMO Description
<b>Land</b>	The project proponent has purchased / settled / acquired (or commenced legal proceedings to purchase / settle / acquire) land for the construction of the project, including through option agreements.
<b>Contracts</b>	Contracts for the supply and construction of major plant or equipment components (such as generating units, turbines, panels, inverters, transmission towers, conductors, and terminal station equipment) have been finalised and executed, including any provisions for cancellation payments.
<b>Planning</b>	The proponent has obtained all required planning consents, construction approvals, connection contracts (including approval of proposed negotiated Generator Performance Standards from AEMO under clause 5.3.4A of the National Electricity Rules), and licences, including completion and acceptance of any necessary environmental impact statements.
<b>Finance</b>	The financing arrangements for the proposal, including any debt plans, has been concluded and contracts executed.
<b>Construction</b>	Construction of the proposal has either commenced or a firm commencement date has been set. Commercial use date for full operation has been set.

Source: AEMO

- 326 While a signed PPA / offtake agreement does not form part of AEMO's formal assessment criteria, it is typically a requirement of committed financing. As a result, in most cases, a signed PPA will form part of the 'Finance' criterion.
- 327 This typical development pathway presents a number of challenges.

***Challenges in PPA market***

- 328 A key challenge is finding an offtaker that is willing to sign a long term PPA for the project offtake. A long term PPA will underwrite the project revenues and is typically both:
- (a) a requirement of project finance lenders; and
  - (b) a strong preference for equity investors in making a final investment decision.
- 329 While there have been some reports of renewables projects reaching financial close without a PPA, these have typically been rare and it is unclear what additional protections have been provided to the financiers in order to proceed.
- 330 One particular challenge is the delay between pricing negotiations and contracting (more specifically the time when a customer gets the production from the project). It is common for

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Brookfield to have a discussion with a potential C&I offtaker now but, depending on the stage of the project by the time the project is ready to take a final investment decision (and contract can be executed for the future delivery of electricity) or the project comes online, considerable time has passed. During that time, the C&I customer's needs might have changed, the cost of the build-out might have increased (or decreased), pricing might (or might not) have changed, etc. All of these factors affect the viability of the PPA, and also potentially impact on **Confidential to Brookfield**.

- 331 The challenges in securing a PPA have been recognised as a market failure by both State and Commonwealth governments and has resulted in a variety of regulatory responses.
- 332 While capacity market mechanisms, regulations and government programs (such as the Commonwealth Underwriting New Generations Investments program, described below) aim to support investment in new renewable generation capacity, this is not being met with the necessary drive in renewables investments in industry. The lag in renewables investment may be attributed to the inherent investment risks associated with renewables generation, which create uncertainty and reticence among investors to commit to renewables projects.
- 333 In its NSW Electricity Infrastructure Roadmap Building an Energy Superpower Detailed Report, the (former) NSW Government recognised that investment in new renewables faces heightened risks. The NSW Government categorised these as price, market, policy and technology risks.<sup>53</sup>
- (a) **Price risks:** the department explains,
- it is difficult for generators to sell long term contracts for their energy, with the contract market dominated by contracts for one to three years in the future [which] is problematic for investors in new generation. Investors and lenders need to be confident of earning sufficient returns to justify their investment in a project. However, the assets they are investing in have 15 year (batteries) to 50 year life spans (pumped hydro). The uncertainty of returns over the life of the assets means that investors are only willing to invest when short term prices are sufficiently high to justify the long term risk. This results in investment being delayed until there are periods of scarcity pricing; that is, periods when participants are able to bid up electricity prices due to tight supply and demand conditions.
- (b) Another form of price risk is **intraday price volatility:**
- Intraday price volatility is important for storage: energy storage makes returns by storing electricity when it is cheap and releasing it when it is expensive. Price volatility is caused by higher penetrations of renewables – renewables are able to generate electricity at very low marginal cost and can therefore force prices down when renewable energy is abundant (e.g. when it is windy or sunny); and is dampened by higher penetration of storage – storage creates demand for electricity in low price periods... [As] energy contract periods are generally up to three years... investors in storage do not have long term certainty over intra-day price volatility. This means that they wait for the price spikes required to justify their investment before making the investment...
- (c) **Market access risk:** in NSW, many prospective renewable resources are located where grid capacity is low. Transmission upgrades (requiring regulatory approval) are required to facilitate connections to new generation projects. The 'chicken and egg' dilemma ensues; approval is based on forecasts of new generation that will justify the transmission project, however, new generation cannot be committed unless there is approved transmission for the generation.
- (d) **Policy risk:** policy settings and investment support change periodically across the Commonwealth and states to accord with changes in government and shifts in public

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<sup>53</sup> NSW Electricity Infrastructure Roadmap, *Building an Energy Superpower Detailed Report 2020*, Page 22, <https://apo.org.au/sites/default/files/resource-files/2020-11/apo-nid309302.pdf>

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attitude. Such changes can impact the projected supply-demand balance and investment returns.

- (e) **Technology risk:** as new energy sources and storage technologies are developed, this results in ongoing cost declines and efficiencies.

- 334 Given the uncertainties posed by these risks, the requisite level of new renewable generation in Australia cannot be deployed as it is difficult for investors to justify their investment in new renewable generation projects.
- 335 The NSW Government recognised that large-scale renewable generation projects require significant upfront capital investment, yet are high-risk due to the difficulty in predicting future wholesale electricity prices. However, as flagged above, as the contract market is dominated by short term agreements, a lack of long-term offtake agreements available makes it difficult to secure project financing for new generation projects.
- 336 Similarly, in response to the ACCC's *Retail Electricity Pricing Inquiry – Final Report*<sup>64</sup>, the Commonwealth Government's Underwriting New Generation Investments Program (**UNGI Program**) was aimed at, among other things, supporting targeted investment in new generation. This program stemmed from the ACCC's recommendation that the Commonwealth Government develop a program under which it would underwrite new generation investments in select circumstances. The UNGI Program was intended to target reductions in wholesale electricity prices by increasing competition and supply, as well as promote system reliability.
- 337 In the *Regulation Impact Statement – Underwriting New Generation Investments Program*, the ACCC, in developing its recommendations to the Australian Government, identified the inability of some generation projects to secure finance as a 'market failure...creating a barrier to entry for new projects'<sup>55</sup>:
- The ACCC received confidential feedback from a number of market participants, including project developers and smaller retailers, that they were keen to invest in new generation projects but were unable to proceed due to an inability to secure project financing. A key barrier identified by the ACCC was a lack of long-term offtake agreements available to underwrite project debt.<sup>56</sup>
- 338 In relation to this, the ACCC noted that:
- Where such [new large-scale generation] projects are proposed by new entrants without a stable long-term downstream customer base, they are unattractive for traditional financing.<sup>57</sup>
- 339 In its Public Consultation Paper on the UNGI Program, the Department of Environment and Energy noted that customers' preference for shorter-term agreements, up to around five years, reflects concerns about locking in electricity volumes when future loads are uncertain.<sup>58</sup> Indeed, in order to obtain financing on this shorter timeframe, the ACCC note that a developer would need to charge a much higher price per MWh in order to recoup its investment over the truncated period – a price which would not be competitive.<sup>59</sup>

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<sup>54</sup> ACCC, *Retail Electricity Pricing Inquiry Final Report*, June 2018 <<https://www.accc.gov.au/retail-electricity-pricing-inquiry-final-report>>

<sup>55</sup> Department of the Environment and Energy, *Regulations Impact Statement – Underwriting New Generation Investment Program*, Australian Government – Department of the Environment and Energy, 24 September 2019, <<https://oia.pmc.gov.au/sites/default/files/posts/2021/12/UNGI%20RIS.pdf>>, page 11

<sup>56</sup> Department of the Environment and Energy, *Regulations Impact Statement – Underwriting New Generation Investment Program*, Australian Government – Department of the Environment and Energy, 24 September 2019, <<https://oia.pmc.gov.au/sites/default/files/posts/2021/12/UNGI%20RIS.pdf>>, page 9

<sup>57</sup> Department of the Environment and Energy, *Regulations Impact Statement – Underwriting New Generation Investment Program*, Australian Government – Department of the Environment and Energy, 24 September 2019, <<https://oia.pmc.gov.au/sites/default/files/posts/2021/12/UNGI%20RIS.pdf>> page 9

<sup>58</sup> Department of the Environment and Energy, *Underwriting New Generation Investments – Public Consultation Paper* – October 2018, <<https://www.energy.gov.au/sites/default/files/underwriting-investment-consultation-paper.pdf>>, page 3

<sup>59</sup> Department of the Environment and Energy, *Underwriting New Generation Investments – Public Consultation Paper* – October 2018, <<https://www.energy.gov.au/sites/default/files/underwriting-investment-consultation-paper.pdf>>, page 3

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340 Brookfield can confirm from its direct experience in the Australian market that these challenges are very real. In Brookfield's view, having a guaranteed offtaker mitigates these risks. Origin Energy Markets' future load (36 TWh) is reasonably certain. Brookfield can therefore pursue a range of projects, with this target in mind, and balance the cost of its renewables build-out against the revenue from Origin Energy Markets' retail business (as opposed to having a single group of assets that need to be assessed individually).

### **Global competition for capital**

- 341 In addition to these challenges, it should be borne in mind that Brookfield Renewable can and does invest globally based on where it can best contribute to the transition to net zero and where it can earn the most attractive risk adjusted returns on the capital it invests on behalf of Brookfield as well as its Limited Partners.
- 342 Australia's transition takes place in the context of the *global* transition to net zero. Globally, the availability of, and access to, the resources needed to achieve the transition are constrained. With 194 countries having committed to the Paris Agreement,<sup>60</sup> there is fierce competition to secure the necessary investment from investors like Brookfield, as well as skills and raw materials.
- 343 Last year, the United States of America introduced the *Inflation Reduction Act (IRA)*, a US\$369 billion taxpayer-funded incentive scheme aimed at turbocharging America's investment in renewable energy, electrification and the development of clean industries such as green hydrogen.<sup>61</sup> Goldman Sachs has reported that the IRA *'includes incentives that make most clean tech — solar, wind, electric vehicles (EVs), and storage, as well as bio-energy, clean hydrogen, and carbon capture — profitable at large scale'*.<sup>62</sup> The IRA makes the United States a very attractive investment destination. Goldman Sachs has predicted that the IRA is expected to generate around ~US\$3 trillion of investment in renewable energy technology.<sup>63</sup> The Clean Energy Council's chief executive, Kane Thornton, has noted that the IRA is a *'game changer'*, creating *'enormous incentives for... green hydrogen and renewable energy to be built in the USA'* resulting in a critical skills and resources drain in Australia.<sup>64</sup>
- 344 Similarly, as BGTF is a global fund, candidate investments can be located around the world and decisions about investments are largely agnostic as to location globally.<sup>65</sup> Brookfield's Investment Committee considers projects across the globe and has no particular reason to prefer investment in Australia. Indeed, as previously outlined, its *raison d'être* is to *'go where the emissions are'*, wherever they happen to be. BGTF is focused on assembling a diversified portfolio across geographies in which it has a local operating presence and extensive market experience, namely North America, South America, Europe, and Asia Pacific.<sup>66</sup> Brookfield's renewable development pipeline is now 126,000 MW with approximately 5,000 MW of new capacity on track for commissioning this year. Brookfield has another approximately 19,000 MW in its advanced stage development pipeline. These estimates do not include the investment in Origin Energy Markets. Of its ~126,000 MW pipeline, approximately **Confidential to Brookfield**% is in North America, **Confidential to Brookfield**% in Europe, **Confidential to Brookfield**% in the Asia Pacific (spread across **Confidential to Brookfield**.) and **Confidential to Brookfield**% in South America.

<sup>60</sup> United Nations Climate Change, *The Paris Agreement*, <<https://unfccc.int/process-and-meetings/the-paris-agreement>>.

<sup>61</sup> ABC News, *Australia urged to boost clean energy spending over claims 'mammoth' US green subsidies bill a threat* (13 February 2023), <<https://www.abc.net.au/news/2023-02-13/australia-urged-to-respond-to-mammoth-us-green-subsidies/101942366>>.

<sup>62</sup> Goldman Sachs, *The US is poised for an energy revolution*, 17 April 2023

<<https://www.goldmansachs.com/intelligence/pages/the-us-is-poised-for-an-energy-revolution.html>>

<sup>63</sup> Goldman Sachs, *The US is poised for an energy revolution*, 17 April 2023

<<https://www.goldmansachs.com/intelligence/pages/the-us-is-poised-for-an-energy-revolution.html>>

<sup>64</sup> ABC News, *Australia urged to boost clean energy spending over claims 'mammoth' US green subsidies bill a threat* (13 February 2023), <<https://www.abc.net.au/news/2023-02-13/australia-urged-to-respond-to-mammoth-us-green-subsidies/101942366>>.

<sup>65</sup> Mostly focusing on OECD countries, and not including any jurisdictions where sanctions might apply, eg, Russia.

<sup>66</sup> Brookfield Global Transition Fund, *Operating Principles for Impact Management*, 2022

<<https://bam.brookfield.com/sites/brookfield-ir/files/2022-11/bam-bgtf-opim-disclosure-statement-vf.pdf>>, page 2

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### **Context to the BGTF Consortium's 'green build-out' plan**

- 345 It is useful to consider the contribution of the BGTF Consortium's 'green build-out' plan for Origin Energy Markets in the context of the scale of the challenges to meet Australia's greenhouse gas reduction targets.
- 346 As outlined elsewhere in this Application, Australia has ambitious targets enshrined in legislation to reduce greenhouse gas emissions to 43% below 2005 levels by 2030 and to achieve net zero by 2050.<sup>67</sup> The Federal Government's Powering Australia plan contemplates that Australia will achieve 82% renewable generation by 2030.<sup>68</sup> AEMO's ISP similarly contemplates that Australia will achieve 83% renewable generation by 2030/2031.<sup>69</sup>
- 347 The current rate of investment in renewables is below that required to meet the targets referred to above. Put simply, unless something changes, and the level of investment increases, Australia will not meet its 2030 targets.
- 348 In a recent speech at a CEDA forum, Ian Learmonth, CEFC chief executive said:
- We estimate that some \$120 billion of capital expenditure is needed to finance new solar, wind, transmission, storage and ancillary services to 2030 in order to meet our ambitious national renewable energy and emissions goals.
- We need to install an estimated 29 GW of large-scale renewable generation – that's about 3.6 GW a year or 300 MW per month (a decent sized wind farm a month) – in order to reach 82 per cent renewables by 2030. To give you an understanding of the uplift required to get there, last year we installed just 2.3 GW of large-scale renewable energy capacity.<sup>70</sup>
- 349 **Figure 13** below shows Brookfield's estimates of historical renewables in the NEM over the last 10 years, compared to the renewables development that will be needed to meet the target assumed for 2030 in AEMO's ISP. Over the last 10 years, the average volume of renewable capacity developed was 1.7 GW per year, and the average volume over the last two years was 2.6 GW per year. This will need to accelerate to 4.2 GW per year over the next seven years in order to achieve the 2030 target.

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<sup>67</sup> Australian Government Department of Industry, Science, Energy and Resources, *Australia's Nationally Determined Contribution – Communication 2022* <<https://unfccc.int/sites/default/files/NDC/2022-06/Australias%20NDC%20June%202022%20Update%20%283%29.pdf>>

<sup>68</sup> The Australian Government, Department of Climate Change, Energy, the Environment and Water, *Powering Australia* <<https://www.energy.gov.au/government-priorities/australias-energy-strategies-and-frameworks/powering-australia>>

<sup>69</sup> AEMO 2022 ISP, page 7 (**Annexure 8**).

<sup>70</sup> The Australian Business Review, *Australia 'behind the pace' on 2030 renewables targets: CEFC*, 15 May 2023.

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**Figure 13: Historical and forecast renewables development in Australia (2013 – 2030)**

Metrics	Start Date	Capacity at Start (GW)	End Date	Capacity at End (GW)	Difference (GW)	Years	Avg. GW per year
Historical Developments over the last 10 years	Aug 2013	10.1	May 2023	27.5	17.3	10	1.7
Historical Developments over the last 7 years	Aug 2016	11.9	May 2023	27.5	15.5	7	2.2
Historical Developments over the last 5 years	Jul 2018	14.2	May 2023	27.5	13.3	5	2.7
Historical Developments over the last 2 years	May 2021	22.3	May 2023	27.5	5.2	2	2.6
Historical Developments over the last year	May 2022	24.6	May 2023	27.5	2.9	1	2.9
Required developments to 2030	May 2023	27.5	Jun 2030	56.9	29.4	7	4.2
<b>Historical Renewables Installed (MW)</b>		Aug 2013	Aug 2016	Jul 2018	May 2021	May 2022	May 2023
Large Scale Wind	MW	2,574	3,708	5,114	8,815	10,055	10,300
Large Scale Solar	MW	-	232	960	5,203	5,901	8,425
Large Scale Storage / Hydro	MW	7,569	7,988	8,121	8,253	8,612	8,745
Installed Large Scale Renewables	MW	10,143	11,927	14,195	22,271	24,567	27,471
Primary Source		AEMO NEM Generation (Aug-2013)	AEMO NEM Generation (Aug-2016)	AEMO NEM Generation (Jul-2018)	AEMO NEM Generation (May 2021)	AEMO NEM Generation (May 2022)	NEM Generation Information – May 2023
Secondary Source		State of the Energy Market 2013		State of the Energy Market 2018			
<b>Renewable Generation Required</b>		Large Scale Solar	Large Scale Wind	Large Scale Storage / Hydro	Total		
FY30 Forecast (AEMO 2022 ISP)	MW	12,204	31,523	13,142	56,870	Total Capacity (Existing, May-23)	% Renewables
Current (May-23, AEMO NEM Generation)	MW	8,425	10,300	8,745	27,471	62,909	43.7%
Additional Renewables by 2030	MW	3,779	21,223	4,397	29,399		
Years to FY30 (Jun-30)	Years	7	7	7	7		
Additional Renewables p.a. to 2030	MW p.a.	540	3,032	628	4,200		

Source: Brookfield, using various information from AEMO and the State of the Energy Market Reports

350 Achieving the very significant increase in renewables generation required to meet Australia's targets will require a dramatic increase in private sector investment in renewables and in transitioning companies like the Origin Energy Markets' business.

351 The BGTF Consortium's \$20 to \$30 billion investment in Origin Energy Markets' 'green build-out' plan, will result in significant total renewable generation being built in Australia, equal to a 10 GW Origin Energy Markets increment (less whatever capacity BGTF may be able to develop in the counterfactual by 2033 on a standalone basis).

### 3.1.4 Conclusion on the counterfactual for Brookfield

352 In summary, as noted above, it is highly uncertain what renewable capacity, if any, Brookfield Renewable will have built in Australia by 2033 absent the Proposed Acquisition. All that can be said with confidence is that Brookfield has one project in development which would, if it proceeds, see up to 315 MW of generation and up to 105 MW of storage built by around 2028. It is impossible to predict with any degree of certainty what additional capacity will have been built by 2033 absent the Proposed Acquisition.

353 The Proposed Acquisition removes some of the key impediments and uncertainties that Brookfield would face without the Proposed Acquisition. In particular, the need to secure an offtake contract that provides an acceptable, risk-adjusted rate of return for BGTF and the need to compete with projects across the globe for Brookfield capital (see section 6.10(h) below).

354 The Proposed Acquisition makes it possible for BGTF to invest in renewable generation assets at scale which, absent the Proposed Acquisition, it would only be able to do in a piecemeal fashion at much smaller scale.

## 3.2 Counterfactual: Origin

### 3.2.1 Overview

355 Absent the Proposed Acquisition, Origin would continue to operate its business in accordance with its existing strategy and business plan. As at the date of this Application, there is no counter bidder for Origin.

356 For the purposes of assessing the Proposed Acquisition, and in particular the public benefits, a critical area of focus is Origin's plans for its renewables build-out and its strategy in respect of renewable PPAs absent the Proposed Acquisition. These aspects of Origin's business represent the key differences between the likely position with and without the Proposed Acquisition.

### 3.2.2 Origin's existing plans for renewables

357 In respect of its energy transition, the most comprehensive public description of Origin's existing strategy and business plan is in its first Climate Transition Action Plan (**CTAP**) dated 26 August 2022, which outlines the company's net zero strategy.<sup>71</sup> The CTAP reflects the minimum level of targets that Origin will achieve in its energy transition to renewables. As further detailed in Chapter 6 of the Application, Origin has implemented both short and medium term targets intended to facilitate its longer term ambition of reaching net zero by 2050 in respect of direct and indirect greenhouse gas emissions, referred to as 'Scope 1', 'Scope 2' and 'Scope 3' emissions.<sup>72</sup> In the shorter term, by 2030, Origin has targeted a 40% reduction in Scope 1, 2 and 3 equity emissions intensity and a 20 million tonne reduction in absolute Scope 1, 2 and 3 equity emissions relative to the FY2019 baseline.<sup>73</sup> Origin considers its medium-term emissions intensity target and long-term net zero ambition to be consistent with the Paris Agreement.<sup>74</sup> Origin's broader strategies for reaching its 2030 targets are described in the CTAP as follows:

- (a) **Reducing emissions from its existing operations:**<sup>75</sup> this involves prioritising actions that enable direct emissions reductions rather than relying on carbon offsets. Critical to this strategy is the early retirement of Australia's largest and Origin's only coal-fired generator, the Eraring Power Station, potentially as early as August 2025, which would be seven years ahead of previously planned closure in 2032. This would bring forward Origin's complete exit from coal-fired power generation. In the meantime, Origin has been exploring mechanisms to improve Eraring's performance, including an artificial intelligence based program to improve the plant's heat rate, which has avoided more than 340,000 tonnes of carbon dioxide emissions as at the date of the CTAP.
- (b) **Growing its portfolio of renewables and cleaner energy:**<sup>76</sup> Origin aims to grow its renewables and storage capacity within its energy generation portfolio. To achieve its CTAP target, Origin would need to develop approximately 2.3 GW by 2030 of net **new** renewable generation and storage capacity (taking total renewable generation and storage capacity to approximately 4 GW by 2030). Origin's plans for its portfolio of renewables within its energy generation portfolio are discussed further below.

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<sup>71</sup> Origin Energy, *Climate Transition Action Plan* (August 2022), <[https://www.originenergy.com.au/wp-content/uploads/Climate-Transition-Action-Plan-2022\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Climate-Transition-Action-Plan-2022_FINAL.pdf)> (**Origin Energy CTAP 2022**) (**Annexure 15**).

<sup>72</sup> **Scope 1** emissions are greenhouse gas emissions released to the atmosphere as a direct result of Origin's activities, also known as direct emissions. **Scope 2** emissions are those emissions resulting from Origin's purchases of electricity to power its offices and sites. **Scope 3** emissions are indirect emissions than Scope 2 emissions relating to Origin's value chain, including wholesale purchases of electricity from the NEM that is sold to customers, and the use of its sold products like LNG and domestic gas. See Origin Energy CTAP 2022, page 12 (**Annexure 15**).

<sup>73</sup> Origin Energy CTAP 2022, page 4 (**Annexure 15**).

<sup>74</sup> Origin Energy CTAP 2022, page 11 (**Annexure 15**).

<sup>75</sup> Origin Energy CTAP 2022, page 16 (**Annexure 15**).

<sup>76</sup> Origin Energy CTAP 2022, page 17 (**Annexure 15**).



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(c) **Enabling customers to decarbonise**<sup>77</sup> Origin aims to enable its customers' decarbonisation by growing Origin's portfolio of simple, affordable low carbon products and clean energy solutions, including rooftop solar and batteries, renewables and carbon-neutral energy, EV solutions and renewables PPAs.

358 Beyond 2030, Origin anticipates that the bulk of its emissions will be associated with gas-fired generation, its share in APLNG's gas production and sale, and LPG distribution.<sup>78</sup> Origin is committed to continuing decarbonisation through largely the same strategies implemented to achieve its 2030 targets, noting in particular Origin's investments in green hydrogen and renewables and the potential retirement of its gas-fired power stations (and declining gas sales) as these assets approach the end of their useful lives.<sup>79</sup>

359 However, as further described in Chapter 6 of the Application, Origin faces a number of risks to its decarbonisation plans. These include possible delays to the closure of Eraring power station, timing and alignment of portfolio decisions, delays to renewable projects, access to capital and carbon markets, access to critical skills and supplies, access to infrastructure and land, market volatility and security of supply, government policy and stakeholder expectations.<sup>80</sup>

### **Origin's energy generation development**

360 As at 31 December 2022, Origin's output from owned and directly contracted generation was from the sources as set out in **Figure 14** below.

**Figure 14: Generation output (MW) of Origin's owned generation and directly contracted generation**

	Nameplate capacity (MW)	Type <sup>1</sup>	HY23			HY22			Change		
			Output	Pool revenue		Output	Pool revenue		Output	Pool revenue	
			(GWh)	(\$m)	(\$/MWh)	(GWh)	(\$m)	(\$/MWh)	(GWh)	(\$m)	(\$/MWh)
Eraring	2,922										
Units 1 - 4	2,880	Black Coal	5,345	1,109	207	5,699	468	82	(354)	640	125
Gas Turbine	42	OCGT	-	-	-	-	-	-	-	-	-
Darling Downs	644	CCGT	596	193	324	788	117	148	(192)	76	176
Osborne <sup>2</sup>	180	CCGT	229	78	341	312	24	78	(83)	54	263
Uranquinty	692	OCGT	40	18	448	134	29	213	(95)	(11)	235
Mortlake	584	OCGT	307	97	317	193	23	120	114	74	197
Mount Stuart	423	OCGT	3	4	1,467	45	19	431	(42)	(16)	1,036
Quarantine	235	OCGT	134	39	291	39	5	128	95	34	163
Ladbroke Grove	80	OCGT	34	12	363	29	4	133	6	9	230
Roma	80	OCGT	9	6	660	36	8	211	(27)	(1)	449
Shoalhaven	240	Pump/hydro	135	36	265	49	5	113	87	30	152
<b>Internal generation</b>	<b>6,080</b>		<b>6,832</b>	<b>1,592</b>	<b>233</b>	<b>7,323</b>	<b>702</b>	<b>96</b>	<b>(491)</b>	<b>890</b>	<b>137</b>
Pelican Point	240	CCGT	220			441			(220)		
Renewable PPAs	1,515 <sup>3</sup>	Solar / Wind	1,593			1,220			373		
<b>Owned and contracted generation</b>	<b>7,835</b>		<b>8,646</b>			<b>8,984</b>			<b>(338)</b>		

<sup>1</sup> OCGT stands for open cycle gas turbine; CCGT stands for combined cycle gas turbine.

<sup>2</sup> Origin has a 50 per cent interest in the 180 MW plant and contracts 100 per cent of the output.

<sup>3</sup> Nameplate capacity includes Stockyard Hill. Origin entitled to 50 per cent of its production output during the period of HY2023, then 100 per cent from January 2023.

Source: Origin Half Year 2023 Report

361 As shown in **Figure 14**, renewable generation represents a small proportion of Origin's owned and contracted generation assets. Renewable PPAs also represent a small proportion of Origin's owned and contracted generation assets.

362 While Origin does not have a publicly stated plan or target in relation to generation development to 2033, a number of public documents give a reasonable basis for making an estimate.

<sup>77</sup> Origin Energy CTAP 2022, page 19 (**Annexure 15**).

<sup>78</sup> Origin Energy CTAP 2022, page 20 (**Annexure 15**).

<sup>79</sup> Origin Energy CTAP 2022, page 20 (**Annexure 15**).

<sup>80</sup> Origin Energy CTAP 2022, page 21 (**Annexure 15**).

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- 363 In particular, the Origin CTAP provides a guide as to Origin's minimum commitment on renewables.
- 364 Origin's CTAP sets a target for Origin to have 4 GW of renewable generation and storage capacity by 2030 (including both owned and contracted generation and storage). Currently, Origin has 1,755 MW of renewable generation and storage, although this will decline to 1,668 MW<sup>81</sup> by 2030 (as renewable PPAs expire). To achieve the CTAP target, Origin would therefore need to develop 2,332 MW of new renewable generation and storage (both owned and contracted) between now and 2030.
- 365 The BGTF Consortium's 'green build-out' plan has a target date of 2033. To enable a like-for-like comparison, an estimate needs to be made of Origin's new renewable generation and storage by 2033. To enable this estimate to be made, the BGTF Consortium has assumed Origin would continue to develop new renewables and generation at approximately the same rate in the 2030 to 2033 period. The development of 2,332 MW in the seven year period between now and 2030 implies development per year of 333 MW. This implies that in the three years to 2033, Origin would build a further 999 MW, taking the total development of new renewable generation and storage between now and 2033 to 3,330 MW. For the purposes of this application, the BGTF Consortium has assumed that Origin accelerates this rate and develops new generation and storage of 4 GW between now and 2033.
- 366 Origin's CTAP provides the starting point of how Origin may develop new renewables and storage capacity.
- 367 The CTAP notes that Origin has pursued, or is pursuing, recent investments in a range of renewable and storage opportunities. These include:
- (a) Eraring Battery in New South Wales (700 MW). **Confidential to Origin;**
  - (b) Carisbrook Solar Farm in Victoria (74 MW). **Confidential to Origin;**
  - (c) Yanco Solar Farm in New South Wales (60 MW). **Confidential to Origin;**
  - (d) Yarrabee Solar Farm in New South Wales (first stage to include nominally up to 150 MW of solar generation, with additional capacity dependent of transmission network upgrades. Planning approval allows for up to 900 MW). **Confidential to Origin;**
  - (e) Morgan Solar Farm in South Australia (250-300 MW). **Confidential to Origin;** and
  - (f) Dapper Solar Farm in New South Wales (250-300 MW). During 2023, Origin will undertake a range of assessments and studies that will form part of the development application to NSW Government.
- 368 Origin also has a number of other pipeline generation and storage projects under consideration, including:
- (a) Mortlake Battery (VIC) - **Confidential to Origin;**
  - (b) Darling Downs Battery (QLD) – 500 MW battery with a storage capacity of up to 2000 MWh; and
  - (c) Shoalhaven Hydro Pump expansion (NSW) – installation of an additional ~235MW generating unit. Higher than anticipated pricing estimates from construction contractors meant Origin did not submit the Shoalhaven expansion for consideration in the Long-Term Energy Service Agreements (**LTESAs**) funding application process in February 2023. The Shoalhaven expansion project remains an advanced development option and Origin continues to take steps to secure the necessary environmental and regulatory

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<sup>81</sup> This reflects a net change in position taking into account both the expiry of PPAs and the expansion of Origin's Shoalhaven pumped hydro storage scheme, which will add approximately 240 MW of new capacity.

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approvals and will re-test pricing at a later date when economic and market factors may have changed.

### ***Likely source of new renewable capacity***

369 The CTAP suggests Origin's strategy remains flexible and the new renewables and storage capacity could come from a combination of Origin-owned assets and contracted renewable PPAs,<sup>82</sup> although the particular mix is something that Origin will determine on a project-by-project basis.

370 It is difficult to predict what the mix of directly owned vs PPAs would be. Currently Origin owns all of its internal gas generation and the bulk of its renewable capacity is held via PPAs. In its Half Year 2023 Report, renewable PPAs make up 1,515 MW, while Shoalhaven (pump/hydro) accounts for 240 MW.<sup>83</sup>

371 For current purposes, it is assumed that Origin would maintain this mix and will achieve its CTAP target and would hold its new renewables and storage capacity to 2033 as follows:

- (a) 25% directly owned; and
- (b) 75% contracted via PPAs – that is, creating around 3 GW of net new PPA demand by 2033.

372 It is understood that some of Origin's current renewable PPAs will expire prior to 2033. These are not considered relevant to the analysis, on Brookfield's assumption that the capacity will be recontracted directly or indirectly.

### ***Origin's plan to meet electricity demand***

373 The above plan for Origin's energy generation development is based on the assumption that Eraring will retire prior to 2030 (by August 2025 at the earliest), as the new renewable development by 2030 will be needed to facilitate the replacement of Eraring's generation capacity (roughly 2.8 GW). However, despite this, Origin will maintain a short electricity position. This means that Origin will generate less electricity from its assets than it sells to its customers, as is currently the case. Origin manages price and volume risks arising from its short electricity position by entering into a range of derivative and other financial contracts, including the following.

- (a) **Renewable PPAs:** long-term power purchase agreements with renewable generators including wind and solar. These contracts are generally agreed at a fixed price, and they involve two elements. First, a 'contract for difference' where the price agreed under the PPA covers a volume of electricity typically linked to actual generation. Although both the relevant renewable generator and Origin sell and buy electricity through the NEM, there is a financial adjustment made between them to give effect to the agreed fixed price under the PPA. Secondly, the generator will transfer renewable energy certificates to Origin. PPAs typically have a long contract term (for example, 15 years) in order to provide adequate certainty to project finance lenders to the generation project.
- (b) **Swaps:** Origin has a number of swap contracts with generators which it refers to internally as a 'Firm Flat' to meet its base load requirements. These typically have a shorter contract term, for example between 1 year and 3 years. Under a swap contract, a given volume of energy is traded during a fixed period for a fixed price (normally 1 MW for a quarter at the strike price). The variable wholesale market (ie NEM) spot price is swapped for the fixed strike price. The contract is settled through payment between the counterparties based on the difference between the spot price and the strike price.

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<sup>82</sup> Origin Energy CTAP 2022, pages 17 and 23 (**Annexure 15**).

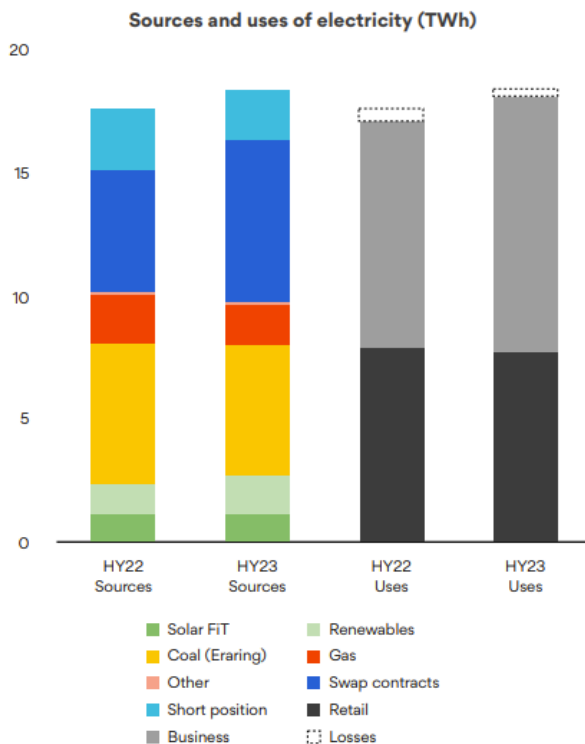
<sup>83</sup> Origin Energy, *Half Year Report 2023*, <[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>, page 20.

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- (c) **Caps:** Origin has purchased a number of bilateral contracts and exchange traded cap contracts. Caps provides electricity purchasers with insurance against high prices. Under a cap contract, a fixed volume of energy is traded during a fixed period for a fixed price but only when the spot price exceeds a specified price, generally greater than \$300. The standard cap contract traded in the market is a "\$300 cap". This means the seller of a cap is required to pay to Origin the difference between the spot price and \$300/MWh every time the spot price exceeds \$300/MWh during the specified contract period. Many of Origin's Caps have a \$300 cap, although others have a higher cap.
- (d) **Insurance:** including insurance contracts covering losses arising from Origin generators being offline due to unforeseen circumstances and unable to generate electricity to meet contracted demand.
- (e) **Settlement Residue Auction (SRA):** Limited interconnector capacity and different demand-supply balances in each NEM zone means that, at certain times, different price may apply in each NEM zone. During most trading intervals, the product of this price differential and energy flow generates a cash residual (the Inter Zone Settlement Residue). AEMO conducts auctions every quarter offering right to share in Inter Zone Settlement Residue. Origin acquires SRAs to hedge inter-regional price differentials.
- (f) **Pool purchases / short position:** the remainder of Origin's retail position and losses is unhedged and is described as its short position. Origin pays the prevailing NEM price for these purchases.

374 As illustrated in **Figure 15**, market contracts and short position account for a significant proportion of Origin's generation.

**Figure 15: Current sources and uses of electricity for Origin**



Source: Origin Half Year 2023 Report

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375 Based on Origin's FY22 Annual Report, Origin's wholesale generation sources are as follows. This is set out in **Figure 16** below.

**Figure 16: Origin's wholesale generation sources**

	FY22		FY21	
	TWh	% Share	TWh	% Share
<b>Owned generation: Eraring</b>	10.97	32.0%	13.28	40.0%
<b>Owned generation: Other</b>	4.54	13.2%	4.19	12.6%
<b>Renewable PPAs</b>	3.20	9.3%	2.96	8.9%
<b>Subtotal</b>	18.71		20.43	
<b>Market (swap and cap) contracts</b>			7.7	23.2%
	11.90	34.7%		
<b>Pool purchases</b>	3.70	10.8%	5.1	15.3%
<b>Subtotal</b>	15.60		12.8	
<b>Total</b>	<b>34.31</b>	100.0%	<b>33.23</b>	100.0%

Source: Origin Annual Report 2022 page 30 in respect of FY 22, FY21.<sup>84</sup>

### *Offshore wind opportunities*

376 Origin has also recently partnered with RES, a major developer of wind generation, to apply for a feasibility licence to develop two offshore wind projects in Gippsland. However, it is expected that only five feasibility licences will be awarded for the Gippsland declared area,<sup>85</sup> and in any event, Origin's investment in this opportunity is at a very early, prospective stage. It is impossible to know at this stage if Origin and RES will be successful in obtaining a feasibility licence, let alone develop the two offshore wind projects in Gippsland.

377 However, if Origin is ultimately successful in obtaining a feasibility licence to develop the offshore wind projects, its ability to execute on this plan, in particular development, will be enhanced under the Proposed Acquisition.

### *CWP Renewables*

378 In 2022, Origin partnered with Canadian pension fund, Caisse de dépôt et placement du Québec (**CDPQ**) to seek to acquire CWP Renewables. The proposal involved CDPQ purchasing the operating assets and Origin and CDPQ jointly acquiring the development assets with Origin acting as preferred offtaker for any new developments. Ultimately, **Confidential to Origin**, and CWP Renewables was sold to Squadron Energy. The structure Origin proposed is, however, indicative of how Origin may seek to participate in and fund renewables developments absent the Proposed Acquisition. It was the combination of Origin and CDPQ that was necessary for progressing the bid. CDPQ brought expertise and capital and the key benefit to CDPQ of its partnership with Origin was Origin's ability to provide an offtake position to support the build out of the CWP development assets.

### **3.2.3 Conclusion**

379 Accordingly, absent the Proposed Acquisition, Origin is likely to continue to operate its business in accordance with its existing strategy and business plan, as it does today. The key area of focus

<sup>84</sup> Pelican Point is in 'Owned generation: Other' – see Origin Annual Report 2022 page 30. See also Origin Half Year 2023 Report, page 20, which provides updated information about half year 2023 as compared to half year 2022  
<[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>

<sup>85</sup> AFR, *Origin joins with global giant RES to seek offshore wind licences* (30 April 2023)

<<https://www.afr.com/companies/energy/origin-joins-with-global-giant-res-to-seek-offshore-wind-licences-20230430-p5d4co>>

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for the purposes of assessing the Proposed Acquisition are Origin's plans to develop new renewable generation and storage capacity and its strategy in respect of renewable PPAs.

380 In relation to new renewables development, based on recent practice, Brookfield estimates that Origin would develop 4 GW of new renewable capacity by 2033. While Origin is also currently exploring offshore wind opportunities, this is at a very early, prospective stage.

381 In relation to Origin's renewable PPA strategy, entering into renewable PPAs and accessing third party capital are likely to form a component of Origin's target of investing in 2,332 MW of new generation renewable and storage by 2030. The particular mix of direct investment and accessing third party capital through PPAs is not set and will be driven by factors such as the quality of Origin-owned sites, the time-to-develop Origin-owned sites, the pricing of PPA offers and the timing of when PPA volumes may be available.

382 Beyond its plans for new renewable development, primarily to transition Eraring which we assume will retire by August 2025 at the earliest, Origin will continue to meet its short electricity position in the same way it currently does, ie, largely through swap and cap contracts and pool purchases. Origin's current proposed build-out will not result in green energy for all of its customers.

### 3.2.4 Board Strategy and LTFP October 2022

#### *Overview*

383 In addition to the data provided in Origin's CTAP, we note that Origin also has an internal document, a board strategy and long-term financial plan (*LTFP*), **Confidential to Origin**.

384 The CTAP reflects the minimum level of commitments that Origin aims to achieve in its energy transition to renewables, **Confidential to Origin** the LTFP reflects **Confidential to Origin: refined internally-focused commitments**. Under Origin's LTFP the goal for renewables and storage by 2030 is **Confidential to Origin: between 4 – 6 GW**, **Confidential to Origin: with a breakdown between renewable generation and storage in a ratio of 1:3 - 1:1**.

385 The LTFP states that Origin's current portfolio position is comprised of approximately **Confidential to Origin: 1 - 2** GW of renewables development projects and **Confidential to Origin: 2.5 – 4.5** TWh of renewables PPAs.

386 Origin's approach to growing its portfolio of renewables and cleaner energy is to invest further in renewables, purchase more from a decarbonising electricity grid, and invest in storage.

387 The focus of these opportunities is on large-scale solar, wind and batteries. This may involve Origin-owned installations or contracted sites, utilising a combination of direct investments and accessing third party capital.

388 Origin takes a portfolio approach to developing the level of renewable generation and storage capacity required to reach the targets in the CTAP **Confidential to Origin**. This involves exploring a combination of different opportunities of different types (including potential sites for projects, development opportunities on those sites, and the mix of direct investment in specific projects and PPAs). This is because the prospects and timing of successfully developing a project to completion can be impacted by many variables such as access to capital, of which some are outside Origin's direct control.

389 In pursuit of its priority of growing its portfolio of renewables, Origin has purchased both early and late stage solar development sites, all of which are currently pre Final Investment Decision (*FID*). Origin also has a number of brownfield storage sites (ie, sites which Origin already owns and which could accommodate renewable energy storage) which, with the exception of the Eraring power station site, are yet to receive planning approval. The final size and timing of these projects (should they proceed) will depend on development costs and the timing of transmission and

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planning approvals. In addition, the alternative PPAs that might be offered in the market at the time will influence precisely what contribution each project makes to achieving the CTAP

**Confidential to Origin** targets.

- 390 Origin faces a number of challenges in the development of its own renewables projects and storage sites. These challenges have an impact on the speed, scale and manner in which Origin can execute its energy transition plans.
- 391 By way of example, Origin does not have ongoing supply arrangements with equipment manufacturers or construction providers with expertise in renewable development and storage projects. Instead, its approach to renewable and storage projects is generally to seek a 'fully-wrapped' EPC contract for a specific project as that project approaches FID. Origin has a low risk tolerance for project risk and seeks to move risk onto the EPC provider. In the past this has resulted in high quotes which has seen projects fall below the required return for a successful FID.
- 392 By contrast, having more buyer power and expertise in construction, and the ability to risk-manage renewable construction projects, would result in a lower overall cost of completion: pricing could be sought on the basis of a committed volume of potential projects, and where more of the risk is borne by the developer rather than the design or construction contractor. This would result in a lower cost in the transition to renewables as well as potentially resulting in some projects coming to market that may not have met the required return under an EPC arrangement for a specific project.
- 393 Further, Origin's current approach results in **Confidential to Origin: less certainty on a project's business case in its early stages**. Untimely unfavourable movements in foreign exchange rates, equipment costs, or contractor risk margins can then lead to projects being stalled or abandoned at a late stage. In contrast, a company that is purchasing renewable equipment regularly and managing multiple construction projects will have greater visibility of these types of project risks, and is likely to be able to more actively manage these risks giving them more confidence to undertake project development activities.
- 394 **Confidential to Origin: Origin on its own is constrained in its ability to adopt the latter approach, which would involve spreading risk by allocating contractors across a number of projects globally.**

### 3.3 Counterfactual: MidOcean Energy

- 395 Absent the Proposed Acquisition, EIG and MidOcean Energy would continue to seek out potential opportunities to acquire interests in the global LNG industry. EIG has recently established MidOcean Energy as a 'pure-play' LNG company with the goal of building a diversified, carbon competitive, international LNG portfolio. MidOcean Energy would, absent the Proposed Acquisition, therefore continue to consider LNG investments on a global basis.
- 396 Aside from acquiring an interest in the Tokyo Gas projects, which is intended to occur irrespective of whether the Proposed Acquisition proceeds, MidOcean Energy has no plans to acquire any other LNG interests in Australia at this stage.

### 3.4 Counterfactual: Brookfield's co-underwriters in the BGTF Consortium GIC

- 397 Absent the Proposed Acquisition, GIC would continue to seek out potential opportunities to invest across a broad range of geographies and sectors. GIC is committed to the global transition to a net-zero economy and will continue to look for opportunities and investments that fit this criterion. However, GIC invests the reserves of the Singapore government under its management on a

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global basis across various sectors and, absent the Proposed Acquisition, it would not necessarily invest in Australia's transition.

398 GIC also has a minority shareholding in listed renewables platform, ACEN Corporation. Absent the Proposed Acquisition, ACEN would continue to operate its business in accordance with its existing strategy and business plan. ACEN has a pipeline of renewable projects in Australia, further detail about which is set out in section 4.11.

### Temasek

399 Temasek aims to build a forward looking and resilient portfolio that delivers sustainable returns over the long term. For each investment Temasek makes, Temasek conducts a bottom-up intrinsic value analysis, with expected returns evaluated against a risk-adjusted cost of capital that is derived using the capital asset pricing model.

400 Temasek has full discretion as an owner and investor, at the portfolio level, to reshape and rebalance its investment holdings as the situation warrants. This means that Temasek may, from time to time, express interest to invest or divest selected positions based on Temasek's outlook and risk-return appetite.

401 Temasek manages its liquidity and balance sheet for resilience, and it does not have targets for investing by asset class, country, sector, or single name. If the Proposed Acquisition were not to proceed, Temasek would consider how to invest the funds in accordance with the aims set out above, with each potential investment considered and analysed on a case-by-case basis, without specifically looking to reallocate these funds to another investment in the energy or clean energy space in Australia.

402 More details on how Temasek invests can be found at <https://www.temasek.com.sg/en/our-investments/how-we-invest>.

## 3.5 Impact of Proposed Acquisition on other market participants

### (a) Context: scale of the energy transition

403 Absent the Proposed Acquisition, industry context and the state of Australia's renewables build-out remains the same. Critically, the scale and urgency remains, and the significant levels of demand for investment in developing renewable generation will also remain, however, what will be missing will be the contribution the BGTF Consortium could make to helping Australia achieve its net zero ambition through the 'green build-out' of Origin Energy Markets.

404 As explained elsewhere in this Application, the scale and urgency of the transition was highlighted by Australia's Climate Change Authority in its *First Annual Progress Report to the Minister for Climate Change and Energy*, published in November 2022.<sup>86</sup>

405 In that report, the Climate Change Authority noted that the Commonwealth Government has increased Australia's 2030 target under the Paris Agreement to 43% below 2005 levels, which has subsequently been enshrined in the Climate Change Act 2022. The Climate Change Authority observed that, while Australia has decarbonised its economy at an average annual rate of 12 Mt CO<sub>2</sub>-e per year since 2009, this needs to increase to 17 Mt CO<sub>2</sub>-e per year (an increase of 42%) in order to achieve Australia's 2030 and 2050 emissions targets. As the Climate Change Authority notes, *'This a significant challenge that is getting harder as time runs out. Australia needs a big upwards shift in momentum'*.<sup>87</sup>

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<sup>86</sup> Climate Change Authority, *First Annual Progress Report to the Minister for Climate Change and Energy*, November 2022, <<https://www.climatechangeauthority.gov.au/publications/targets-progress-advice>>.

<sup>87</sup> Climate Change Authority, *First Annual Progress Report to the Minister for Climate Change and Energy*, November 2022, <https://www.climatechangeauthority.gov.au/publications/targets-progress-advice>, page 21.



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406 In this context, the Climate Change Authority stresses the importance of abatement in the electricity sector and cites AEMO modelling of a grid with renewables generating 83% of electricity in the NEM by 2030–31. The Climate Change Authority concludes that the annual development rate for utility scale solar needs to double, while the rate for wind generation needs to triple. The annual development rate is set out in **Figure 17** below.

**Figure 17: Annual development rate needed to 2030**

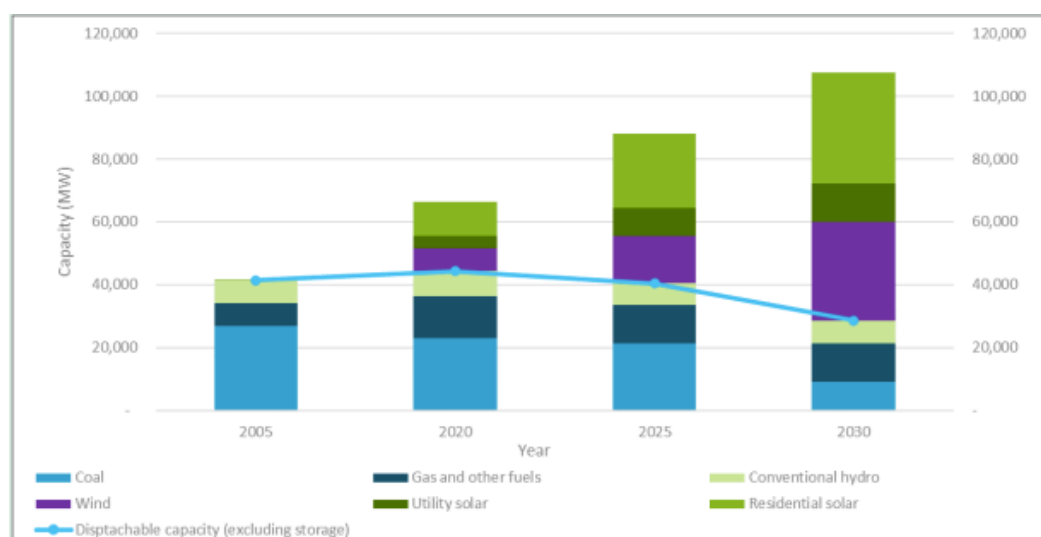
	Change 2010-2020 (GW)	Change 2020-2030 (GW)	Increase in installation rate
<b>Wind</b>	7	24	3x
<b>Utility solar</b>	4	8	2x
<b>Residential solar</b>	10	24	2x

Source: (AEMC, n.d.), (AEMO, 2022), Climate Change Authority analysis.

Source: Climate Change Authority, First Annual Progress Report to the Minister for Climate Change and Energy, Nov 2022, page 25

407 The Climate Change Authority also notes the *'pressing need'* for significant new utility-scale storage by 2030 in **Figure 18** below.

**Figure 18: Historical and projected capacity excluding storage, AEMO Step Change scenario**



Source: Climate Change Authority, First Annual Progress Report to the Minister for Climate Change and Energy, Nov 2022, page 26

### (b) Generation market as a whole

408 Absent the Proposed Acquisition, it is likely the generation market as a whole (ie, including Brookfield and Origin) would continue to develop new utility scale generation and storage projects, at a pace that is similar to, or at most, slightly quicker than, the current pace of renewables development.

### (c) Demand likely to remain solid

409 Many of the current generation demand drivers – notably the forecast closures of existing generation capacity and demand from customers for new renewable supply – are likely to continue over the next 5 to 10 years.

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- 410 There is a pipeline of potential utility scale generation and storage projects in the NEM. AEMO has identified potential new generation and storage projects in the NEM totalling approximately 209 GW.<sup>88</sup> Of the 209 GW, only 14.2 GW of project capacity is ranked higher than 'publicly announced', with:
- (a) approximately 7.9 GW of proposed generation and storage capacity classified by AEMO as committed (the highest commitment assessment level). Of this, approximately 3.8 GW comprises utility scale wind and solar generation; and
  - (b) a further 6.2 GW of proposed generation and storage capacity classified by AEMO as 'Anticipated'. Of this, approximately 2.9 GW comprises utility scale wind and solar generation.
- 411 In recent years, the NEM has brought through new utility scale generation and storage projects at a rate of around 2.55 GW per annum. The latest AER Wholesale markets quarterly Q4 2022 observed that:<sup>89</sup>
- (a) in CY 21, around 2.6 GW of solar, wind and battery capacity entered the NEM;
  - (b) in CY 22, around 2.5 GW of solar, wind and battery capacity entered the NEM;
  - (c) the AER expects that, of the 3.8 GW of proposed utility scale wind, solar and storage capacity that has been classified by AEMO as committed, approximately 2.2 GW will enter the NEM in CY 23.
- 412 This has been achieved by a range of developers, with some support from the large retailers. For example, AGL has announced a number of projects in recent years.
- (a) Queensland's largest operational commercial scale battery near Wandoan became fully operational in August 2022 and delivers 100 MW of capacity to the grid. The battery is owned by Vena Energy Australia, and AGL has full operational dispatch rights on a fixed long-term contract for 15 years.
  - (b) In 2019, AGL partnered with Electranet to deliver the Dalrymple 30 MW ESCRI battery in South Australia. The project was a joint initiative of AGL, Advisian (Worley Parsons) and Electranet, and was funded in part by the Australian Renewable Energy Agency. The Dalrymple BESS works with AGL's existing 90 MW Wattle Point Wind Farm and rooftop solar PV to provide back-up power where supply is interrupted and until the grid is restored.
  - (c) In April 2022, Neoen secured a seven-year agreement with AGL, under which AGL will support the investment of Neoen's 100MW Capital Battery in the Australian Capital Territory, and enable AGL to virtually charge and discharge up to 70 MW. Construction of Neoen's Capital Battery commenced in December 2021 and is expected to begin operating in the first half of 2023.
  - (d) AGL has signed four battery derivative agreements with Maoneng Group, which will see Maoneng develop four large-scale batteries (each 50MW in capacity) in New South Wales, and allow AGL to call on capacity at a fixed price for 15-years. The batteries, owned by Maoneng, are expected to become operational from 2023.

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<sup>88</sup> AEMO, *Generation Information*, Generator Information page, May 2023, <<https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>>.

<sup>89</sup> AER, *Wholesale markets quarterly Q4 2022*, February 2023, <<https://www.aer.gov.au/wholesale-markets/performance-reporting/wholesale-markets-quarterly-q4-2022>>, page 39.

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- 413 Similarly, Energy Australia also has announced a number of new energy projects in its development pipeline.
- (a) Located in Hazelwood North in the Latrobe Valley, Energy Australia has committed to building the Wooreen Energy Storage System, a four-hour utility scale battery with 350 MW capacity, scheduled to become operational before the end of 2026.
  - (b) Energy Australia is investigating the development of a new Mt Piper Battery Energy Storage System near Lithgow. The project is in the early stages of assessment and planning, and the development parameters are up to 500 MW of capacity with a duration of up to 4 hours of dispatchable energy.
  - (c) Energy Australia is also investigating a pumped hydro project at Lake Lyell near Lithgow in NSW, which preliminary feasibility studies suggest that a pumped hydro project is technically feasible. The site could accommodate a facility capable of producing up to 335 MW of electricity with around eight hours of storage.
  - (d) However, as outlined above, the current pace of development is heavily dependent on project financing backed by third party PPAs, is not efficient and is not delivering renewables and storage projects at the pace required to meet Australia's net zero targets.
- (d) Market failure in supply of generation projects**
- 414 While there is significant demand for the development of renewable generation capacity, there is no basis to assume that the 'market' will deliver the required renewables build-out in time. This is not a 'market failure' but reflects that the targets seek to achieve broader social and environmental goals and are not purely economic.
- 415 As discussed in more detail in section 3.1.3 above, there are a number of challenges to achieving the NEM contribution to Australia's net zero targets including: (i) access to transition capital for high emissions businesses; (ii) global competition for such capital; (iii) difficulties in securing 15 year PPAs or other price certainty for new developments; (iv) access to scarce equipment and inputs; and (v) access to scarce skills. The Proposed Acquisition will address these issues with respect to Origin Energy Markets.
- 416 More specifically, challenges exist in relation to the financing and offtake for utility scale renewables projects in Australia.
- (a) The current funding model, which typically involves a project-by-project financing structure backed directly or indirectly by a PPA, is a slow, uncertain and costly process which will be difficult to 'scale up' to meet the required development path.
  - (b) Existing retailers have shown a reluctance to sign long term PPAs due to wholesale price volatility, attributed to the continued growth in renewable energy coming into the grid at low prices.  
  
For example, in AGL's half year results for 2021, 70% of AGL's \$2.69 billion asset write-downs was attributable to provisions for onerous contracts. This \$1.9 billion write down related primarily to legacy wind farm offtake agreements entered into between 2006 and 2012 to support the development of the renewables sector at the time – at prices significantly higher than the spot and forecast prices for electricity and renewable energy certificates today.<sup>90</sup>
  - (c) The ACCC has highlighted the difficulties market participants face with respect to financing projects. In the Public Consultation Paper on the UNGI Program, the ACCC

<sup>90</sup> AGL, ASX & Media Release, 4 February 2021, <[https://www.agl.com.au/-/media/aglmedia/documents/about-agl/asx-and-media-releases/2021/210204\\_assetimpairmentandrecognitionofonerouscontracts.pdf](https://www.agl.com.au/-/media/aglmedia/documents/about-agl/asx-and-media-releases/2021/210204_assetimpairmentandrecognitionofonerouscontracts.pdf)> page 1

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received representations from project developers, smaller retailers and large C&I customers, that:

there was a potential market failure with respect to financing projects that [would] deliver new lower cost electricity generation'.<sup>91</sup> The participants cited 'an inability of certain customers to commit to longer-term contracts and/or insufficient credit-worthiness as the main reasons why they have been unable to finance projects.

(d) The former Department of Environment and Energy further noted that:

large vertically integrated generators and retailers are often able to finance new generation projects through leveraging their existing generation portfolio and customer base. However, for individual generation projects, debt investors typically require foundation customers with longer term electricity agreements in place in order to finance the project.<sup>92</sup>

### (e) New government schemes

417 One acknowledgement of these market failings are recently announced government schemes aimed at facilitating Australia's renewables and storage build-out.

418 It is difficult, however, to assess the likely impact of these government schemes. While each scheme seeks to address the market failure and accelerate renewables and storage development, each does so via a different mechanism and it is difficult to assess the extent to which they will result in additional renewables and storage projects (compared with business as usual). Indeed, it is likely that a number of Origin projects may seek to participate in these schemes.

419 However, government schemes of this kind are a burden on already constrained government budgets and there is a limit to how much additional taxpayer funded subsidy can be provided in this area.

#### *Victorian SEC proposals*

420 The Victorian Government's recently announced revival of the State Electricity Commission (**SEC**) aims to bring forward Victoria's net-zero emission goals: 95% of renewable energy by 2035, and net zero by 2045. The SEC, as guided by an Expert Advisory Panel of six of Australia's leading business and energy experts, will invest an initial \$1 billion towards delivering 4.5 gigawatts of power through new build renewable energy and storage projects – the equivalent capacity of Loy Yang A. The SEC aims to accelerate the energy transition and drive down electricity prices by, among other things, being an active energy market participant, pushing more renewable energy into the system, and working with industry to invest in and speed up the delivery of renewable energy.<sup>93</sup>

421 In April 2023, the Minister for the SEC launched the SEC's Pioneer Investment Mandate.<sup>94</sup> Under the mandate, the SEC will conduct a market search for its Pioneer Investment: the SEC's first step in the development of the broader SEC portfolio. The market search process for investment includes a Registration of Interest to identify suitable projects across Victoria, against the SEC's strategic project criteria:

(a) **Strategic alignment:** the investment must align with the SEC's objective to accelerate the transition away from coal, towards renewable and affordable energy for Victorians, and deliver commercial returns.

<sup>91</sup> Department of the Environment and Energy, *Underwriting New Generation Investments – Public Consultation Paper – October 2018*, <<https://www.energy.gov.au/sites/default/files/underwriting-investment-consultation-paper.pdf>>, page 3

<sup>92</sup> Department of the Environment and Energy, *Underwriting New Generation Investments – Public Consultation Paper – October 2018*, <<https://www.energy.gov.au/sites/default/files/underwriting-investment-consultation-paper.pdf>>, page 3

<sup>93</sup> State Electricity Commission, *SEC Pioneer Investment Mandate- 2023*, <<https://www.vic.gov.au/sites/default/files/2023-04/SEC-Investment-Mandate.pdf>>, page 3.

<sup>94</sup> State Electricity Commission, *SEC Pioneer Investment Mandate- 2023*, <<https://www.vic.gov.au/sites/default/files/2023-04/SEC-Investment-Mandate.pdf>>.

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- (b) **Technology:** the technology must be proven, and contribute towards Victoria's renewable energy and/or storage targets.
- (c) **Size:** the SEC will preference projects with a larger capacity, with a minimum target capacity of 100 MW.
- (d) **Location:** located in Victoria, with a preference for projects that support REZ development and/or efficient operation of the grid.
- (e) **Project delivery:** the ability to meet key government policy objectives, including engagement with local communities and supporting local suppliers.
- (f) **Timing:** projects with a defined delivery strategy that can begin operations and delivering electricity as soon as possible.
- (g) **Partnership:** a partnership that seeks commercial returns, and is committed to Victoria's energy transition and can deliver on development, technical and commercial expertise.

422 A key objective of the market search is to start building a pipeline of potential future investments over the medium to long term, to align with the SEC's 10-year strategic plan.

423 Registrations of Interest recently closed on 15 May 2023. From late May to mid-June 2023, the SEC will undergo a select market engagement phase targeted to specific registered projects which have the potential to best meet the criteria for the Pioneer Investment/s, and invite interested parties based on select market engagement to submit an investment proposal. From mid-June 2023 onwards, the SEC expects to assess the proposals and develop a shortlist of opportunities.

### *Commonwealth Capacity Investment Scheme (CCIS) proposals*

424 Further to the above, in December 2022, the Australian Government announced that a new Commonwealth Capacity Investment Scheme (**CCIS**) will be established. As described in **Annexure A**, the CCIS is a new Commonwealth revenue underwriting mechanism aimed at unlocking \$10 billion in private and public sector investment in new clean dispatchable storage and generation in Australia's energy market; it is envisaged that the CCIS will 'unlock 6GW of dispatchable power, by de-risking investments in priority generation and storage projects'.<sup>95</sup> The CCIS is designed to fill gaps in supply by covering generator costs when prices are low, and recouping that money when prices are higher. That is, the scheme will establish agreed revenue floors to cover project operating costs, with the Commonwealth paying the difference when revenue falls short of costs, and recouping a share of profits when generators exceed agreed revenue ceilings. It is aimed at ensuring the reliability and security of the energy market, ensuring affordable electricity supply and reducing Australia's exposure to high coal and gas prices over the medium to long term.

425 Funding under the federal budget includes:

- (a) \$9.9 million over 5 years from 2022-23 (and \$0.4 million per year to 2041-42) for AEMO to deliver auctions in South Australia and Victoria and undertake contract management activities for selected projects;
- (b) \$6.4 million in 2023-24 for the Department of Climate Change, Energy, the Environment and Water to design the auction process in late 2023 to operate in South Australia and Victoria, and continue work on a national rollout of the scheme; and
- (c) underwriting costs for clean energy projects in South Australia and Victoria selected through the auction process.

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<sup>95</sup> Budget 2023-24, *Building a clean energy future*, <[https://budget.gov.au/content/factsheets/download/factsheet\\_clean\\_energy-20230510.pdf](https://budget.gov.au/content/factsheets/download/factsheet_clean_energy-20230510.pdf)>, page 2.

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426 The CCIS will initially be available in South Australia and Victoria, before it is ultimately rolled out to all jurisdictions nationally, and will be limited to zero emissions dispatchable generation and storage technologies. The Government will also work with New South Wales to deliver the CCIS auctions in 2023 in partnership with the NSW Electricity Infrastructure Roadmap. Eligible projects will include those eligible under existing state-based schemes as well as on-grid, public and private utility scale projects that achieve financial close from 8 December 2022 onwards. The mix of generation and storage for reliability will be determined through the tender process, and all configurations will be considered (co-located and standalone). The CCIS will complement, rather than overlap, existing state/territory schemes (such as the NSW Electricity Infrastructure Roadmap), and support the transformation of the sector through the Powering Australia Plan, including Rewiring the Nation and Powering the Regions.

427 Further consultation on the detailed design will occur with industry. The Australian Government is expected to release further details on the scheme in the coming months, with a view to having the CCIS operational (and having the first auction occur) in the second half of 2023.

428 There is no real certainty, however, that any of these Government schemes will shift the dial on Australia's energy transition.

### (f) Significant downside risk

429 In short, while the rest of the market will continue to develop new utility scale generation and storage projects, there is a significant downside risk to achieving the AEMO 'Step Change' scenario outlined in its 2022 ISP. There is a real risk that the actual market delivery will reflect either the 'Progressive Change' or 'Slow Change' scenarios identified by AEMO.

430 A sense of the scale of the challenge is provided by the ISP forecast to 2033 for new NEM utility-scale solar and wind capacity is contained in **Figure 19** below.

**Figure 19: AEMO ISP forecast – various scenarios**

ISP Scenario	New NEM utility-scale solar and wind capacity in 2033	Shortfall to 'Step Change' Scenario
Step Change	38 GW	-
Progressive Change	16 GW	(22 GW)
Slow Change	13 GW	(25 GW)

Source: AEMO ISP 2022 Source Table, figure 12

431 Absent the Proposed Acquisition, the most likely outcome is that by 2033, there will be a material shortfall in the renewable generation and storage required to meet Australia's net zero targets.

### (g) Impact on other market participants

432 With the above context, in addition to considering what Brookfield and Origin would do if the Proposed Acquisition does not proceed, it is relevant to consider the impact of the Proposed Acquisition on other industry participants (ie, what would they do with and without the Proposed Acquisition). In particular as discussed above, in the counterfactual Brookfield's best estimate is that Origin would enter into PPAs providing approximately 3 GW of renewable generation and storage by 2033 (75% of what Brookfield estimates would be approximately 4 GW of renewable and storage that Brookfield would develop absent the Proposed Acquisition). Brookfield's base plan, however, is to have Origin Energy Markets build *itself* 14 GW of new renewable generation and storage, potentially displacing the 3 GW that would be built by third parties for Origin pursuant to a PPA.

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- 433 In considering this, as discussed above, four points should be borne in mind.
- 434 **First**, the estimated ~3 GW of PPAs form part of the ~4 GW that Brookfield estimates Origin would develop by 2033 in the counterfactual. The overall additional renewable energy and storage that would result from the Proposed Acquisition is Brookfield's 14 GW in the factual compared to Origin's ~4GW (including ~3 GW of PPAs) and an uncertain amount Brookfield may build without the Proposed Acquisition.
- 435 **Second**, although Brookfield's base case is that it would build the 14 GW itself within Origin Energy Markets, it would be open to considering a PPA with a third party if such a PPA provided a more attractive return to Brookfield than building that capacity itself. This would be the case where another market player is willing to build the project for a lower return on capital for the same risk taken in developing the project.
- 436 **Third**, overall demand for new renewable generation is very high. AEMO estimates that the existing 16 GW of variable renewable energy (at utility scale) will need to treble by 2030, and then doubling that capacity by 2040, and again by 2050<sup>96</sup> to achieve Australia's Paris agreement commitments. Origin Energy Markets represents only approximately 18.77% of electricity demand in the NEM<sup>97</sup>. A range of other retailers, including AGL and Energy Australia, and industrial and commercial customers, are all seeking to build or enter into PPAs to support the building of renewables. There are a large number of companies developing renewable generation and storage in Australia. In addition, the focus over the next 7 to 10 years in Australia is on replacing coal. Once the coal is replaced, however, demand is expected to increase as a result of electrification (EV's etc.). This will increase demand for renewables and provide even more opportunities for other investors / developers to pursue renewables projects in Australia.
- 437 **Fourth**, it does appear that greenfield renewable projects are finding it difficult to sell long term PPAs to either retailers or corporate off-takers because of the long term commitment (approximately 15 years) required. This has been borne out in Brookfield's Australian renewables business. The Proposed Acquisition will, however, remove both demand (Origin Energy Markets' approximately 3 GW) and supply (Brookfield's uncertain potential future supply of renewables), meaning it is uncertain what overall impact on the supply and demand of PPAs the Proposed Acquisition would have.
- 438 Overall, the Proposed Acquisition should not have an adverse impact on other renewables developers, including those seeking to enter into PPAs.

### 3.6 Conclusion

- 439 The Proposed Acquisition provides a pathway for Brookfield, via BGTF, to invest in a platform which would allow it, according to its business plans, to build 14 GW of renewables and storage capacity in Australia by 2033. This represents a meaningful contribution to the renewables and storage capacity needed to be developed for Australia to achieve its net zero targets.
- 440 Absent the Proposed Acquisition, Brookfield's best estimate is that Origin would either build itself or, through PPAs, underpin the building of an additional approximately ~4 GW of renewables and storage capacity in Australia by 2033. Brookfield would also continue to seek to invest in developing renewables and storage although the volume it is likely to be able to deliver by 2033 is very uncertain and will likely be *ad hoc* having regard to the state of the Australian market relative to international markets. The only Brookfield project currently under development is scheduled to deliver approximately 420 MW of generation and storage by around 2028.

<sup>96</sup> AEMO, 2022 Integrated System Plan – For the National electricity Market (June 2022), page 39 <<https://aemo.com.au/-/media/files/major-publications/isp/2022/2022-documents/2022-integrated-system-plan-isp.pdf?la=en>> (AEMO 2022 ISP)

<sup>97</sup> Origin load of 35.5 TWh (FY22), Origin Energy Annual Report 2022, page 29; And total NEM load 189.1 TWh (FY22), Australian Energy Regulator, Annual electricity consumption – NEM, <<https://www.aer.gov.au/wholesale-markets/wholesale-statistics/annual-electricity-consumption-nem>>.

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- 441 In summary, the Proposed Acquisition is expected to deliver an additional approximately 10 GW of renewable generation and storage (less whatever capacity Brookfield may be able to develop in the counterfactual by 2033 on a standalone basis).
- 442 The Proposed Acquisition will see the BGTF Consortium transition the Origin Energy Markets business so that it is largely emissions free (other than necessary gas-fired firming capacity). This will materially contribute towards Australia's targets for renewable generation and emissions reduction in accordance with the Paris Agreement. The Proposed Acquisition will not affect other companies' efforts to transition, noting the challenges referred to above.



## 4 Parties and related entities

443 This section of the Application provides information about:

- (a) **Brookfield** including Brookfield Corporation and Brookfield Asset Management (**sections 4.1 and 4.2**);
- (b) **Brookfield's Renewable Power and Transition** business unit including BEP and BGTF, with BGTF being the controlling investor in the BGTF Consortium (**section 4.3**);
- (c) **Brookfield Renewable Power and Transition's** activities in Australia (**section 4.4**);
- (d) **Brookfield LP** (a partnership led and controlled by Brookfield affiliates and funds, and its co-investors), the proposed acquiror of the Origin Energy Markets business (**section 4.5**);
- (e) **Brookfield Infrastructure** business unit including BIP (**section 4.6**);
- (f) **Brookfield Infrastructure's** investments in Australia (**section 4.7**) including:
  - (i) **AusNet**, a company in which a Brookfield affiliate has a 45.4% interest that is relevant to the ACCC's consideration of the Proposed Acquisition (**section 4.8**);
  - (ii) **Intellihub**, a company in which a Brookfield affiliate has a 50% interest that is relevant to the ACCC's consideration of the Proposed Acquisition (**section 4.9**);
  - (iii) **X-Elio**, BIF IV has a 50% ownership interest (**section 4.10**);
- (g) **Buckland Investment** being a co-investor in the Brookfield LP (**section 4.11**);
- (h) **Temasek** being a co-investor in the Brookfield LP (**section 4.12**);
- (i) **Reliance** being a potential co-investor in the Brookfield LP (**section 4.13**);
- (j) **MidOcean Energy**, being the proposed acquirer of the Origin Integrated Gas business (**section 4.14**); and
- (k) **Senex**, being a potential limited partner in MidOcean Energy, LLC (**section 4.15**); and
- (l) **Origin**, being the company to be acquired (**section 4.16**).

### 4.1 Brookfield

444 Brookfield is a leading global alternative asset manager with a total of US\$800 billion assets under management. Brookfield invests in sectors such as renewable power, infrastructure, real estate, private equity and credit. Its operations involve 195,000 employees in 30 power markets across 21 countries. Brookfield offers a range of alternative investment products to investors globally. These include public and private pension plans, endowments and foundations, sovereign wealth funds, financial institutions, insurance companies and private wealth channels.

445 Further information about Brookfield can be found at: <https://www.brookfield.com/about-us/who-we-are>. An overview of Brookfield's primary businesses is set out in **Figure 20** below.

**Figure 20: Brookfield's primary businesses**



Source: Brookfield<sup>98</sup>

<sup>98</sup> Values are in US\$. As of 31 December 2022.

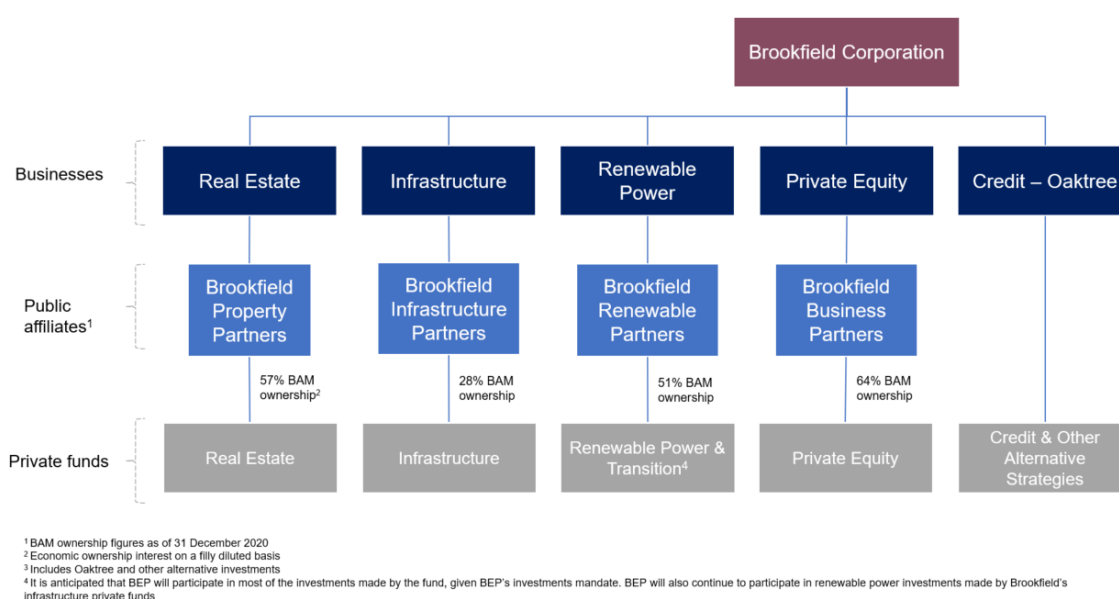
## 4.2 Brookfield group organisational structure

### (a) Brookfield Corporation and Brookfield Asset Management ULC

446 Brookfield comprises the ultimate parent Brookfield Corporation, Brookfield Asset Management ULC (**BAM**) and their affiliates.<sup>99</sup> Brookfield Corporation, BAM and their affiliates are referred to in this Application as **Brookfield**.

447 Brookfield Corporation is a publicly listed (NYSE: BN and TSX: BN) corporation, headquartered in Toronto, Canada,<sup>100</sup> deploying its capital on a value basis and compounding that capital over the long term. Brookfield Corporation focuses on investment of its proprietary capital. Brookfield Corporation provides a diverse product mix of private funds and public vehicles in which investors may invest. The structure of Brookfield Corporation is set out in **Figure 21** below.

**Figure 21: Brookfield Corporation**



Source: Brookfield

448 BAM is the holding company for the Brookfield asset management business. BAM and its subsidiaries provide asset management services including to affiliates of Brookfield Corporation.

449 Brookfield Corporation focuses on investment of its proprietary capital and BAM focuses on management of investment vehicles through which Brookfield Corporation, its affiliates and third parties invest.

### (b) BAM structure

450 BAM is organised by business unit: Renewable Power and Transition, Infrastructure, Private Equity, Real Estate, Credit<sup>101</sup> and Insurance Solutions. Each business unit manages various investment vehicles, including privately placed and publicly traded vehicles in which Brookfield Corporation has an interest.

<sup>99</sup> A restructure of Brookfield Corporation was completed on 9 December 2022. As part of that restructure Brookfield Asset Management Inc. changed its name to Brookfield Corporation. References to Brookfield Asset Management Inc. that predate 9 December 2022 (for example, in Origin's initial announcements to the market) should be understood as referring to Brookfield Corporation. As part of the restructure a separate company Brookfield Asset Management Limited was listed on the NYSE. Brookfield Asset Management Limited owns 25%, and Brookfield Corporation owns 75%, of BAM, which is the holding company for the Brookfield asset management business.

<sup>100</sup> Brookfield Asset Management, *Brookfield at a Glance* (2021) <<https://bam.brookfield.com/sites/brookfield-ir/files/brookfield/bam/annual-reports/2021/2021%20Brookfield%20At%20a%20Glance.pdf>>.

<sup>101</sup> The Credit unit comprises, among other things, a public securities group (**PSG**) which invests in public capital markets and Brookfield Corporation also holds a controlling interest in Oaktree Capital (**Oaktree**). Both PSG and Oaktree are managed independently of BAM and operate on the other side of an information wall from the aforementioned business units.

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- 451 Each business unit essentially operates independently on a day-to-day basis. It has its own CEO, and generally carries out its activities via dedicated investment management entities (which are affiliates of BAM). An affiliate of BAM is also the employing entity of the personnel that sit within that unit. Those personnel are dedicated to the management of its business activities, including the investment and operational activities of the investment vehicles managed by the business unit. By way of example, the Brookfield Infrastructure business unit has a dedicated CEO and its own employees in Australia that work only on Brookfield Infrastructure investments. Personnel that work for Brookfield Renewable Power and Transition are not involved in these investments.
- 452 There is also practical separation between the business units. For instance, the Infrastructure and Renewable Power and Transition teams in Australia are located on different floors of Brookfield's offices and have separate electronic drives. There are only a very small number of people who work across business units as part of shared service teams that sit across units (such as IT and compliance).
- 453 BAM, as a manager of each business units' investments, earns a management fee and a 'carried interest' or 'carry' in the fund as an incentive. Carried interest is a contractual arrangement whereby Brookfield receives a fixed percentage of investment gains generated within a private fund provided that the investors receive a predetermined minimum return. Carried interest is typically paid towards the end of the life of a fund after the capital has been returned to investors and may be subject to 'clawback' until all investments have been monetised and minimum investment returns are sufficiently assured. Accordingly, BAM, as manager, is directly financially incentivised to maximise returns of every business in the fund. BAM does this through its management of holding companies – it sets the strategy of portfolio companies and then delegates authority to the management of the portfolio company for them to operate the business in accordance with that strategy.

### **(c) Fund structure and governance**

- 454 The Brookfield Infrastructure and Brookfield Renewable Power and Transition business units typically make their investments through limited partnerships or similar structures. A limited partnership is a partnership that includes two or more partners – a general partner and one or more limited partners. The general partner (typically a wholly owned Brookfield subsidiary) is responsible for the day-to-day management of the business of the partnership, while the limited partners are passive investors that do not take part in the day-to-day management of the partnership's business. The investors (ie, limited partners) are called on by the fund for capital (capped at the level of each investor's commitment) each time the fund acquires a portfolio company or requires additional capital for a pre-existing investment. Brookfield generally commits to invest significant capital through (or alongside) its managed investment vehicles which commitment is generally satisfied by Brookfield Corporation or its affiliates. In some circumstances there is more than one Brookfield investor.<sup>102</sup> Limited partners are required by the terms of their subscription agreements to invest in each purchase.
- 455 An affiliate of BAM is generally appointed as the general partner for each investment vehicle that is a limited partnership. This entity is usually a special purpose vehicle. The general partner generally appoints one or more affiliates of BAM as investment managers to manage the day-to-day investment activities of the investment vehicle and may appoint additional affiliates to provide operational services to portfolio companies of such investment vehicles.

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<sup>102</sup> For example, both BIP and BEP invest through the BIF series of funds (BIF I-IV) depending on whether the asset that the BIF fund is acquiring is a renewable or non-renewable asset. When a fund proposes to make a purchase, it draws down capital from all investors in the fund, including from the Brookfield related and third party investors. BEP only provides capital through BIF IV for renewable assets. Likewise, BIP only provides capital through BIF IV for non-renewable assets.

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456 The funds use capital committed by the investors to acquire companies or assets that fall within its investment mandate. The funds managed by BAM will typically acquire control or joint control of a company alongside third party co-investors, however, from time to time those funds may acquire a minority interest in limited circumstances.

457 Investments are also overseen by an Investment Committee. There is an Investment Committee for each business unit and all the funds within that business unit are overseen by that Investment Committee. There is typically some overlap in the individuals that sit on these committees. The principal role of the Investment Committees is to review and make the ultimate decision regarding investments recommended by the relevant Brookfield managed funds – this includes new and follow-on investments in portfolio companies.

### (d) Management of portfolio companies

458 Portfolio companies of Brookfield funds are generally managed day-to-day at the portfolio company level (as opposed to the holding company level) by the relevant company's executive management team – that is, by the operating company's own CEO under the supervision of their board of directors. Brookfield typically has, via governance rights, the right to appoint directors to the holding company board. The holding company board then typically approves the budget and business plan for the operating company and then delegates authority for the board of the operating company (and its CEO) to run the business on a day-to-day basis. The appointed investment manager will manage the Brookfield fund's interest in the holding company. This involves: (i) nominating directors to the portfolio company board; and (ii) voting on shareholder matters, on behalf of the fund.

459 Investment Committees are not involved in the day-to-day management of portfolio companies of the funds.

## 4.3 Brookfield Renewable Power and Transition

460 Brookfield's Renewable Power and Transition business unit has approximately US\$72 billion of assets under management, US\$47 billion in fee-bearing capital, 3,200 operating employees, 8,000 power generating facilities, and approximately 24,000 MW of generating capacity across five continents.<sup>103</sup> It is one of the world's largest renewable energy power platforms. Each of its businesses have full development, construction and operational capabilities. Its considerable operating experience and track record in effectively managing and growing valuable assets are used to attain its dual objectives, to generate attractive returns on its investments and provide communities with clean energy solutions to further decarbonisation efforts.

### (a) BEP

461 Investors can access exposure to Brookfield's Renewable & Transition business unit via dual listed Brookfield Renewable Partners L.P (**BEP**) (NYSE: BEP; TSX: BEP.UN) a Bermuda-based limited partnership, and Brookfield Renewable Corporation (NYSE, TSX: BEPC), a Canadian corporation. BEP is one of the world's largest publicly traded renewable power platforms with generating facilities in North America, South America, Europe and Asia.

462 In recent years, BEP's focus on decarbonisation and energy transition has led to investments in decentralised power production and new green industries. Thus, its diversified portfolio consists of hydroelectric, wind, solar, distributed energy and sustainable technology solutions.

463 Additionally, BEP forms partnerships with corporations that seek to decarbonise their businesses, helping more than 600 high-quality customers transition to net zero. For instance, it owns one of the largest distributed generation businesses in the United States, which has significant

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<sup>103</sup> Brookfield Asset Management, *Investor Day Presentation* (2023) (**Annexure 22.2**); see also Brookfield, *Renewable Power & Transition* <<https://www.brookfield.com/our-businesses/renewable-power-transition>>

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operating, development and origination capabilities, and a 2,000 MW operating and development portfolio. BEP is also a leading supplier of corporate green power purchase agreements to consumers across a diverse range of sectors such as utilities, real estate, energy, technology, financial services, and other commercial and industrial businesses.

464 BEP currently has no existing Australian assets in the energy sector. Additional information on BEP is available on its website at <https://bep.brookfield.com/>.

465 Brookfield Corporation owns an approximate 48% equity interest in BEP (on a fully-exchanged basis).

### (b) BGTF

466 BGTF focuses on investments that accelerate the global transition to a net zero carbon economy. It targets investment opportunities worldwide relating to reducing greenhouse gas emissions and energy consumption, as well as increasing low-carbon energy capacity and supporting sustainable solutions. The general partner for BGTF is an affiliate of BAM, who is responsible for the day-to-day management of BGTF and its investments. BGTF also has a number of limited partners, who are passive investors and do not take part in the day-to-day management of BGTF.<sup>104</sup>

467 Brookfield has committed US\$2.6 billion funding to BGTF via BEP, its flagship listed renewable power company.

468 BGTF has two objectives: to achieve attractive financial returns, and to generate quantifiable change in behaviours which impact the environment. It will attain these objectives by adopting a focused impact management approach to investing, namely by making investments in high-quality assets and businesses that would support and accelerate the global economy's transition to net zero. Three primary themes characterise the investment opportunities BGTF will be seeking:

- (a) **Business transformation:** guide the transition of businesses towards a net zero business model, especially those in the utility, energy, industrial and technology sectors;
- (b) **Clean energy:** expand low-carbon and renewable energy production, and technologies which enhance energy capacity; and
- (c) **Sustainable solutions:** develop the capacity of communities to adapt, and further the growth of a circular economy. This is achieved through waste management, utilising resources efficiently and developing resilient infrastructure, and services supporting these solutions.

469 BGTF will be the largest investor in Brookfield LP, which will acquire the Origin Energy Markets business.

470 Importantly, BGTF is a closed-end fund with an operating term of 12 years (with option for two one-year extensions). This means that BGTF will exit any investments, including Origin Energy Markets, prior to the end of the fund's term.

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<sup>104</sup> For completeness, we note BGTF is widely held by investors which comprise a broad range of institutions that operate both in Australia and internationally. There are only three 'founding investment partners' (Ontario Teachers' Pension Plan, Temasek Holdings (Private) Limited and New York State Common Retirement Fund) which have committed significant capital to BGTF.  
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471 An overview of Brookfield Renewable Power and Transition is set out in **Figure 22** below.

**Figure 22: Overview of Brookfield Renewable Power and Transition**

<b>Overview</b>	<p>Brookfield's Renewable Power and Transition unit is responsible for sourcing and managing renewable power and transition investments, including those which BGTF ultimately invests in. It has approximately 25 GW of generating capacity globally.</p> <p>Brookfield Renewable Power and Transition has US\$72 billion assets under management.</p> <p>Investors can obtain exposure to Brookfield Renewable Power and Transition through publicly traded shares in BEP or Brookfield Renewable Corporation and institutional investors can also participate in private fund opportunities.</p>
<b>Funds</b>	<p>BGTF is a recently established closed ended fund which announced an initial close of US\$7 billion in July 2021 with US\$15 billion of commitments now obtained. It is an impact fund that focuses on investments that accelerate the global transition to a net zero carbon economy. It sits within the Renewable Power and Transition group.</p> <p>Brookfield Renewable Power and Transition also invests through the BIF IV and V. Brookfield Renewable Power and Transition only provides capital through BIF IV and V for renewable assets.</p>
<b>Core Senior Management Team</b>	<p>CEO: Connor Teskey</p> <p>BGTF: Mark Carney (Head of Transition Investing)</p> <p>Wyatt Hartley, Natalie Adomait, Jehangir Vevaina, Julian Thomas, Jennifer Mazin and Kelly Goddard.</p>
<b>Brookfield investor</b>	BEP
<b>Investment Manager</b>	Brookfield Renewable Energy Group LLC
<b>Investment Committee Members (as at December 2022)</b>	<p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p>

Source: Brookfield

#### 4.4 Brookfield Renewable Power and Transition investments in Australia

472 Brookfield does not currently own any operating generation assets in Australia (other than through X-Elio). It does however have a team in Australia exploring opportunities to invest in new renewables generation. In early April 2023, it announced it had entered an agreement with Greenleaf Renewables to develop, build and take ownership of the up to 315 MW Moonlight Range Wind Farm in central Queensland. The Moonlight Range Wind Farm is in the development phase and is expected to be ready for construction in 2025, subject to the approvals being received. Moonlight Range will also include up to 105 MW of storage (BESS), with this expected to follow a similar timeframe to the wind farm. The project is currently at the 'land negotiation' stage.

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473 Brookfield Renewable Power and Transition is also working in partnership with Greenleaf Renewables to explore additional development opportunities in Queensland, which could provide an additional 600 MW of wind generation and up to **Confidential to Brookfield: 150 - 250** MW of storage. These projects are currently at the 'land negotiation' stage, and **Confidential to Brookfield**.

474 In addition to these projects, Brookfield Renewable Power and Transition continues to explore other potential opportunities. The development of these opportunities including Moonlight Range and the Greenleaf opportunities is dependent on securing an offtake agreement with retailers or industrial customers.

475 If the Proposed Acquisition proceeds, subject to internal approval processes, the above opportunities would be contributed to Origin Energy Markets and form part of the up to 14 GW build-out proposed by Brookfield Renewable Power and Transition for Origin Energy Markets. If the Proposed Acquisition does not proceed, Brookfield Renewable Power and Transition is not confident the Moonlight Range project or any of the other projects would proceed as they would be dependent on, amongst other things, successfully negotiating with project counterparties.

### (a) X-Elio

476 Brookfield Renewable Power and Transition business unit has, through Brookfield Infrastructure Fund IV (**BIF IV**),<sup>105</sup> a 50% ownership interest in Spanish company X-Elio. The remaining 50% is held by KKR. Brookfield Renewable Power and Transition and KKR hold X-Elio as a 50 / 50 joint venture. **Confidential to Brookfield**. On 16 March 2023 BIF IV agreed to acquire the remaining 50% it does not own from KKR. The transaction is subject to customary closing conditions and is expected to close during the second half of 2023.

477 X-Elio currently owns one operational solar farm in Queensland and has five active solar farm pipeline projects in Australia.

478 X-Elio is discussed further in section 4.10 below.

### 4.5 Brookfield LP

479 Brookfield LP has been established for the purposes of the Proposed Acquisition and it has no activities or operations in Australia (or globally).

480 Brookfield LP will be controlled by Brookfield (through Brookfield managed funds including BGTF and BEP holding a combined interest of up to 67.6%), with co-underwriters Buckland Investment (22.5%), Temasek (9.9%), potentially Reliance, and possible other foundation co-investors.<sup>106</sup>

### 4.6 Brookfield Infrastructure

481 Brookfield's Infrastructure business unit has approximately US\$143 billion of assets under management across the transport, midstream and data sectors, making it one of the world's largest infrastructure investors. Brookfield Infrastructure acquires and invests in infrastructure assets which provide essential services.

482 Its objective is to deliver attractive long-term financial returns to its investors, regardless of market conditions. Brookfield does this through a combination of cash yield and capital appreciation, and by leveraging its operational expertise to enhance cash flows and increase value.

### **BIP**

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<sup>105</sup> As mentioned above, both BIP and BEP invest through the BIF series of funds (BIF I-IV) depending on whether the asset that the BIF fund is acquiring is a renewable or non-renewable asset. When a fund proposes to make a purchase, it draws down capital from all investors in the fund, including from the Brookfield related and third party investors. BEP only provides capital through BIF IV for renewable assets.

<sup>106</sup> GIC through Buckland Investment Pte. Ltd. will have no direct influence on the underlying investments with Brookfield retaining management of Brookfield LP.

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- 483 Investors can access exposure to Brookfield's Infrastructure business unit via dual listed Brookfield Infrastructure Partners L.P. (**BIP**) (NYSE: BIP and TSX: BIP.UN). Brookfield Corporation owns approximately 30% of BIP. BIP is one of the largest owners and operators of critical and diverse global infrastructure networks which facilitate the movement and storage of energy, water, freight, passengers and data. BIP focuses on investment in high-quality, long-life assets that provide essential products and services for the global economy. In this Application the term BIP is used to refer to Brookfield Infrastructure Partners L.P whereas Brookfield Infrastructure is used to refer to the infrastructure business unit of BAM.
- 484 An overview of Brookfield Infrastructure is set out in **Figure 23** below.

**Figure 23: Overview of Brookfield Infrastructure**

<b>Overview</b>	<p>Brookfield's Infrastructure unit is responsible for sourcing and managing infrastructure (non-renewable power) investments. It owns and operates assets across transport, data, utilities and midstream sectors with a focus on cash flow stability and resilience.</p> <p>Brookfield Infrastructure has US\$143 billion assets under management.</p> <p>Investors can obtain exposure to Brookfield Infrastructure through publicly traded shares in BIP or Brookfield Infrastructure Corporation and institutional investors can also participate in private fund opportunities.</p>
<b>Funds</b>	<p>Brookfield SuperCore Infrastructure Partners - a global infrastructure, open ended fund with current total equity commitments of US\$8.4 billion<sup>107</sup>. It sits within the infrastructure division of the Brookfield group and invests in infrastructure assets in the utilities, transport, midstream and data segments.</p> <p>BIF series (I-V) – a series of global, closed ended infrastructure funds that invest in infrastructure assets in the utilities, transport, midstream and data segments as well as in renewable power<sup>108</sup> investments.</p>
<b>Core Senior Management Team</b>	<p>CEO: Samuel Pollock (CEO Infrastructure)</p> <p>BSIP: Eduardo Salgado, Michael Botha and Natalie Hadad</p> <p>BIF series management: David Krant, Ben Vaughan and Scott Peak</p>
<b>Brookfield investor</b>	<p>BSIP: BIP<sup>109</sup></p> <p>BIF series: Primarily BIP, with a small allocation to BEP</p>
<b>Investment Manager</b>	Brookfield Asset Management Private Institutional Capital Advisers (Canada) L.P.
<b>Investment Committee Members (as at December 2022)</b>	<p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p> <p><b>Confidential to Brookfield</b></p>

<sup>107</sup> As an 'open-ended' fund, the total equity invested in BSIP will grow over time.

<sup>108</sup> Infrastructure and Renewable Power investments within BIF IV are managed and overseen separately. See section 4.2 above.

<sup>109</sup> BIP's investment in BSIP is negligible. **Confidential to Brookfield**. BIP has not invested through BSIP for the AusNet acquisition but instead co-invested alongside BSIP in AusNet such that BIP holds an interest in the AusNet business, which is included in Brookfield's aggregate 45.4% holding in AusNet.



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Source: Brookfield

### 4.7 Brookfield Infrastructure's investments in Australia

485 Brookfield Infrastructure has two investments in the electricity supply chain in Australia relevant to the Proposed Acquisition.

#### **AusNet**

486 Brookfield Infrastructure has a 45.4% interest in AusNet Pty Ltd (**AusNet**) through Brookfield funds including BIP and Brookfield Super-Core Infrastructure Partners (**BSIP**). The remaining equity in AusNet is held by third party investors.

487 BSIP is an open-ended global diversified infrastructure fund. BSIP focuses on investments in core infrastructure assets in developed markets. BIP has made an investment of US\$50 million in BSIP. All remaining investors in BSIP are unrelated third parties. BSIP is managed and operated by BSIP GP, S.à r.l. (a wholly owned entity of Brookfield Corporation). BSIP has no investments in Australia other than AusNet.

488 AusNet is discussed further in section 4.8 below.

#### **Intellihub**

489 Brookfield Infrastructure has, through BIF IV, a 50% ownership interest in (the holding company of) Intellihub Australia Pty Ltd (**Intellihub**). The remaining 50% is held by Pacific Equity Partners (**PEP**), through the PEP Smart Metering Fund (**PEP SMF**). GIC Infra, through an affiliate, is an investor in the PEP SMF, which is managed by PEP. GIC Infra's interests in PEP SMF is **Confidential to GIC: a majority**, giving it an indirect economic interest of **Confidential to GIC: a substantial minority** in Intellihub.

490 BIF IV is one of Brookfield's flagship global infrastructure funds. BIF IV has invested ~A\$1bn for its 50% interest in Intellihub. BIP is the largest investor in BIF IV, providing **Confidential to Brookfield** of its capital. BIF IV has a focus on acquiring high-quality infrastructure assets.<sup>110</sup> It has a diversified set of investments in infrastructure businesses and a global portfolio of renewable power assets. In general, BIP funds Brookfield Corporation's portion of the BIF IV committed capital for investments consisting primarily of non-renewable assets, with BEP funding Brookfield Corporation's portion of committed capital for investments consisting primarily of renewable power assets.

491 Intellihub is discussed further in section 4.9 below.

#### **Other Brookfield investments in Australia**

492 BEP has a 13.04% interest in listed Canadian company, TransAlta. TransAlta develops, owns and operates diverse electrical generation assets in Canada, the United States and Australia. In Australia, TransAlta has an interest in a gas pipeline and two gas-fired power stations in the Pilbara region and a third gas-fired power station in the Kalgoorlie region. Origin Energy Markets' only presence in Western Australia, is its WINconnect business acquired in 2022. WINconnect provides retail embedded network and hot water services. Given the lack of any overlap or vertical relationship, TransAlta is not discussed further.

493 Brookfield holds a majority interest in Oaktree Capital Management. Signal Energy is a portfolio company of Oaktree Capital Management. Signal Energy is a construction company, which provides a full portfolio of engineering, procurement, and construction/balance of plant services for renewable energy and infrastructure projects globally. This includes solar, wind, high voltage, energy storage and distributed generation projects. Signal Energy established a presence in

<sup>110</sup> Brookfield, *Brookfield Infrastructure Fund IV* (February 2019) <[https://www.pcr-ma.org/sites/default/files/fileattachments/general/page/2411/bam\\_bif\\_iv\\_investor\\_presentation\\_q3\\_2018\\_-\\_feb\\_2019\\_vf2\\_plymouth\\_county.pdf](https://www.pcr-ma.org/sites/default/files/fileattachments/general/page/2411/bam_bif_iv_investor_presentation_q3_2018_-_feb_2019_vf2_plymouth_county.pdf)> (Annexure 22.1).

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Australia in 2017, and has since provided EPC services for three solar farm projects but remains a very small provider of EPC services in Australia. Given that Origin Energy Markets is not an EPC contractor and that Signal Energy is a small EPC provider in a very competitive market, Signal Energy is not discussed further.

494 For completeness Brookfield and its affiliates and funds have a range of other investments in Australia in industries that are unrelated to the Proposed Acquisition, including a rail freight network, container terminal operations, hospitals, retirement living and offices. A summary of Brookfield's operations in Australia is set out in **Figure 24** below.

### **Figure 24: Brookfield in Australia**

#### **Confidential to Brookfield**

Source: Brookfield

#### **Other**

495 Copies of Brookfield Corporation's, BEP's, BIP's, BGTF's, BIF IV's and BSIP's most recent annual reports are attached as **Annexures 1.16 to 1.21** respectively.

496 **Annexures 1.16 to 1.21** also reflect BAM's, BEP's, BIP's, BGTF's, BIF IV's and BSIP's most recent audited annual financial statements. More recent management accounts are not available.

497 A copy of BEP's recent strategic plan is attached as **Annexure 1.22**.

## **4.8 AusNet**

### **Ownership structure and governance**

498 As noted above, Brookfield affiliated entities, including BSIP and BIP, own, indirectly, a combined 45.4% of AusNet. The remaining equity is owned by:

(a) Australian Retirement Trust (**ART**):<sup>111</sup> 15%.

ART is an Australian multi-industry superannuation fund. ART invests in the following asset classes: Australian shares, international shares, private capital, property, diversified strategies, infrastructure, fixed interest and alternative strategies.

(b) Alberta Investment Management Corporation (**AIMCO**): 9.9%.

AIMCO is a government-owned investment manager headquartered in Canada. AIMCO was established in 2008, and is responsible for managing the investments of pension, endowment, and government funds in Alberta.<sup>112</sup> As at 31 December 2022, AIMCO has a C\$158 billion of assets under management,<sup>113</sup> with investments spanning various asset classes: fixed income, public equities, real estate, infrastructure & renewable resources, and private equity.<sup>114</sup> AIMCO's Infrastructure and Renewable Resources portfolio manages more than \$11 billion of global assets.<sup>115</sup>

(c) Investment Management Corporation of Ontario (**IMCO**):

IMCO is a government-owned investment manager headquartered in Canada. IMCO was established in 2012, and is responsible for managing the investments of public-sector pensions and government funds in Ontario.<sup>116</sup> At 31 December 2022, IMCO has C\$73

<sup>111</sup> Formerly known as SunSuper Superannuation Fund.

<sup>112</sup> AIMCO, *At a glance* <<https://www.aimco.ca/who-we-are/at-a-glance>>.

<sup>113</sup> AIMCO, *At a glance* <<https://www.aimco.ca/who-we-are/at-a-glance>>.

<sup>114</sup> AIMCO, *What we do* <<https://www.aimco.ca/what-we-do/asset-classes>>.

<sup>115</sup> AIMCO, *Infrastructure & Renewable Resources* <<https://www.aimco.ca/what-we-do/asset-classes/infrastructure-renewable-resources/>>.

<sup>116</sup> PIMCO, *About Us – Overview* <<https://www.imcoinvest.com/overview.html>>; IMCO, *Who we serve* <<https://www.imcoinvest.com/who-we-serve.html>>.

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billion of assets under management,<sup>117</sup> with investments spanning Canada, the United States of America, Europe and the Middle East and Asia Pacific.<sup>118</sup>

- (d) Healthcare of Ontario Pension Plan (**HOOPP**): 9.9%.

HOOPP is a defined benefit pension plan for healthcare workers in Ontario, Canada. At December 31, 2022, HOOPP Infrastructure held US\$2.69 billion of direct and co-investments. A further US\$822 million of assets were held through private infrastructure funds.

- (e) Canada's Public Sector Pension Investment Board (**PSP**): 9.9%.

PSP is a government-owned pension investment fund headquartered in Canada. PSP Investment was established in 1999 to manage the pension plans of the federal public service, the Canadian Forces, the Royal Canadian Mounted Police and the Reserve Force.<sup>119</sup> At 31 March 2022, PSP Investment has C\$230.5 billion of assets under management, with investments spanning Canada, the United States of America, South America, Europe and the Asia-Pacific.<sup>120</sup>

- 499 The relationship between Brookfield and these co-investors is governed by a Governance Agreement (described further below). While these investors may also invest through one or more of Brookfield's funds, there is no special commercial relationship between them.
- 500 Brookfield and its co-investors hold their interests in a series of holding companies at the top of which is Australian Energy Holdings No 1 Pty Ltd (**AusNet Holdings**). AusNet Holdings holds the interests in AusNet and its subsidiaries. It approves the annual budget and business plan for AusNet and makes decisions relating to large capital investments. It has otherwise delegated its authority to the CEO of AusNet.<sup>121</sup>
- 501 AusNet is managed day-to-day by the board of AusNet Pty Ltd (**AusNet**) and its subsidiaries, and the AusNet management team. The board of AusNet is comprised of its management team: the CEO, CFO and company secretary.
- 502 The CEO, under delegated authority from AusNet Holdings, has significant operational authority including to take decisions on AusNet's key business activities up to certain thresholds as set out below:
- (a) mergers, acquisitions, equity investments and divestments up to \$**Confidential to AusNet** million;
  - (b) regulated capital expenditure up to \$**Confidential to AusNet** million;
  - (c) unregulated and excluded Negotiated Transmission Connections up to \$**Confidential to AusNet** million;
  - (d) prescribed and innovation projects funded by regulated schemes up to \$**Confidential to AusNet** million;
  - (e) other growth and future networks projects up to \$**Confidential to AusNet** million.
- 503 This delegation of authority means that, in practice, it is rare that approval of AusNet Holdings is sought for day-to-day business decisions. In the event that AusNet Holdings' approval is required for a capital expenditure relating to a customer contract or project, AusNet will usually seek approval for an amendment to its budget (rather than approval for the contract or project).

<sup>117</sup> IMCO, 2022 Annual Report, page 8 <<https://www.imcoinvest.com/pdf/imco-annual-report-2022.pdf>>.

<sup>118</sup> IMCO, 2022 Annual Report, page 9 <<https://www.imcoinvest.com/pdf/imco-annual-report-2022.pdf>>.

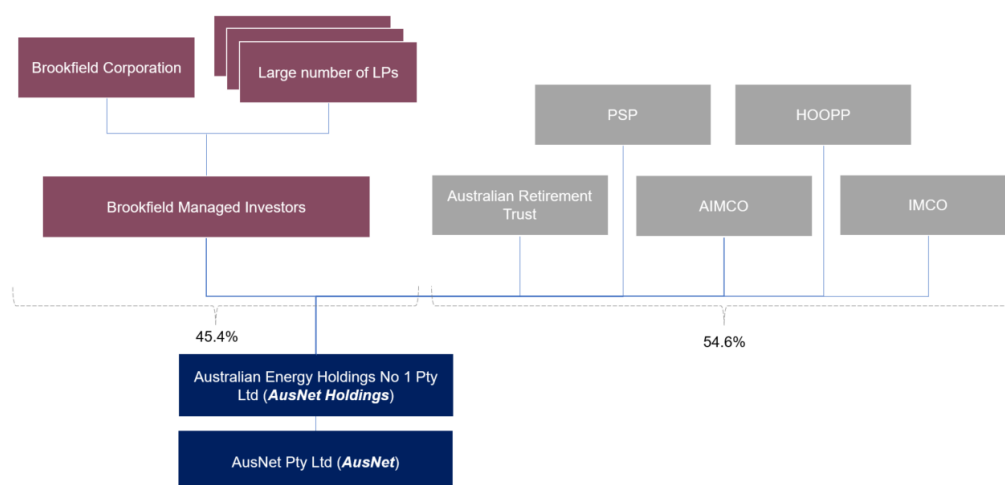
<sup>119</sup> Public Sector Pension Investment, *Our Story* <<https://www.investpsp.com/en/psp/our-story/>>.

<sup>120</sup> Public Sector Pension Investment, *We are PSP* <<https://www.investpsp.com/en/>>.

<sup>121</sup> 'AusNet Services Authority Manual – Delegations of Authority' was adopted by AusNet Holdings to give authority to AusNet's CEO (rather than Managing Director) at completion of Brookfield and its co-investors' acquisition of AusNet in 2022 (**Annexure 11**).

504 **Figure 25** below sets out the ownership structure of AusNet Holdings and AusNet.

**Figure 25: Ownership structure of AusNet<sup>122</sup>**



Source: AusNet

505 At the AusNet Holdings level, each investor is entitled to appoint one director to the board of AusNet Holdings for each 9.9% interest they hold except ART which is entitled to appoint two directors for its interest. **Confidential to Brookfield: Two of the Canadian investors have** irrevocably waived their right to appoint a director. The Board of AusNet Holdings is therefore made up of eight directors, four of whom are appointed by Brookfield on behalf of the Brookfield controlled entities. Other than reserved matters (detailed below), decisions are taken by the board by a simple majority vote (with each investor group having **Confidential to Brookfield: voting rights**).

506 Reserved matters require a super-majority vote of at least Brookfield plus two of the remaining investors. These include, for example:

- (a) approval of annual budget **Confidential to Brookfield**;
- (b) approval of business plan **Confidential to Brookfield**;
- (c) appointment or termination of the CEO;
- (d) acquisitions or dispositions above **Confidential to Brookfield**; and
- (e) **Confidential to Brookfield**, consolidation, **Confidential to Brookfield**.<sup>123</sup>

507 As mentioned above, AusNet is operated at the portfolio company by its management team with significant delegated authority to take day to day business decisions. It is therefore rare that the AusNet Holdings board is asked to approve AusNet's day to day business decisions.

508 In the event that an activity requires the approval of AusNet Holdings, the governance regime prevents an AusNet group entity from entering into a material<sup>124</sup> arrangement, or an arrangement for services that is not at arm's length with Brookfield or any of its affiliates unless the arrangement is approved by a majority of the non-Brookfield investors. After the Proposed Acquisition, Origin Energy Markets would be a Brookfield affiliate for this purpose, with the effect that any material or non-arm's length arrangement between AusNet and Origin Energy Markets

<sup>122</sup> There are a large number of limited partners that hold interests in BSIP. These limited partners are passive investors. Brookfield manages BSIP on a day-to-day basis.

<sup>123</sup> AusNet Shareholders Governance Agreement (entered 9 February 2022) p 85 (**Annexure 11**).

<sup>124</sup> AusNet Shareholders Governance Agreement (entered 9 February 2022) page 36 requires that agreements **Confidential to Brookfield: exceeding a threshold amount are approved by non-interested investors (Annexure 11)**.

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would need to be approved by Brookfield and **Confidential to Brookfield**. These regimes would not prevent an AusNet group entity from entering into an arrangement with a competitor to Origin Energy Markets that raises conflicts concerns. However, it is rare that such an arrangement would come before the AusNet Holdings board.

509 The general partner has appointed BAMPIC as the manager for all BSIP's investments including BSIP's interest in AusNet Holdings. As manager, BAMPIC is responsible for: (i) nominating directors to the AusNet Holdings board; and (ii) voting on AusNet Holdings shareholder matters, on behalf of BSIP.

### Activities

510 AusNet is an Australian energy delivery services company that owns and operates \$11 billion in electricity and gas network assets. Its revenue for the financial year ended 31 March 2022 was \$1,924.5 million. It owns the principal electricity transmission network in Victoria. It is also one of five electricity distributors and one of three gas distributors in Victoria. It also offers a range of development and future networks services (see <https://www.AusNetservices.com.au/>). A map of AusNet's electricity transmission and gas and electricity distribution networks is set out below in **Figure 26**.

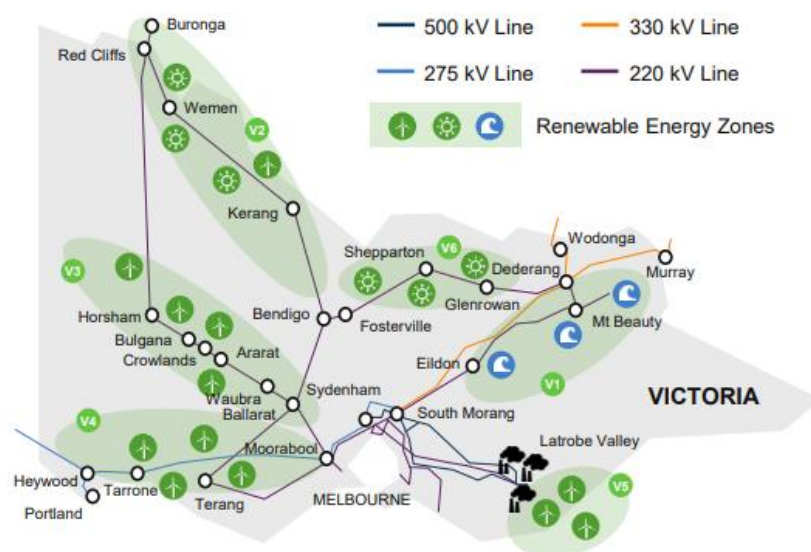
**Figure 26: Map of AusNet's gas and electricity network**



Source: <https://www.AusNetservices.com.au/about/what-we-do>

511 **Electricity transmission network:** AusNet owns and operates Victoria's principal electricity transmission network comprising 61 terminal stations, ~13,000 towers and ~6,850 kilometres of high-voltage powerlines, which feed into five lower-voltage electricity distribution networks in Victoria. AusNet also helps connect power to New South Wales, South Australia and Tasmania. A map of AusNet's electricity transmission network is set out in **Figure 27** below.

Figure 27: AusNet's electricity transmission network

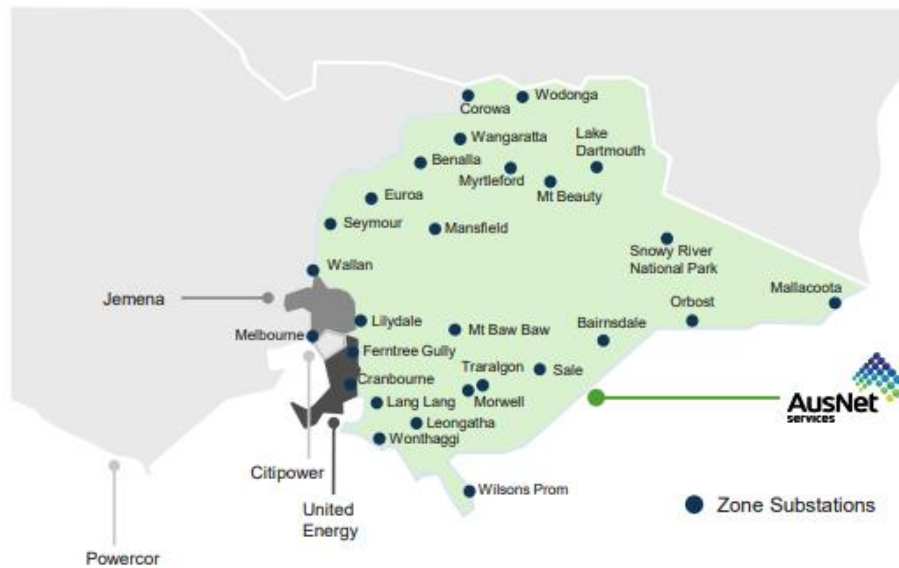


Source: AusNet

- 512 The primary Victorian transmission system is owned and maintained by AusNet. The Australian Energy Market Operator (**AEMO**) is responsible for system planning, augmentation and the provision of services to users ie, TNSP functions are split between AusNet and AEMO.<sup>125</sup>
- 513 **Electricity distribution network:** AusNet owns and manages one of the five electricity distribution businesses operating in Victoria, including the low voltage power poles, wires and meters which deliver power to businesses and homes.
- 514 AusNet's distribution network encompasses 44,705 kilometres of overhead powerlines, 7,908 kilometres of underground cables, 417,145 power poles and 90,000 streetlights. This network covers 80,000 square kilometres, most of which is in rural or regional areas and feeds electricity to ~802,000 customers across eastern and north-eastern Victoria, and in Melbourne's north and east. A map of AusNet's electricity distribution network is set out in **Figure 28** below.

<sup>125</sup> AEMO, *Victorian transmission network service provider role* (2022) <<https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/victorian-planning/victorian-transmission-network-service-provider-role#:~:text=AEMO%20is%20responsible%20for%20the, network%20infrastructure%20should%20be%20built>>.

Figure 28: Victoria's electricity distribution network



Source: AusNet

- 515 **Gas distribution network:** AusNet owns and manages one of the three gas distribution businesses in Victoria. The AusNet gas network covers 12,587 kilometres in an area of 60,000 square kilometres. This network includes mains, mainline valves, pressure regulating facilities (including city gates, field and district regulators), service pipes and meters and ancillary equipment. A map of AusNet's gas distribution network is set out below in **Figure 29**.
- 516 AusNet distributes gas to ~792,000 residential, industrial and commercial customers in Melbourne, Geelong and parts of Western Victoria.

Figure 29: Victoria's gas distribution networks



Source: AusNet

#### Development and future networks (including Mondo)

- 517 AusNet also operates what it refers to internally as 'Development and Future Networks' (*DFN*) business, which provides a range of services to support the management of electricity, gas and water networks that fall outside its regulated business.
- 518 DFN consists of a mix of businesses of parts of the businesses within AusNet conducted by:
- (a) Mondo Power Pty Ltd (*Mondo*); and
  - (b) AusNet Transmission Group Pty Ltd.
- 519 Most relevantly to this Application, AusNet's DFN business is engaged in the following activities:
- (a) **Energy monitoring and management:** Mondo has a smart energy monitoring and management system, Ubi, which monitors electricity use, sending accurate updates to the user's computer, smartphone or tablet so they can watch their energy flow in near real-time. In addition, AusNet supplies energy management systems to commercial and industrial (C&I) customers. This can involve the installation of PV systems and associated electricity supply. For example, Mondo provides the solar solution for the Deakin University Solar Farm.
  - (b) **VPP trials:** AusNet is currently undertaking two exploratory VPP projects to enhance network stability. The first involves a VPP for grid reliability where AusNet is exploring how Mondo's Ubi circuit control device can be used as a microgrid in regional and remote areas to provide additional energy reliability in those areas. The second, Project Edge, involves working with ARENA and AEMO to create a simulated market and trading mechanism for DER assets.
  - (c) **Batteries:** AusNet has developed, or is developing, three batteries:
    - (i) **Phillip Island:** a 5 MWh battery for use on Phillip Island for example in the event of outages on the line servicing Phillip Island or during peak demand periods (such as over summer).



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- (ii) **Ballarat:** a 30 MWh battery at Ballarat. The "Ballarat Big Battery" project was funded by the Victorian government, ARENA, AusNet and EnergyAustralia. EnergyAustralia rather than AusNet operates the battery.
- (iii) **Thomastown:** AusNet is developing a Battery Energy Storage System in Thomastown, 14 kilometres north of Melbourne, Victoria. The Thomastown battery will have a maximum power output of 300 MW and a storage capacity of 600 MWh. Designing and planning activities have begun but the battery is not expected to be operational before 2025.
- (d) **Other services:** Mondo provides a range of other infrastructure services to the utilities sector including contestable metering services for commercial and industrial customers and energy retailers, as well as a range of water, sewer and gas services including water meter services, sewer connection assessment and network intelligence.

A full description of Mondo's activities is available on its website at <https://mondo.com.au/>.

520 With respect to DFN, AusNet Transmission Group Pty Ltd provides network augmentations and connection (both contestable and non-contestable but not including maintenance or replacement work). AusNet is also engaging in trials and research relating to electric vehicles, grid energy storage, mini-grids and exports of excess solar to the electricity grid.

### **Other**

521 AusNet's company structure chart is attached at **Annexure 2.1**. AusNet's company structure chart also identifies the officeholders and executive team for each of AusNet's relevant businesses.

522 A copy of AusNet's most recent annual report is attached as **Annexure 2.2**, a copy of its most recent audited financial statements is attached as **Annexure 2.3**, and a copy of its most recent management accounts is attached as **Annexure 2.4**.

523 AusNet's most recent business and strategic plan is attached as **Annexure 2.5**.

524 The names, contact details and gross revenue earned from each of AusNet's top 10 customers in the preceding financial year is set out at **Annexure C**.

525 Contact details for each of AusNet's: (i) actual or potential competitors, (ii) top five to 10 suppliers; and (iii) trade or industry associations in which it is a member are set out in **Annexure C**.

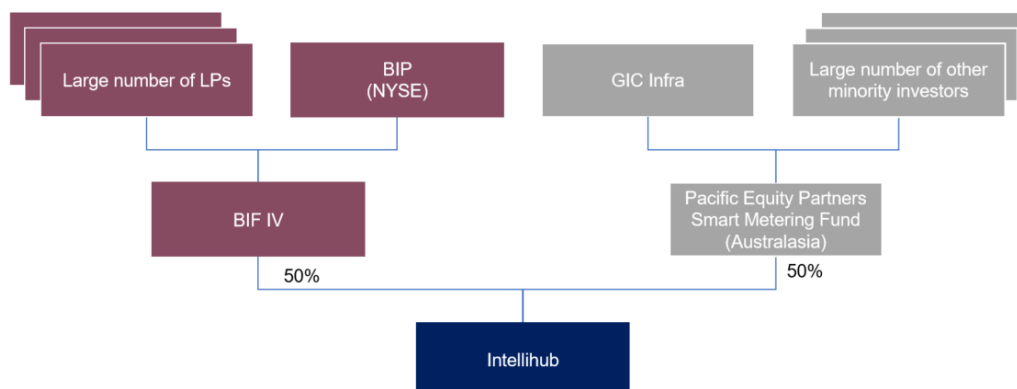
## **4.9 Intellihub**

### **Ownership structure and governance**

526 BIF IV owns 50% of Intellihub. The remaining 50% is held by PEP, through PEP SMF. PEP SMF and BIF IV hold Intellihub in a 50 / 50 joint venture. GIC Infra, through an affiliate, is an investor in the PEP SMF, which is managed by PEP. GIC Infra's interest in PEP SMF is **Confidential to GIC: a majority**, giving it an indirect economic interest of **Confidential to GIC: a substantial minority** in Intellihub.

527 **Figure 30** below sets out the ownership structure of Intellihub.

**Figure 30: Ownership structure of Intellihub**



Source: Brookfield and GIC

528 Each of BIF IV and PEP are entitled to appoint an equal number of directors to the Intellihub board. Board matters are approved by a simple majority of votes except for board reserved matters which require approval by directors representing interests of **Confidential to Brookfield**. **Confidential to Brookfield: All other matters must be by mutual agreement.** Board reserved matters include related party proposals and conflicts as well as –

- (a) **Confidential to Brookfield**
- (b) **Confidential to Brookfield**
- (c) **Confidential to Brookfield**
- (d) **Confidential to Brookfield**
- (e) **Confidential to Brookfield**
- (f) **Confidential to Brookfield**
- (g) **Confidential to Brookfield**

529 **Confidential to GIC: GIC acts as a passive investor in PEP SMF. As a passive investor GIC has standard limited partner rights and have no influence on governance.**

- (a) **Confidential to GIC**
- (b) **Confidential to GIC**
- (c) **Confidential to GIC**
- (d) **Confidential to GIC**

530 The general partner has appointed BAMPIC as the manager of all of BIF IV's investments including BIF IV's interest in Intellihub. As manager, BAMPIC is responsible for: (i) nominating directors to the Intellihub board; and (ii) voting on Intellihub shareholder matters, on behalf of BIF IV.

531 In addition, Intellihub is managed day-to-day by the Intellihub management team - that is, at the portfolio company level by its own CEO under the supervision of the Intellihub board. The Intellihub board will make its own business decisions including investment and capital expenditure decisions unless it needs to request further capital from its shareholders to fund the activities of Intellihub. Such requests are expected to be rare, **Confidential to Intellihub.**

**Activities**

- 532 Intellihub is an Australian and New Zealand-based smart utility services infrastructure provider that delivers smart metering and data solutions across electricity, gas and water networks (see <https://www.intellihub.com.au/>). Intellihub primarily services the electricity sector, with only a very limited gas and water offering currently (noting that the gas and water sectors do not have contestable smart metering). In particular, Intellihub's gas and water offerings involve developing products for use by gas and water networks (ie, as a potential input supplier) rather than as a metering service, and accordingly this is a small part of Intellihub's business.
- 533 Intellihub's electricity smart metering offering combines a smart meter (eg, Intelli-M) with a communications module (eg, Intelli-ConX). A smart meter is a device that digitally measures energy use (ie, when and how much energy is used at a residential, commercial or business premises). The smart meter sends this information back to the energy retailer remotely for billing purposes, without the meter needing to be manually read by a meter reader.<sup>126</sup> Specifically, Intellihub offers Metering Coordinator, Metering Provider and Metering Data Provider services to its utility retailer customers, as well as offering the following valued added services (**VAS**):
- (a) **Remote re-energisation / de-energisation:** Remotely switching energy on and off at the customer premises for which the retailer is currently the financially responsible market participant. The intention is to minimise unbilled revenue from 'vacant consumption' and avoid paying network connection charges to distributors when a house is not occupied.
  - (b) **Network data:** Off-market data produced by the meter (ie, other than consumption) and outage / safety related notifications / information. The intention is to enable distributors to enhance the safety, reliability and costs (both OpEx and CapEx) involved in operating the electricity grid by providing data on the low-voltage network and DER-related services.
  - (c) **Interval data:** Intellihub provides retailers with total consumption data in near real time (as opposed to only the next day). This enables retailers to minimise bill shock experienced by consumers (and associated costs, eg, call centre resourcing) and offer improved insights or notifications to consumers via mobile applications and online portals.
  - (d) **Streaming data:** Intellihub streams instantaneous consumption data to retailers in near real-time (few second delay). This enables retailers to offer a further differentiated digital product to their end-consumers, giving them a tool to view their energy usage in real time and develop a deeper understanding of how their appliances link to consumption.
- 534 These advanced smart metering infrastructure services are primarily provided:
- (a) to electricity energy retailers across the NEM (other than in Victoria where smart meters have already been installed by distributors) for deployment to customers across the mass market (ie, residential customers and small-medium enterprises);
  - (b) for use in embedded networks (ie, high-density residential buildings, retail, aged care communities and corporate parks); and
  - (c) for use in commercial and industrial settings (ie, large businesses with direct access to the wholesale electricity market who may have hundreds of meters per customer).
- 535 Intellihub's customer revenue as at 30 June 2022 was **Confidential to Intellihub: \$120 - \$150** million. Intellihub's key contracts are with major electricity retailers, set out in **Figure 31** below:

<sup>126</sup> AER, *Smart meters* <<https://www.aer.gov.au/consumers/my-energy-service/smart-meters>>.

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*Figure 31: Key terms of Intellihub's contracts with its customers*

Customer	Meter Contract Term	Deployment Term	Volume commitment	Contracting arrangement
Origin Energy	<p>Confidential to Origin and Intellihub: Material term of key customer contract</p> <p>Confidential to Origin and Intellihub: Material term of key customer contract</p>	<p>Confidential to Origin and Intellihub: Material term of key customer contract</p>	<p>Confidential to Origin and Intellihub: Material term of key customer contract</p> <p>Confidential to Origin and Intellihub: Material term of key customer contract</p>	<p>(a) Confidential to Origin and Intellihub: Material term of key customer contract</p> <p>(b) Confidential to Origin and Intellihub: Material term of key customer contract</p> <p>(c) Confidential to Origin and Intellihub: Material term of key customer contract</p>
AGL	<p>Confidential to Intellihub: Material term of key customer contract</p>	<p>Confidential to Intellihub: Material term of key customer contract</p> <p>Confidential to Intellihub: Material term of key customer contract</p>	<p>Confidential to Intellihub: Material term of key customer contract</p> <p>Confidential to Intellihub: Material term of key customer contract</p>	<p>(a) Confidential to Intellihub: Material term of key customer contract</p> <p>(b) Confidential to Intellihub: Material term of key customer contract</p>
EnergyAustralia	<p>Confidential to Intellihub: Material term of key customer contract</p>	<p>Confidential to Intellihub: Material term of key customer contract</p>	<p>Confidential to Intellihub: Material term of key customer contract</p> <p>Confidential to Intellihub: Material term of key customer contract</p>	<p>(a) Confidential to Intellihub: Material term of key customer contract</p> <p>(b) Confidential to Intellihub: Material term of key customer contract</p>
ActewAGL	<p>Confidential to Intellihub: Material term of key customer contract</p>	<p>Confidential to Intellihub: Material term of key customer contract</p>	<p>Confidential to Intellihub: Material term of key customer contract</p> <p>Confidential to Intellihub: Material term of key customer contract</p>	<p>(a) Confidential to Intellihub: Material term of key customer contract</p> <p>(b) Confidential to Intellihub: Material term of key customer contract</p>

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Customer	Meter Contract Term	Deployment Term	Volume commitment	Contracting arrangement
			contract	
Aurora	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract  Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub  Confidential to Intellihub: Material term of key customer contract	(a) Confidential to Intellihub: Material term of key customer contract  (b) Confidential to Intellihub: Material term of key customer contract
Red Energy	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract	(a) Confidential to Intellihub: Material term of key customer contract  (b) Confidential to Intellihub: Material term of key customer contract
Telstra	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract	(a) Confidential to Intellihub: Material term of key customer contract  (b) Confidential to Intellihub: Material term of key customer contract  (c) Confidential to Intellihub: Material term of key customer contract
Alinta <sup>127</sup>	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract	(a) Confidential to Intellihub: Material term of key customer contract  (b) Confidential to Intellihub: Material term of key customer contract  (c) Confidential to Intellihub: Material term of key customer contract
Simply Energy	Confidential to Intellihub: Material term of key customer contract	Confidential to Intellihub: Material term of key customer contract  Confidential	Confidential to Intellihub: Material term of key customer contract  Confidential to Intellihub:	(a) Confidential to Intellihub: Material term of key customer contract

<sup>127</sup> Confidential to Intellihub.

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Customer	Meter Contract Term	Deployment Term	Volume commitment	Contracting arrangement
		to IntelliHub: Material term of key customer contract	Material term of key customer contract	

Source: IntelliHub

536 IntelliHub also offers various ancillary products / services (in addition to its smart meter offering), for example:

- (a) **Solar management:** IntelliHub offers near real-time solar generation and household consumption data delivery services.
- (b) **Serviced hot water:** IntelliHub offers data delivery services on hot water in embedded networks for developers, strata managers and owner corporations.
- (c) **Distributed Energy Resources (DER) devices:** IntelliHub offers a connectivity bridge between the smart meter and a range of appliances behind the meter. This currently allows for near-real-time data delivery services and dynamic control services for electric hot-water systems and / or solar systems where connected to the smart meter

537 For completeness, IntelliHub also has various projects currently under development, including for example:

- (a) **Batteries:** IntelliHub is developing systems that can optimise fleets of batteries to reduce costs for retailers and increase cost benefits for households.
- (b) **Electric vehicle charging:** IntelliHub is developing a service to provide managed monitoring and control of electric vehicle (**EV**) charging.
- (c) **Virtual Power Plants:** A Virtual Power Plant (**VPP**) is a network of homes or small businesses whose solar panels, batteries, pool pumps, EVs and other 'behind the meter' energy assets are controlled by a software platform that reduces electricity demand in coordinated ways to avert shortages and blackouts. IntelliHub is developing a platform that VPPs can communicate with and control distributed assets. It is an element of a VPP, but does not compete directly with Origin Energy Markets' VPP operation.
- (d) **Home insights (load disaggregation):** IntelliHub is developing energy insight algorithms that have the ability to offer consumers a personalised breakdown of energy use by appliance.

### Other

538 IntelliHub's company structure chart is attached at **Annexure 3.1** and its organisation chart at **Annexure 3.2**.

539 Copies of IntelliHub's most recent audited financial statements are attached as **Annexures 3.3** and **3.4** and a copy of its most recent management accounts is attached as **Annexure 3.5**. IntelliHub does not have an annual report.

540 IntelliHub's most recent business and strategic plan is attached as **Annexure 3.6**.

541 The names, contact details and gross revenue earned from each of IntelliHub's top 10 customers in the preceding financial year is set out below at **Annexure D**.

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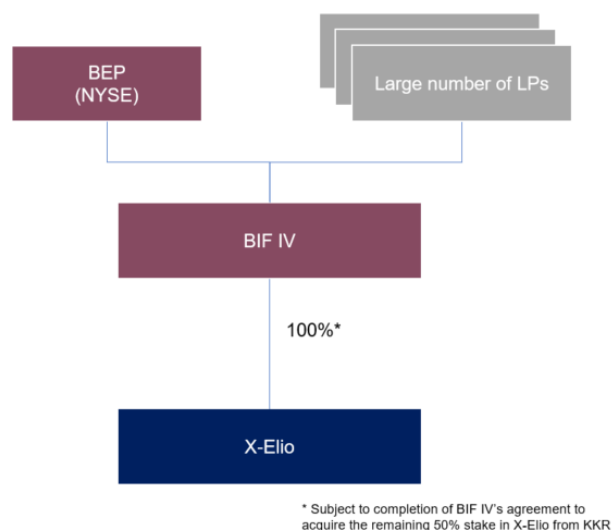
542 Contact details for each of Intellihub's: (i) actual or potential competitors, (ii) top five to 10 suppliers; and (iii) trade or industry associations in which it is a member, are set out below at **Annexure D**.

### 4.10 X-Elio

#### **Ownership structure and governance**

543 Brookfield Renewable Power and Transition business unit has, through BIF IV,<sup>128</sup> a 50% ownership interest in Spanish company X-Elio. The remaining 50% is held by KKR. Brookfield Renewable Power and Transition and KKR hold X-Elio as a 50 / 50 joint venture. **Confidential to Brookfield**. On 16 March 2023 BIF IV agreed to acquire the remaining 50% it does not own from KKR. The transaction is subject to customary closing conditions and is expected to close during the second half of 2023. **Figure 32** below sets out the ownership structure of X-Elio.

**Figure 32: Ownership structure of X-Elio<sup>129</sup>**



Source: Brookfield

#### **Activities**

544 X-Elio is a Spanish global renewable energy developer and operator that specialises in the development, construction, financing, operations and maintenance of renewable and sustainable utility scale energy projects (see <https://www.x-elio.com/>). X-Elio is headquartered in Spain and also has a presence in 12 markets including Australia.

545 X-Elio is primarily focused on the development of solar photovoltaic (**PV**) energy projects.

546 X-Elio entered the Australian market in 2017. As set out in **Figure 33** below, it currently has one operational solar farm in Australia, the Blue Grass Solar Farm (**Blue Grass SF**) in Chinchilla, QLD, which opened in November 2022. Further details are provided below:

<sup>128</sup> As mentioned at footnote 40, both BIP and BEP invest through the BIF series of funds (BIF I-IV) depending on whether the asset that the BIF fund is acquiring is a renewable or non-renewable asset. When a fund proposes to make a purchase, it draws down capital from all investors in the fund, including from the Brookfield related and third party investors. BEP only provides capital through BIF IV for renewable assets.

<sup>129</sup> On 21 March 2023, BIF IV agreed to acquire the remaining 50% it does not own from KKR.

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**Figure 33: Blue Grass Solar Farm**

Blue Grass Solar Farm	
Installed capacity	200 MW
Area	552 ha
System type	One Axis Tracker
Peak power	200 MWp
Nominal power	148 MWh
Annual production	420,000 MWh / year
Tons of CO <sub>2</sub> avoided (approximately)	320,000 tons CO <sub>2</sub> / year
Households supplied (approximately)	80,000

Source: <https://www.x-elio.com/projects-archive/blue-grass/>

547 X-Elio has also five active solar farm projects in early stages of development, these are set out in more detail at **Figure 34** below.

**Figure 34: X-Elio's Pipeline Projects**

	Project	Location	Peak power / nominal power	Battery storage	Status
1.	Sixteen Mile solar farm and battery storage	Hopeland, Queensland	420MWp / 350 MWn	-	In development. Q4 2026 estimated operation date.
2.	Forest Glen solar farm	Dubbo, NSW	110MWn	-	In development. <b>Confidential to Brookfield</b> expected operation date.
3.	Willavale solar farm and battery storage	Wollogorang, NSW	<b>Confidential to Brookfield</b> MWp	<b>Confidential to Brookfield</b> MWh BESS (BESS size under assessment)	<b>Confidential to Brookfield</b>
4.	<b>Confidential to Brookfield</b>	<b>Confidential to Brookfield</b>	<b>Confidential to Brookfield</b> MWp	<b>Confidential to Brookfield</b> MW BESS	<b>Confidential to Brookfield</b>
5.	<b>Confidential to Brookfield</b>	<b>Confidential to Brookfield</b>	<b>Confidential to Brookfield</b> MWp	<b>Confidential to Brookfield</b> MW / <b>Confidential to Brookfield</b> Mwh <b>Confidential to Brookfield</b>	<b>Confidential to Brookfield</b>

Source: X-Elio

548 For completeness, **Confidential to Brookfield**.



#### 4.11 Buckland Investment

- 549 Buckland Investment Pte. Ltd. (***Buckland Investment***) is an investment holding company incorporated under the laws of Singapore as a private limited company. Buckland Investment is indirectly wholly owned by GIC (Ventures) Pte. Ltd. and managed by GIC Special Investments Private Limited, which is in turn wholly owned by GIC Private Limited (***GIC***). GIC is a global investment management company established in 1981 to manage Singapore's foreign reserves. GIC invests across a wide range of asset classes, including equities, fixed income, private equity, real estate and infrastructure. GIC is among the world's largest fund management companies.
- 550 GIC Infra, through an affiliate, has a **Confidential to GIC: minority** interest in Intercontinental Energy (***Intercontinental Energy***). InterContinental Energy is a global dedicated green fuels company and is part of the consortium behind the proposed 50 GW Western Green Energy Hub planned for Western Australia's southern coast and the 26 GW Australian Renewable Energy Hub being developed near Port Hedland in north-west Western Australia.<sup>130</sup> These projects remain in development phases. Origin's only presence in Western Australia is its WINconnect business acquired in 2022. WINconnect provides retail embedded network and hot water services. Given the lack of any overlap or vertical relationship, Intercontinental Energy is not discussed further.
- 551 GIC Infra, through an affiliate, has a 16.87% interest in the listed Southeast Asian renewables platform, ACEN Corporation (formerly AC Energy) (***ACEN***). ACEN is headquartered in the Philippines and also has a presence in Vietnam, Indonesia, India and Australia.
- 552 In Australia, ACEN Australia Pty Ltd is a renewable developer and operator. It has one solar farm and one advanced project in New South Wales. These are set out in more detail in **Figure 35** below:

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<sup>130</sup> Intercontinental Energy, *Our Portfolio*, <<https://intercontinentalenergy.com/our-portfolio>>

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**Figure 35: ACEN's advanced renewables projects**

Name	State	Key facts
<b>New England Solar and Battery</b>	New South Wales	<p>(a) New England Solar is a solar and battery energy storage project currently in construction.</p> <p>(b) A 720 MW solar farm will be located in Uralla, NSW in the New England Renewable Energy Zone. It is anticipated that the solar farm will produce 1,800,000 MWh of electricity each year.</p> <p>(c) Phase 1 includes a 400 MW solar farm. This commenced operation in March with around 300MW installed. Its generation capacity will continue to increase throughout 2023 before the full 400 MW capacity is reached.</p> <p>(d) Construction has also begun on the battery system, which will be a 50MW/1 hour system.</p> <p>(e) There is also potential for the battery part of the project to be scaled up, to 200MW with two hours of storage, or 400MWh<sup>131</sup></p>
<b>Stubbo Solar</b>	New South Wales	<p>(a) Stubbo Solar is a 400 MW renewable energy generator project located in Stubbo, NSW.</p> <p>(b) Stubbo Solar will involve a 200 MWh battery energy storage system and a solar farm. Stubbo Solar is anticipated to generate approximately 1,000,000 MWh of electricity each year (although this is dependent on final installed capacity).</p> <p>(c) Construction of the site commenced in around January 2023, with construction of main project works expected to begin in 2023. Construction will take place over two years, with the project unlikely to be complete before 2025.</p>

Source: Various publicly available sources, as referenced in relevant footnotes

553 An overview of ACEN's pipeline projects is set out in **Figure 36** below. **Confidential to GIC.**

**Figure 36: ACEN's pipeline renewable projects**

Name	State	Key facts
<b>Birriwa Solar<sup>132</sup></b>	NSW	<p>(a) Birriwa Solar is a solar and battery energy project currently under development in the Central West Orana REZ</p> <p>(b) Birriwa Solar is anticipated to have generation capacity of up to 600 MW (although this is dependent on final installed capacity of the project)</p> <p>(c) Birriwa Solar is in the early stages of development, with ongoing technical, environmental, cultural and social impact assessments being undertaken to inform project submissions, and remains subject to Minister approval</p>
<b>Valley of the Winds<sup>133</sup></b>	NSW	<p>(a) Valley of the Winds is a wind energy park project currently under development in the Central West REZ</p>

<sup>131</sup> Renew Economy, 'Work begins on big battery adjoining Australia's biggest solar project' (26 May 2022) <<https://reneweconomy.com.au/work-begins-on-big-battery-adjoining-australias-biggest-solar-project/>>.

<sup>132</sup> ACEN Australia, *Birriwa Solar* <<https://birriwasolar.com.au/birriwa-solar/>>.

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Name	State	Key facts
		<p>(b) Valley of the Winds is anticipated to have generation capacity of up to 2,500,000 MWh of electricity each year (although this is dependent on final installed capacity of the project)</p> <p>(c) Valley of the Winds is in the final stage of planning works with the NSW Department of Planning, Industry and Environment, and remains subject to Minister approval</p>
<b>Aquila Wind</b> <sup>134</sup>	NSW	<p>(a) Aquila Wind is a wind energy park project currently under development near Dubbo in NSW</p> <p>(b) Aquila Wind is at an early stage of development, with site identification and due diligence currently underway. The anticipated generation capacity of this project is currently unknown</p> <p>(c) If a suitable site is identified, Aquila Wind remains subject to technical, environmental, cultural, social and economic assessments to inform its development application, as well as Minister approval</p>
<b>Narragamba Solar</b> <sup>135</sup>	NSW	<p>(a) Narragamba Solar is a solar energy project currently under development in New South Wales</p> <p>(b) Narragamba Sola is anticipated to have generation capacity of up to 320 MW (although this is dependent on final installed capacity of the project)</p> <p>(c) Narragamba Solar is at an early stage of development remains subject to technical, environmental, cultural, social and economic assessments to inform its development application, as well as Minister approval</p>
<b>Phoenix Pumped Hydro</b> <sup>136</sup>	NSW	<p>(a) Phoenix Pumped Hydro is a hydro energy project currently under development in NSW's Central-West Orana REZ</p> <p>(b) Phoenix Pumped Hydro is anticipated to have generation capacity of up to 800 MW (although this is dependent on final installed capacity)</p> <p>(c) Phoenix Pumped Hydro is at an early stage of development remains subject to technical, environmental, cultural, social and economic assessments to inform its development application, as well as Minister approval</p>
<b>Baroota Pumped Hydro</b> <sup>137</sup>	SA	<p>(a) Baroota Pumped Hydro is an energy storage project currently under development in South Australia</p> <p>(b) Baroota Pumped Hydro is anticipated to have storage capacity of between 200 to 270 MW (although this is dependent on final installed capacity)</p> <p>(c) Baroota Pumped Hydro was approved for development in February</p>

<sup>133</sup> ACEN Australia, *Valley of the Winds* <<https://acenrenewables.com.au/projects/valley-winds/>>.

<sup>134</sup> ACEN Australia, *Aquila Wind* <<https://aquilawind.com.au/the-project/>>.

<sup>135</sup> ACEN Australia, *Narragamba Solar* <<https://acenrenewables.com.au/projects/narragamba-solar/>>.

<sup>136</sup> Rise Renewables, *Baroota Pumped Hydro Project* <<https://riserenewables.com.au/projects/baroota-hydro-mid-north-port-pirie-energy-electricity-project/>>; ACEN Australia, *Phoenix Pumped Hydro* <<https://acenrenewables.com.au/projects/phenix-pumped-hydro/>>.

<sup>137</sup> Rise Renewables, *Baroota Pumped Hydro Project* <<https://riserenewables.com.au/projects/baroota-hydro-mid-north-port-pirie-energy-electricity-project/>>; ACEN Australia, *Phoenix Pumped Hydro* <<https://acenrenewables.com.au/projects/phenix-pumped-hydro/>>.

## Public Version

Name	State	Key facts
		<p>2019</p> <p>(d) Baroota Pumped Hydro is being developed by ACEN and is at an early stage of development</p>
<b>Birdle Track Solar Project<sup>138</sup></b>	SA	<p>(a) Birdle Track Solar is a solar energy project currently under development in South Australia</p> <p>(b) Birdle Track Solar is anticipated to have a generation capacity of up to 300 MW (although this is dependent on final installed capacity)</p> <p>(c) Birdle Track Solar is also being developed by ACEN in a joint venture with UPC Renewables, and will be co-located with the Baroota Pumped Hydro project</p> <p>(d) Birdle Track Solar is also being developed by ACEN and is at an early stage of development.</p>
<b>Robbins Island<sup>139</sup></b>	Tas	<p>(a) Robbins Island is a renewable energy park project currently under development in North West Tasmania</p> <p>(b) Robbins Island is anticipated to have a generation capacity of up to 900 MW (although this is dependent on final installed capacity of both Stage 1 and Stage 2 of the project)</p> <p>(c) Robbins Island has not yet been approved for development by the Tasmanian Minister for Planning. Robbins Island project has lodged its development application, which is currently under assessment</p>
<b>Jim's Plain Wind<sup>140</sup></b>	Tas	<p>(a) Jim's Plain is a renewable energy park project currently under development in North West Tasmania</p> <p>(b) Jim's Plain is anticipated to have a generation capacity of up to 240 MW, comprising 200 MW of wind energy and 40 MW of solar energy (although this is dependent on final installed capacity)</p> <p>(c) Jim's Plain was approved for development by the Tasmanian Minister for Planning in July 2020</p> <p>(d) Construction at Jim's Plain is expected to commence in 2023</p>
<b>North East Wind<sup>141</sup></b>	Tas	<p>(a) North East Wind is a wind energy project currently under development in North East Tasmania</p> <p>(b) North East Wind is anticipated to have a generation capacity of up to 1,260 MW (although this is dependent on final installed capacity)</p> <p>(c) In August 2022, the North East Wind was declared to be a major project by the Tasmanian Minister for Planning, which means that this project will be subject to a streamlined assessment process<sup>142</sup></p>

<sup>138</sup> Rise Renewables, *Birdle Track Solar Project* <<https://riserenewables.com.au/projects/bridle-track-solar-mid-north-port-pirie-energy-electricity-project/>>; ACEN, 'AC Energy JV to develop hydro-based power storage project in Australia' <<https://www.acenrenewables.com/2019/10/ac-energy-jv-to-develop-hydro-based-power-storage-project-in-australia/>>.

<sup>139</sup> Jim's Plan & Robbins Island Renewable Energy Parks, *Robbins Island* <<https://robbinsislandwind.com.au/projects/robbins-island/>>.

<sup>140</sup> Jim's Plan & Robbins Island Renewable Energy Parks, *Jim's Plain* <<https://robbinsislandwind.com.au/projects/jims-plain/>>.

<sup>141</sup> ACEN, *North East Wind* <<https://newind.com.au/the-project/>>.

<sup>142</sup> Premier of Tasmania, 'North East Wind Farm declared a Major Project' (12 August 2022)

<[https://www.premier.tas.gov.au/site\\_resources\\_2015/additional\\_releases/north-east-wind-farm-declared-a-major-project#:~:text=Today%20the%20Tasmanian%20Liberal%20Government,streamlined%20Major%20Projects%20assessment%20process](https://www.premier.tas.gov.au/site_resources_2015/additional_releases/north-east-wind-farm-declared-a-major-project#:~:text=Today%20the%20Tasmanian%20Liberal%20Government,streamlined%20Major%20Projects%20assessment%20process)>.

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Name	State	Key facts
		(d) North East Wind is at an early stage of development remains subject to technical, environmental, cultural, social and economic assessments to inform its development application, as well as Minister approval
<b>Axedale Solar</b> <sup>143</sup>	Vic	(a) Axedale Solar is a solar energy project currently under development near Axedale, Victoria (b) Axedale Solar is anticipated to have a generation capacity of up to 160 MW (although this is dependent on final installed capacity) (c) Plans for a BESS with a capacity of 60 MWh are also being progressed as a part of the project (d) Axedale Solar has received government approval, however construction has not yet commenced

Source: Various publicly available sources, as referenced in relevant footnotes

### 4.12 Temasek

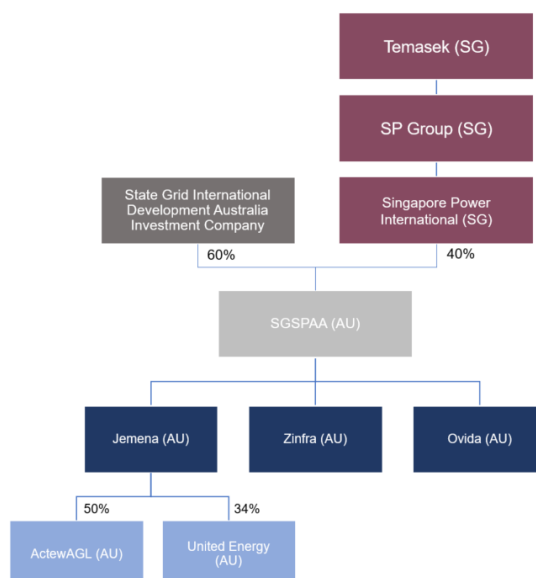
- 554 Incorporated in 1974, Temasek is an investment company headquartered in Singapore. Supported by 12 offices globally, Temasek owns a SGD 403 billion portfolio as at 31 March 2022, mainly in Singapore and the rest of Asia. Temasek's investment philosophy has been guided by four long term investment themes that encompass Digitisation, Sustainable Living, Future of Consumption, and Longer Lifespans. Its portfolio spans a broad spectrum of industries: Financial Services; Transportation & Industrials; Telecommunications; Media and Technology; Consumer & Real Estate; Life Sciences & Agri-food; Multi-Sector Funds as well as others (including Credit).
- 555 Temasek owns and manages its assets based on commercial principles. Temasek's investment, divestment and other business decisions are directed by its board and management. Neither the President of Singapore nor Temasek's sole shareholder, the Singapore Minister for Finance (MOF) are involved in its business decisions. The majority of the Temasek board members are non-executive independent private sector business leaders.
- 556 Details of the major investments of Temasek are set out on its website at [www.temasek.com.sg](http://www.temasek.com.sg).
- 557 Temasek has a 100% interest in Singapore Power Limited (**SP Group**). SP Group is an owner and operator of electricity and gas transmission and distribution businesses and a provider of market-support services in Singapore. As a matter of long-standing governance policy, Temasek does not direct the business decisions or operations of its portfolio companies, which are the responsibility of the boards and management teams of the companies, including SP Group.
- 558 SP Group has a 40% interest in SGSP (Australia) Assets Pty Ltd (**SGSPAA**), an Australian company which is engaged in the transmission and distribution of electricity and gas in the following Australian states and territories: Victoria, New South Wales, Queensland, the Australian Capital Territory and the Northern Territory. The remaining 60% is owned by State Grid International Development Australia Investment Company Limited (**State Grid**). SGSPAA owns or has an interest in a portfolio of energy infrastructure assets and related businesses, operated under three brands, being Jemena, Ovida and Zinfra – with partially-owned interests operated under separate brands, Evoenergy and United Energy.

<sup>143</sup> ACEN Australia, Axedale Solar <<https://acenrenewables.com.au/projects/axedale-solar-farm/>>; UPC / AC Renewables Australia, 'Axedale Solar Farm Planning Permit Granted' <[https://axedalesolar.com.au/documents/104/Planning\\_Permit\\_Granted\\_YdGUMvK.pdf](https://axedalesolar.com.au/documents/104/Planning_Permit_Granted_YdGUMvK.pdf)>.

## Public Version

559 **Figure 37** below sets out the ownership structure of SP Group and its electricity and gas holding subsidiaries.

**Figure 37: Ownership structure of SP Group and its electricity and gas interests**



Source: SGSPAA

**(a) Jemena**

**Structure and Governance**

560 SGSPAA is jointly controlled by State Grid and SP Group to the extent that reserved matters require the approval of both State Grid and SP Group (through their appointed board directors) on matters including (i) budget, business plan and detailed capex plan, and (ii) the appointment of senior management including the managing director of SGSPAA. A deadlock on these matters is either resolved by the shareholders or the status quo is preserved.

561 The interest Temasek has in Jemena is indirect through one of SP Group's subsidiaries and there are no Temasek representatives on the Jemena Board. Jemena operates independently of Temasek on a day-to-day basis and business decisions are made at the Jemena board level with limited input or oversight from Temasek. The Jemena board must perform their obligations in line with their fiduciary duties to take decisions in good faith and in the best interests of the company in accordance with the *Corporations Act 2001* (Cth). The board will take decisions in the interests of Jemena without regard to other investments of Temasek.

**Activities**

562 Jemena is an owner and operator of electricity and gas assets across eastern and northern Australia. Jemena's portfolio includes electricity distribution, gas distribution and gas transmission assets.

**Electricity distribution assets**

563 Jemena's electricity distribution assets are outlined in **Figure 38** below.

**Figure 38: Jemena's gas distribution assets**

Name	State	Jemena interest	Key facts
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## Public Version

Name	State	Jemena interest	Key facts
<b>Jemena Electricity Network</b>	Victoria	100%	<p>(a) <b>Purpose / use:</b> The network distributes electricity to more than 360,000 customer homes and businesses in north-West Melbourne. The network is one of five licensed electricity distribution networks in Victoria. The network footprint incorporates a mix of major industrial areas, residential growth areas, established inner suburbs and Melbourne International Airport. Jemena manages the distribution network.</p> <p>(b) <b>Length:</b> 11,000 km<sup>144</sup></p> <p>(c) <b>Customers:</b> more than 360,000<sup>145</sup></p>
<b>Evoenergy</b>	Australian Capital Territory	50% <sup>146</sup>	<p>(a) <b>Purpose / use:</b> the ActewAGL Distribution Partnership (<b>ADP</b>) owns and operates the electricity distribution network in the ACT under the brand 'Evoenergy'.</p> <p>(b) <b>Length:</b> 5,088 km</p> <p>(c) <b>Customers:</b> more than 177,000<sup>147</sup></p>
<b>United Energy</b>	Victoria	34% <sup>148</sup>	<p>(a) <b>Purpose / use:</b> United Energy distributes electricity through a distribution network from southeast Melbourne to the Mornington Peninsula.</p> <p>(b) <b>Length:</b> 13,000 km<sup>149</sup></p> <p>(c) <b>Size:</b> 1,472 km</p> <p>(d) <b>Customers:</b> more than 640,000<sup>150</sup></p>

Source: Various publicly available sources, as referenced in relevant footnotes

<sup>144</sup> Jemena, *What we own* <<https://jemena.com.au/about/what-we-own>>.

<sup>145</sup> Jemena, *What we own* <<https://jemena.com.au/about/what-we-own>>.

<sup>146</sup> Jemena holds a 50% interest in the ActewAGL Distribution Partnership (**ADP**), primarily operating as 'Evoenergy'. The remaining 50% is ultimately held by the ACT Government.

<sup>147</sup> AER, *Evoenergy – electricity distribution network* <<https://www.aer.gov.au/networks-pipelines/service-providers-assets/evoenergy-electricity-distribution-network>>.

<sup>148</sup> Jemena holds a 34% interest in United Energy Distribution Holdings Pty Ltd (**UEDH**). The remaining share is owned by Cheung Kong Infrastructure Holdings.

<sup>149</sup> Jemena, *What we own* <<https://jemena.com.au/about/what-we-own>>.

<sup>150</sup> Jemena, *What we own* <<https://jemena.com.au/about/what-we-own>>.

## Public Version

564 The map contained in **Figure 39** below shows the distribution area for the Jemena Electricity Network in Victoria.

**Figure 39: Jemena Electricity Network**



Source: Jemena, *Electricity* <<https://jemena.com.au/electricity>>.

### Gas distribution assets

565 Jemena's gas distribution assets are outlined in **Figure 40** below.

**Figure 40: Jemena's gas distribution assets**

Name	State	Jemena interest	Key facts
<b>Jemena Gas Network</b>	New South Wales	100%	<p>(a) <b>Purpose/ use:</b> The network distributes natural gas to Sydney, Newcastle, the Central Coast and Wollongong, as well to customers in more than 20 regional centres, including the Central West, Central Tablelands, South Western, Southern Tablelands, Riverina and Southern Highlands regions. Jemena manages the distribution network</p> <p>(b) <b>Length:</b> 25,000km<sup>151</sup></p> <p>(c) <b>Customers:</b> more than 1.5 million residential business and industrial sites<sup>152</sup></p>
<b>Evoenergy</b>	Australian Capital Territory	50% <sup>153</sup>	<p>(a) <b>Purpose / use:</b> The ActewAGL Distribution Partnership (ADP) owns and operates the gas networks in the ACT, Queanbeyan-Palerang and Nowra. Jemena manages the distribution network.</p> <p>(b) <b>Length:</b> 4,720 km</p> <p>(c) <b>Customers:</b> 124,000<sup>154</sup></p>

Source: Various publicly available sources, as referenced in relevant footnotes

<sup>151</sup> Jemena, *What we own* <<https://jemena.com.au/about/what-we-own>>.

<sup>152</sup> Jemena, *What we own* <<https://jemena.com.au/about/what-we-own>>.

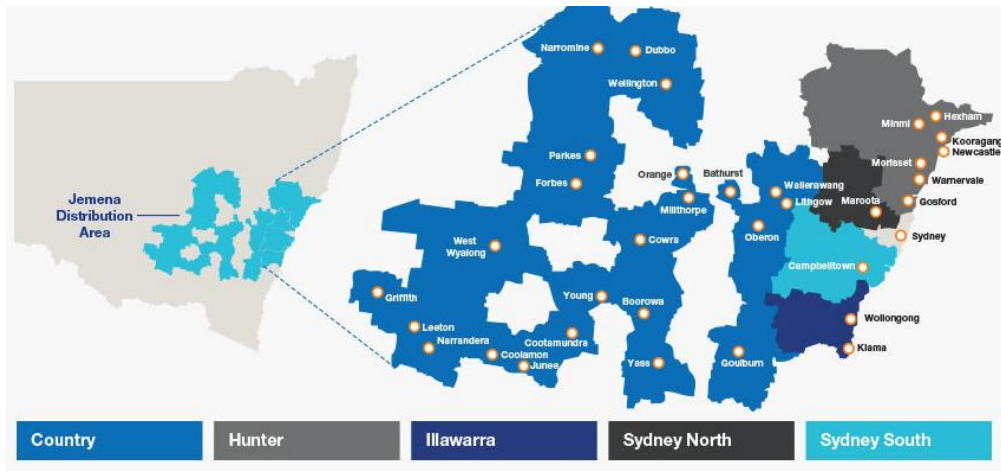
<sup>153</sup> Jemena holds a 50% interest in the ActewAGL Distribution Partnership (ADP), primarily operating as 'Evoenergy'. The remaining 50% is ultimately held by the ACT Government.

<sup>154</sup> AER, *Evoenergy – electricity distribution network* <<https://www.aer.gov.au/networks-pipelines/service-providers-assets/evoenergy-gas-distribution-network>>.



566 The map contained in **Figure 41** below shows the distribution area for the Jemena Gas Network:

**Figure 41: Jemena Gas Network**

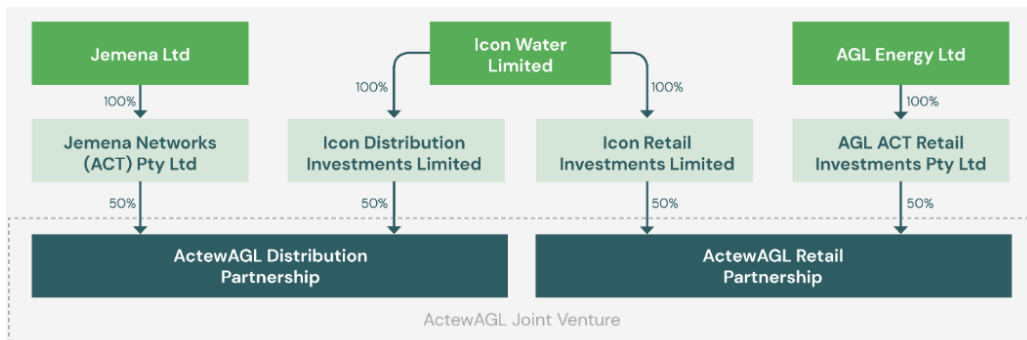


Source: Jemena, Gas <<https://jemena.com.au/gas>>.

567 As outlined above, Jemena has a 50% interest in ActewAGL Distribution Partnership. The remaining 50% is owned by Icon Water Limited, an ACT Government owned corporation. ActewAGL Distribution Partnership owns and operates the electricity and gas networks under the brand name ‘Evoenergy’<sup>155</sup> (the ActewAGL Distribution Partnership is referred to in this section as **Evoenergy**).

568 **Figure 42** below sets out the ownership structure of ActewAGL and its Distribution Partnership and Retail Partnership. As demonstrated below, Jemena does not hold any interest in the retail business of Evoenergy.

**Figure 42: Ownership structure of ActewAGL and its Distribution Partnership and Retail Partnership**



Source: Jemena

569 The ActewAGL Joint Venture Partnerships Board (**Joint Venture Board**) comprised of six members governs the ActewAGL Retail and ActewAGL Distribution partnerships on behalf of the partners. Decisions are made through the Joint Venture Board noting the practice is to have the retail partners decide unanimously the vote on retail related matters and the distribution partners decide the vote on distribution matters, again unanimously. Matters that relate to the Joint Venture more broadly (ie, shared services) are decided through unanimous agreement of the Joint Venture Board. Jemena has an operating agreement for the gas distribution network where the day-to-day operations are outsourced to Jemena. The electricity distribution network’s day to day operations are managed internally by ActewAGL staff.

<sup>155</sup> ActewAGL, ActewAGL Joint Venture – Who we are and how we operate <<https://actewagljv.com.au/joint-venture>>.

## Public Version

- 570 Evoenergy owns and operates the electricity network in the ACT and the gas networks in the ACT, Palerang shires and Nowra. It supplies approximately 270,000 customers. Jemena manages these gas networks.
- 571 Jemena also has a 34% interest in United Energy Distribution Holdings Pty Ltd (**United Energy**). The remaining share is owned by a Cheung Kong Infrastructure-lead consortium. Day-to-day business decisions are made directly by United Energy. The Board of Directors includes seven members of which 1 is nominated by Jemena and the remainder are appointed by United Energy. Jemena has a vote for all matters at the Board for its 34% interest and for certain matters requiring a special majority decision (>75% of votes) has veto rights. These matters are included in the shareholders agreement and relate to any matter that could impact materially the value of equity in the business (ie, creating a new business, material asset sales, dividends and dividend policy, changes in the capital structure including raising new debt, equity or other forms of instrument like the RPS, granting of indemnity or guarantees). United Energy is one of five electricity distributors in Victoria. United Energy supplies more than 630,000 customers in a 1,472 square kilometre area from the south-eastern suburbs, down to the Mornington Peninsula. Around 90% of United Energy's customers are homes.

### Gas transmission pipelines and processing facilities

- 572 Jemena owns the following gas transmission pipelines and processing facilities:

- (a) Eastern Gas Pipeline (Vic-NSW)
- (b) VicHub (Vic)
- (c) Queensland Gas Pipeline (Qld)
- (d) Colongra Gas Transmission and Storage Facility (Qld)
- (e) Atlas Gas Pipeline and Processing Facilities (Qld)
- (f) Darling Downs Pipeline (Qld)
- (g) Roma North Gas Processing Facility (Qld)
- (h) Northern Gas Pipeline (NT- Qld)

- 573 Further information about each of these assets is provided in section 12.

- 574 The map contained in **Figure 43** below shows the location of the Jemena gas pipelines and processing facilities.

**Figure 43: Jemena Gas Pipeline and processing facilities**



Source: <https://jemena.com.au/pipelines>

## Public Version

### (b) Zinfra

#### **Structure and Governance**

575 Zinfra is a wholly owned subsidiary of SGSPAA. State Grid has a 60% interest in SGSPAA and SP Group owns the remaining 40% interest.

#### **Activities**

576 Zinfra delivers engineering, design, construction, field-based maintenance and operating services across energy infrastructure assets in Australia. Zinfra targets the outsourcing of construction and maintenance activities of electricity transmission and distribution lines and operations and maintenance services for gas pipelines and gas distribution systems as well as adjacent markets such as mining.

577 Zinfra provides services to transmission and distribution customers within SGSPAA (Jemena, United Energy and Evoenergy) and third party clients (AusNet, TasNetwork and Transgrid). Zinfra does not provide services to retailers. The Proposed Acquisition therefore does not give rise to any vertical relationships between Zinfra and Origin Energy Markets.

### (c) Ovida

#### **Structure and Governance**

578 Ovida is a wholly owned subsidiary of SGSPAA. State Grid has a 60% interest in SGSPAA and SP Group owns the remaining 40% interest.

#### **Activities**

579 Ovida offers distributed energy resources products and services to individual customers and multiple connected customers via the integration of traditional generations or commodity markets. Ovida's distributed energy resources products and services include rooftop solar PV units, battery storage, thermal energy storage, hybrid energy solutions and site energy management technologies. Ovida also makes investments in the Australian electricity market including greenfield opportunities across Australia, investing in renewables and energy infrastructure. Ovida does not have any material relationship with Origin Energy Markets.

### 4.13 Reliance

580 Reliance Industries Limited (**Reliance**) is in discussions with Brookfield to join the Brookfield LP. Reliance is a global company headquartered in Mumbai, dually listed on the Bombay Stock Exchange (BSE: 500325) and National Stock Exchange of India Limited (NSE: RELIANCE). Reliance is the largest publicly traded company in India by market capitalisation and India's largest exporter with diverse investments in energy, materials, retail, entertainment and digital services. Reliance has publicly committed to enabling up to 100 GW of solar energy in India by 2030.

581 Reliance is currently developing the Dhirubhai Ambani Green Energy Giga Complex in Jamnagar, India. This comprises four 'giga factories' on 5,000 acres of land which will include an integrated solar photovoltaic module factory, an advanced energy storage battery factory for intermittent energy, an Electrolyser Factory for the production of Green Hydrogen and a Fuel Cell Factory for converting hydrogen into motive and stationary power. Once operational, this will be one of the largest integrated renewable energy manufacturing facilities globally.

582 Reliance, through various subsidiaries, holds interests in several Australian entities including Addverb Technologies Pty Limited (**Addverb**), Sodium-ion Batteries Pty Limited, Sterling and Wilson Solar Australia Pty Ltd and GCO Solar Pty Ltd (**GCO Solar**).

## Public Version

### (a) Addverb

#### **Structure and Governance**

583 Reliance, through its subsidiary Reliance Retail, holds an interest of approximately 55% in Addverb Technologies USA Inc., which includes a 47.92% interest in Addverb Technologies Pty Limited.

#### **Activities**

584 Addverb is the Australian subsidiary of Addverb Technologies USA Inc., a global robotics company providing automation services for supply chain operations. This includes warehouse automation, picking technologies, and warehouse and factory software solutions.

### (b) Sodium-ion

#### **Structure and Governance**

585 Reliance, through its subsidiary Reliance New Energy Solar, wholly owns UK-based company Faradion Limited (Faradion), which includes a 45.91% interest in Sodium-ion Batteries Pty Limited.

#### **Activities**

586 Faradion specialises in sodium-ion cell battery storage technology including cell materials, cell infrastructure, and safety and transportation. Faradion has established a joint venture in Australia with ICM Investments called Nation Energie, which supplies batteries for industry and home use. Nation Energie is the exclusive Oceania distributor for Faradion products.

### (c) Sterling and Wilson

#### **Structure and Governance**

587 Through its subsidiary Reliance New Energy, Reliance owns a 40% interest in Sterling and Wilson Renewable Energy Limited, a listed entity based in India which includes minority interests in its Australian subsidiaries, Sterling and Wilson Solar Australia Pty Ltd (40%) and GCO Solar (30.4%) (collectively, **Sterling and Wilson**). Sterling and Wilson is one of the largest EPC and O&M providers globally, providing turnkey solutions for large scale solar projects. Sterling and Wilson has contributed to more than 200 solar projects worldwide with an aggregate capacity of approximately 10 GW.

#### **Activities**

588 Sterling and Wilson's Australian projects are outlined in **Figure 44** below.

**Figure 44: Sterling and Wilson's Australian energy projects**

Name	Location	Asset owner	Key facts
<b>Shell Gangarri Solar Farm</b>	QLD	Shell New Energies	<b>Description:</b> Project currently under construction  <b>Output:</b> 144 MW
<b>Columboola Solar Farm</b>	QLD	Korea East West Power, Energy New Infrastructure Fund, and its advisors <a href="#">ICA Partners</a> and <a href="#">DR &amp; AJU LLC</a>	<b>Description:</b> (a) Recently achieved full generation output (b) 417,000 next generation bifacial solar panels  <b>Output:</b> 202 MWp

## Public Version

Name	Location	Asset owner	Key facts
		Project delivery partners include <a href="#">Sterling and Wilson Renewable Energy</a> , <a href="#">Powerlink Queensland</a> and AEMO	
<b>Western Downs Green Power Hub</b>	QLD	Neoen	<p><b>Description:</b></p> <ul style="list-style-type: none"> <li>(a) 1500 hectares</li> <li>(b) Largest solar farm project in Australia</li> <li>(c) Under construction</li> <li>(d) High-efficiency bifacial monocrystalline PV modules</li> <li>(e) 200MW battery for energy storage will be located next to the solar farm</li> </ul> <p><b>Output:</b> 460 MW</p>
<b>Wellington Solar Farm</b>	NSW	Lightsource BP	<p><b>Description:</b></p> <ul style="list-style-type: none"> <li>(a) Largest bifacial project in Australia</li> <li>(b) 490 hectares</li> <li>(c) Completion expected in 2024</li> </ul> <p><b>Output:</b> 200 MW</p>
<b>Port Augusta Renewable Energy Park</b>	SA	Iberdrola	<p><b>Description:</b></p> <ul style="list-style-type: none"> <li>(a) Australia's biggest integrated wind and solar energy project</li> <li>(b) Commissioning began in October 2022, project completed</li> <li>(c) 50 wind turbines and 250,000 solar modules together with associated infrastructure</li> <li>(d) 5400 hectares</li> </ul> <p><b>Output:</b> Capacity of 317 MWp, combining 107 MW solar PV built by Sterling and Wilson with 210 MW wind</p>

Source: Reliance

#### 4.14 **EIG / MidOcean Energy**

589 EIG Management Company, LLC (**EIG**) is a leading institutional investor in the global energy and infrastructure sectors with \$22.7 billion under management as of 31 December 2022. EIG specializes in private investments in energy and energy-related infrastructure on a global basis.

590 EIG was established in 1982. During its 40-year history, EIG has committed \$44.6 billion in 396 projects or companies in 42 countries on six continents.

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- 591 EIG's clients include many of the leading pension plans, insurance companies, endowments, foundations and sovereign wealth funds in the U.S., Asia and Europe. EIG is headquartered in Washington, D.C. with offices in Houston, London, Sydney, Rio de Janeiro, Hong Kong and Seoul.
- 592 MidOcean Energy is an LNG company formed and managed by EIG to build a diversified, resilient, cost and carbon competitive LNG portfolio.<sup>156</sup> It reflects EIG's belief in LNG as a critical enabler of the energy transition and the growing importance of LNG as a geopolitically strategic energy resource. MidOcean Energy seeks to create a diversified 'pure play' integrated and international portfolio of high-quality operating LNG projects.
- 593 Additional information is available on EIG's website at [www.eigpartners.com](http://www.eigpartners.com) or MidOcean Energy's website at [www.midoceanenergy.com](http://www.midoceanenergy.com).
- 594 It is intended that one or more EIG controlled funds will invest in MidOcean Energy. The EIG controlled funds are formed as limited partnerships or similar structures. An affiliate of EIG will be appointed as the general partner of these controlled funds, and will be responsible for the day-to-day management of MidOcean Energy. It is possible that additional investors will also invest in MidOcean Energy as a limited partner. With one exception, the other potential passive investors EIG is currently in discussions with are not participants in the East Coast domestic gas market and do not have East Coast gas reserves. One potential investor is Senex Energy Limited (**Senex**), an Australian company that is privately owned by K-A Energy 1 Pty Ltd, a subsidiary of POSCO INTERNATIONAL Corporation (**POSCO**) (50.1%) and Hancock Energy Corporation Pty Ltd (**Hancock Energy**) (49.9%). EIG is in discussions with Senex regarding it (or its shareholders POSCO / Hancock Energy) investing in MidOcean Energy as a limited partner with an equity commitment equivalent to **Confidential to MidOcean Energy: a minority investment**. Senex is a small supplier of gas in the East Coast domestic market. A description of Senex' energy assets in Australia is set out at section 4.15 below. Neither Hancock Energy nor POSCO currently have any other ownership interests in East Coast gas production assets other than Senex. Further detail on Senex's (or its shareholders Hancock Energy / POSCO's) proposed investment in MidOcean Energy is set out in Chapter 14.
- 595 MidOcean Energy does not currently own any assets in Australia. However, on 7 October 2022, MidOcean Energy entered into definitive documentation to acquire small interests in the Gorgon, Pluto, Ichthys and QCLNG projects from the Tokyo Gas Group for US\$2.15 billion.<sup>157</sup> The interests proposed to be acquired from Tokyo Gas are:
- (a) **5% of Pluto LNG (operated by Woodside Energy Group Ltd):** The Pluto LNG terminal processes gas from the offshore Pluto and Xena gas fields, off the coast of Western Australia. Since 2012, gas has been piped through a 180 kilometre trunkline to a single processing train with an LNG production capacity of 4.9 million tons per year.<sup>158</sup> Pluto LNG has long term sales agreements in place with Tokyo Gas and Kansai Electric (which holds a 5% interest in the project, with Woodside holding the remaining 90%). Woodside is also developing a brownfield expansion of Pluto LNG through the construction of a second gas processing train. However, Tokyo Gas does not hold an interest in, and therefore MidOcean Energy will not be acquiring an interest in, that second gas processing train.<sup>159</sup> **Confidential to MidOcean Energy**. Pluto supplies domestic gas into the Western Australian market as part of its Western Australian domestic gas reservation commitment;

<sup>156</sup> References to MidOcean Energy should be understood as also referring to MidOcean Reef Bidco Pty Ltd.

<sup>157</sup> **Confidential to MidOcean Energy**.

<sup>158</sup> Woodside Energy, *Pluto LNG* (2023) <<https://www.woodside.com/what-we-do/operations/pluto-lng>>.

<sup>159</sup> Woodside Energy, *Pluto LNG* (2023) <<https://www.woodside.com/what-we-do/operations/pluto-lng>>.

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- (b) **1.575% of Ichthys LNG (operated by Inpex Corp)**: Ichthys LNG terminal is located near Darwin and processes gas from the Browse Basin off the north coast of Western Australia. It has an LNG production capacity of approximately 8.9 million tonnes per annum and an LPG production capacity of approximately 1.65 million tonnes per annum.<sup>160</sup> It commenced production and shipment of LNG and LPG in 2018. The Ichthys Field is estimated to contain more than 12 trillion cubic feet of gas and 500 million barrels of condensate.<sup>161</sup> Ichthys' offshore facilities and onshore facilities near Darwin are connected through an 890 kilometre gas export pipeline.<sup>162</sup> It is operated as a joint venture with the other participants being INPEX group companies (66.245% interest), TotalEnergies (26% interest) and the Australian subsidiaries of CPC (2.625% interest), Osaka Gas (1.2%), Kansai Electric Power (1.2% interest), JERA (0.735% interest) and Toho Gas (0.42% interest).<sup>163</sup> Ichthys does not currently supply gas domestically, but it is connected to the Northern Territory's domestic gas market as a potential emergency supply source.<sup>164</sup> **Confidential to MidOcean Energy.**
- (c) **1% of Gorgon LNG (operated by Chevron Corp)**: The Gorgon LNG terminal is located on Barrow Island near Onslow in the Pilbara region of Western Australia and processes gas from the Janz-lo Field and Gorgon Field, off the coast of Western Australia. It has a production capacity of 15.6 million tonnes per annum.<sup>165</sup> It comprises three trains and a domestic gas plant, with the capacity to supply 300 terajoules of gas per day.<sup>166</sup> The plant commenced production in 2016. It is operated as a joint venture with the other participants being the Australian subsidiaries of Chevron (47.3% interest), ExxonMobil (25% interest), Shell (25% interest), Osaka Gas (1.25% interest), and JERA (0.417% interest).<sup>167</sup> Gorgon supplies domestic gas into the Western Australian gas market as part of its Western Australian domestic gas reservation commitment; and
- (d) **2.5% of Train 2 in QCLNG (operated by Shell plc)**: QCLNG encompasses two LNG trains located on Curtis Island near Gladstone on Queensland's central east coast, with Tokyo Gas currently holding a 2.5% interest in Train 2 (ie, 1.25% of the QCLNG in total). The plant receives coal seam gas through a 340 kilometre underground pipeline from Surat Basin in Southern Queensland.<sup>168</sup> The plant commenced production from Train 1 in December 2014 and Train 2 in 2015.<sup>169</sup> Each train has a capacity of 4.25 million tons per year.<sup>170</sup> Shell holds the remaining 97.5% interest in Train 2. For completeness, Shell and CNOOC each hold a 50% interest in Train 1. QCLNG has capacity to produce approximately 8.5 million tonnes of LNG per annum (mtpa).<sup>171</sup> QCLNG supplies domestic gas into the East Coast domestic gas market.

596 All are suppliers of LNG to Asian markets.

### Other

597 MidOcean Energy's company structure chart is attached at **Annexure 4.1** and its organisation chart at **Annexure 4.4**.

<sup>160</sup> INPEX, *Ichthys LNG Project* (2023) <<https://www.inpex.co.jp/english/ichthys/>>.

<sup>161</sup> INPEX, *Ichthys LNG* (2023) <<https://www.inpex.com.au/projects/ichthys-lng/>>.

<sup>162</sup> INPEX, *Ichthys LNG* (2023) <<https://www.inpex.com.au/projects/ichthys-lng/>>.

<sup>163</sup> INPEX, *Ichthys LNG Project* (2023) <<https://www.inpex.co.jp/english/ichthys/>>.

<sup>164</sup> *State of the Energy Market 2022 – Report*, page 132 (**Annexure 12**).

<sup>165</sup> Chevron Australia, *An Australian icon – the Gorgon project* <<https://australia.chevron.com/our-businesses/gorgon-project/>>.

<sup>166</sup> Chevron Australia, *An Australian icon – the Gorgon project* <<https://australia.chevron.com/our-businesses/gorgon-project/>>.

<sup>167</sup> Chevron Australia, *An Australian icon – the Gorgon project* <<https://australia.chevron.com/our-businesses/gorgon-project/>>.

<sup>168</sup> Mechademy, *Queensland Curtis LNG* <[https://www.mechademy.com/lng\\_plant/queensland-curtis-lng/](https://www.mechademy.com/lng_plant/queensland-curtis-lng/)>.

<sup>169</sup> Mechademy, *Queensland Curtis LNG* <[https://www.mechademy.com/lng\\_plant/queensland-curtis-lng/](https://www.mechademy.com/lng_plant/queensland-curtis-lng/)>.

<sup>170</sup> Mechademy, *Queensland Curtis LNG* <[https://www.mechademy.com/lng\\_plant/queensland-curtis-lng/](https://www.mechademy.com/lng_plant/queensland-curtis-lng/)>.

<sup>171</sup> *State of the Energy Market 2022 – Report*, page 131 (**Annexure 12**).

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598 MidOcean Energy, as a recently established entity, does not yet have an annual report, audited financial statements, or management accounts.

599 MidOcean Energy's most recent business and strategic plan is attached as **Annexure 4.6**.

600 We note that MidOcean Energy does not have customers or suppliers at this point in time. MidOcean Energy is also not a member of any trade or industry associations.

601 Contact details for each of MidOcean Energy's actual or potential competitors are set out in **Annexure E**.

### 4.15 Senex

602 Senex is an Australian natural gas producer which, since 1 April 2022, has been privately owned by K-A Energy 1 Pty Ltd, a subsidiary of POSCO INTERNATIONAL Corporation (50.1%) and Hancock Energy Corporation Pty Ltd (49.9%) following a takeover. Prior to this date, Senex was an ASX listed company. Senex is POSCO and Hancock Energy's only investment in East Coast gas market producers.

603 Senex holds long-life natural gas assets in the Surat and Bowen Basins, comprising approximately 2,300 square kilometres of acreage and includes material production, development-ready expansions and appraisal and exploration opportunities.<sup>172</sup> Senex also holds a 25% interest in a joint venture for the Kogan Renewable Hydrogen demonstration plant.<sup>173</sup>

604 As at 30 June 2021, Senex's production assets, currently comprising two operating areas in the Surat Basin, contributed approximately 17.3 PJ of natural gas per year into the East Coast gas market.<sup>174</sup> This represents less than 1% of the annual production of the East Coast wholesale gas market, which will have an annual production of approximately 1,996 PJ in 2023.<sup>175</sup> These operating areas are:

- (a) **Atlas, Surat Basin:** The Queensland Government awarded the acreage comprising Atlas to Senex in September 2017, with additional acreage awarded in September 2020. The Atlas asset now comprises 76 square kilometres of acreage with approximately 80 natural gas wells, pipelines and a processing facility to compress the gas for delivery to customers. Energy infrastructure operator Jemena has built, owns and operates the gas processing facility and pipeline, which provides access to the Wallumbilla Gas Hub. Senex has an agreement in place with Jemena to expand the Atlas gas processing facility by 50% to process 48 TJ of gas per day.<sup>176</sup> The Atlas tenure was granted by the Queensland Government subject to an Australian market supply condition such that all of its production is required to be sold into the East Coast gas market.
- (b) **Roma North, Surat Basin:** The Queensland Government awarded Roma North to Senex in May 2019. The Roma North asset comprises 370 square kilometres of acreage with 35 natural gas wells, a processing facility, and a 5 kilometre pipeline. Energy infrastructure operator Jemena owns and operates the gas processing facility and pipeline, which provides access to GLNG's liquefied natural gas plant. Senex has an agreement in place with GLNG for supply of up to 50 TJ of gas per day (which covers the entirety of Senex's production from Roma North and would include the entirety of any gas produced from any

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<sup>172</sup> Senex, *2021 Annual Report*, pages 8, 30 <[https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021\\_FA-WEBVERSION-1.pdf](https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021_FA-WEBVERSION-1.pdf)>.

<sup>173</sup> CS Energy, *CS Energy and Senex Energy join forces on renewable hydrogen* <<https://www.csenergy.com.au/news/cs-energy-and-senex-energy-join-forces-on-renewable-hydrogen>>.

<sup>174</sup> Senex, *Annual Report 2021*, page 17 <[https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021\\_FA-WEBVERSION-1.pdf](https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021_FA-WEBVERSION-1.pdf)>.

<sup>175</sup> ACCC, *Gas Inquiry 2017 – 2030: Interim update on east coast gas supply-demand outlook for 2023* (March 2023) page 8 <[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20March%202023%20interim%20report\\_1.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20March%202023%20interim%20report_1.pdf)>.

<sup>176</sup> Senex, *Atlas* <<https://www.senexenergy.com.au/operations/project-atlas/>>.



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further expansion up to the current site infrastructure and processing capacity of 48 TJ per day).<sup>177</sup>

605 Senex exploration assets, currently comprising one exploration area in the Surat Basin and one exploration area in the Bowen Basin.<sup>178</sup> These exploration areas include:

- (a) **Artemis, Surat Basin:** The Queensland Government has awarded preferred tenderer status for the gas exploration block comprising Artemis in May 2019. The Artemis asset comprises 153 square kilometres of acreage. Senex's ownership of the Artemis asset is subject to an exploration tenure grant for an initial six-year term. Senex has implemented an initial four-year work program, including geological studies and three wells drilled in financial years 2022 and 2023.<sup>179</sup>
- (b) **Eidsvold, Bowen Basin:** The Queensland Government has awarded preferred tenderer status for a gas exploration block near Eidsvold in September 2022. The block near Eidsvold comprises 586 square kilometres of acreage. Senex has implemented an initial four-year work program, including geological studies, 2D seismic acquisition and an exploration well.<sup>180</sup>

606 Senex has a range of commercial and industrial customers including CSR Building Products, Orora, Visy Glass, Alinta Energy, CleanCo Queensland and Southern Oil Refining,<sup>181</sup> as well as the long term supply to GLNG.<sup>182</sup>

607 Additional information is available on Senex's website at <https://www.senexenergy.com.au/>.

### 4.16 Origin

608 Origin is an ASX listed integrated energy company. Origin has two core businesses, its Energy Markets Business responsible for electricity generation and electricity and gas retailing across Australia,<sup>183</sup> and its Integrated Gas Business which includes a 27.5% interest in APLNG and its upstream gas fields in the Surat and Bowen basins in Queensland.<sup>184</sup> It also operates, or has interests in, a range of other businesses in future energy, non-energy or energy adjacent sectors.

#### **Energy markets business**

609 The Origin Energy Markets operations include, most relevantly, electricity generation and electricity and gas retail.

610 **Generation:** Origin's existing portfolio has a total generating capacity of 7,835 MW, comprising 6,080 MW of own generation and 1,515 MW of contracted renewables and 240 MW from other contracts.<sup>185</sup> Origin operates six natural gas-fired power stations, one black coal generator and a number of other power stations (including renewable assets), which are located across Queensland, Victoria, South Australia and New South Wales. Origin's generation portfolio is summarised in **Figure 45** below.

<sup>177</sup> Senex, *Roma North* <<https://www.senexenergy.com.au/operations/roma-north/>>.

<sup>178</sup> Senex, *Exploration* <<https://www.senexenergy.com.au/operations/exploration/>>.

<sup>179</sup> Senex, *Exploration* <<https://www.senexenergy.com.au/operations/exploration/>>.

<sup>180</sup> Senex, *Exploration* <<https://www.senexenergy.com.au/operations/exploration/>>.

<sup>181</sup> Senex, *Atlas* <<https://www.senexenergy.com.au/operations/project-atlas/>>.

<sup>182</sup> Senex, *Roma North* <<https://www.senexenergy.com.au/operations/roma-north/>>.

<sup>183</sup> Origin has LPG interests in the South Pacific and Papua New Guinea. It entered into a contract on 8 November 2022 to sell these interests which is expected to complete by the end of **Confidential to Origin**.

<sup>184</sup> The gas fields in the Surat and Bowen basins are being surrendered.

<sup>185</sup> Origin Energy Markets, *Half Year Report 2023*, <[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>, page 20. As at 22 February 2023, 240 MW are contracted from Pelican Point.

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**Figure 45: Origin's generation portfolio**

Name	Location	Nameplate capacity	Type of facility
<b>Mortlake Power Station</b>	VIC	584 MW	Natural gas-fired power station
<b>Uranquinty Power Station</b>	NSW	692 MW	Natural gas-fired power station
<b>Eraring Power Station<sup>186</sup></b>	NSW	2,922 MW	Black coal generator
<b>Shoalhaven Hydro Pump Storage Scheme<sup>187</sup></b>	NSW	240 MW	Hydro power station
<b>Mt Stuart Power Station<sup>188</sup></b>	QLD	423 MW	Predominantly natural gas-fired power station
<b>Darling Downs Power Station</b>	QLD	644 MW	Natural gas-fired power station
<b>Roma Power Station</b>	QLD	80 MW	Natural gas-fired power station
<b>Ladbroke Grove Power Station</b>	SA	80 MW	Natural gas-fired power station
<b>Quarantine Power Station</b>	SA	235 MW	Natural gas-fired power station
<b>Osborne Cogeneration Plant<sup>189</sup></b>	SA	180 MW	Combined cycle plant with a gas turbine, heat recovery steam generator and steam turbine

Source: Origin

- 611 Origin generates enough power for around half of its customer load. For the remainder of its requirements, it is a net-buyer from the wholesale energy market.<sup>190</sup>
- 612 Origin's current development projects include several large-scale solar developments, battery energy storage systems co-located with existing power stations, and expansion of the Shoalhaven pumped storage hydro power plant. These projects are summarised in **Figure 46** below:

**Figure 46: Origin's development projects**

Name	Location	Description	Status	Project type
<b>Carisbrook Solar Farm</b>	VIC	This renewable generation project has an export capacity of 74 MW of solar generation.  Output from the solar farm will connect into the national electricity grid.	<b>Confidential to Origin.</b>	Solar development
<b>Mortlake Power Station battery</b>	VIC	Origin is proposing to develop a large-scale battery storage project adjacent to Origin's gas-	Origin is currently preparing the required studies and plans to seek planning approval from	Battery energy storage

<sup>186</sup> Origin Energy, *Welcome to Eraring, Australia's largest power station* (2023) <<https://www.originenergy.com.au/about/who-we-are/what-we-do/generation/eraring-power-station/>>.

<sup>187</sup> Shoalhaven Pump Storage Scheme consists of two pumped storage hydropower stations at Kangaroo Valley and Bendeela in the Shoalhaven area.

<sup>188</sup> Uses an open-cycle gas turbine system in which the three turbines are fuelled by extra low sulphur diesel.

<sup>189</sup> With both baseload and peaking capacity, Osborne provides electricity to the NEM. Osborne is jointly owned by Origin and ATCO Power, and Origin contracts 100% of the output.

<sup>190</sup> Jon Briskin, *Supporting all customers through the energy transition* (8 June 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/supporting-all-customers-through-the-energy-transition/>>.

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Name	Location	Description	Status	Project type
		<p>fired Mortlake Power Station.</p> <p>The battery will be connected into the 500kV network to which the existing gas turbine units are connected.</p>	<p>the Victorian State Government.</p> <p><b>Confidential to Origin.</b></p>	
<b>Yarrabee Solar Farm</b>	NSW	<p>The first stage of the project is expected to include nominally 150 MW of solar generation, with additional capacity dependent of transmission network upgrades. Planning approval allows for up to 900 MW.</p> <p>Planning approval also allows for a 35 MW battery energy storage system of facility.</p>	<p>The project was initially intended to be built in two 450 MW generation stages. <b>Confidential to Origin.</b></p>	Solar development
<b>Yanco Solar Farm</b>	NSW	<p>The renewable generation project has an export capacity of 60 MW of solar generation.<sup>191</sup></p> <p>The project will connect to the national electricity grid through Transgrid's Yanco substation located southeast of the project site.</p> <p>The planning permit allows for development of a battery energy storage facility or system with a maximum capacity of 81 MW.</p>	<p>The project secured planning approval from the New South Wales Government in July 2020.<sup>192</sup> <b>Confidential to Origin</b></p>	Solar development
<b>Dapper Solar Farm</b>	NSW	<p>Origin is seeking development approval for a 250-300 MW solar and battery development project.</p>	<p>During 2023, Origin will undertake a range of assessments and studies that will form part of the development application to New South Wales Government.</p>	Solar development
<b>Shoalhaven Hydro Pump expansion</b>	NSW	<p>Origin proposes to expand its Shoalhaven pumped hydro storage scheme with the installation of one</p>	<p>The New South Wales Government approved the Environmental Impact Assessment (<i>EIS</i>) for</p>	Pumped storage hydro

<sup>191</sup> Australia Energy Market Operator, *NEM Generation Information January 2023* <<https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>>

<sup>192</sup> With one subsequent modification to this approval since that time.

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Name	Location	Description	Status	Project type
		additional ~235 MW generating unit.	<p>proposed geotechnical works in November 2019. Origin completed and lodged a full EIS for the project in early November 2022.</p> <p>Higher than anticipated pricing estimates from construction contractors meant Origin did not submit the Shoalhaven expansion for consideration in the Long-Term Energy Service Agreements (<b>LTESAs</b>) funding application process in February 2023. The Shoalhaven expansion project remains an advanced development option and Origin continue to take steps to secure the necessary environmental and regulatory approvals and will re-test pricing at a later date when economic and market factors may have changed.</p>	
<b>Eraring Power Station battery</b>	NSW	<p>Origin is progressing plans for a battery energy storage system at Eraring Power Station.</p> <p>The proposed battery project, which is currently proposed to be carried out in stages, has a potential peak output of 700 MW for up to four hours (or lesser loads for longer periods). Once all stages are completely, the battery will be able to meet the energy needs of approximately 150,000 homes for up to four hours.</p>	<p>Project secured planning approval (for all stages) from the New South Wales Government in May 2022.</p> <p>Origin made a Final Investment Decision on the first stage of the project (460 MW / 2 hour battery) in March 2023.</p> <p><b>Confidential to Origin.</b></p>	Battery energy storage
<b>Darling Downs Power Station battery</b>	QLD	Origin is proposing to construct a 500 MW battery with a storage	Project has secured approval from the Western Downs Regional	Battery energy storage

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Name	Location	Description	Status	Project type
		<p>capacity of up to 2,000 MWh.<sup>193</sup> The battery will be installed beside Origin's Darling Downs Power Station, a combined cycle gas-fired power station, with an existing generation capacity of 630 MW.</p> <p>The battery will be charged via the existing grid connection and dispatched at times of high demand.</p>	<p>Council.</p> <p>Origin will undertake competitive sourcing processes to identify suitably qualified equipment supply and installation contractors for the battery.</p>	
<b>Morgan Solar Farm</b>	SA	<p>The project will include a solar farm with a generation capacity of up to 250-300 MW, with a battery energy storage system of up to 80 MW.</p> <p>The project will be developed over two stages, with stage one comprising up to 120 MW of solar power.</p>	<p>The project secured development approval from the South Australian Government in September 2020.</p> <p><b>Confidential to Origin.</b></p>	Solar development

Source: Origin

- (a) Origin's Future Fuels business is pursuing opportunities in hydrogen produced by renewable powered processes. This includes a proposed hydrogen production facility in collaboration with Orica, to be located in the Hunter Valley region of NSW. The proposed facility would produce hydrogen for manufacturing and mobility applications.<sup>194</sup> Origin has also completed a feasibility investigation of an export scale green hydrogen and ammonia project in the Bell Bay industrial precinct in northern Tasmania. Origin is also in a feasibility study for the export of methylcyclohexane from Gladstone in Queensland.

This business is currently part of Origin's Integrated Gas business but will be moved to be part of the Origin Energy Markets business to be acquired by the BGTF Consortium on completion.

- 613 **Retail and Origin Zero:** Origin sells electricity and gas to residential, business and wholesale customers in Eastern Australia. Set out in **Figure 47** below is the number of customer accounts (by electricity and gas) Origin services per state in the NEM, with electricity and gas shown separately.

<sup>193</sup> Australia Energy Market Operator, *NEM Generation Information January 2023* <<https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>>.

<sup>194</sup> Origin, *Origin planning Newcastle hydrogen hub*, 28 February 2022 <<https://www.originenergy.com.au/about/investors-media/origin-planning-newcastle-hydrogen-hub/>>

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**Figure 47: Origin customer accounts – gas and electricity**

<b>Customer accounts</b>			
<b>Customer accounts ('000) as at</b>	<b>31 December 2022</b>	<b>30 June 2022</b>	<b>Change</b>
<b>Electricity</b>	<b>2,736</b>	<b>2,733</b>	<b>3</b>
NSW <sup>1</sup>	1,169	1,193	(24)
Queensland	683	674	9
Victoria	622	608	14
South Australia <sup>2</sup>	261	257	4
<b>Natural Gas</b>	<b>1,282</b>	<b>1,277</b>	<b>4</b>
NSW <sup>1</sup>	387	379	8
Queensland	177	178	(1)
Victoria	494	495	(1)
South Australia <sup>2</sup>	224	226	(2)
<b>Total electricity and natural gas</b>	<b>4,017<sup>3</sup></b>	<b>4,010</b>	<b>7</b>
Rolling average customer accounts	4,013	3,944	70
Broadband	74	61	14
LPG	368	368	0
Other <sup>4</sup>	29	20	9
<b>Total customer accounts</b>	<b>4,489</b>	<b>4,458</b>	<b>30</b>

1 Australian Capital Territory customer accounts are included in New South Wales.

2 Northern Territory and Western Australia customer accounts are included in South Australia.

3 Includes 413,000 CES customer accounts (FY2022: 403,000).

4 Largely relates to Origin Home Assist customers.

Source: Origin Energy Half Year 2023 Report, page 22

614 The graphs in **Figure 48** and

615 **Figure 49** below show Origin's electricity and gas volumes per state in FY21 and FY22.

**Figure 48: Origin retail volumes electricity**

<b>Volume summary</b>								
<b>Volumes sold (TWh)</b>	<b>HY23</b>			<b>HY22</b>			<b>Change (TWh)</b>	<b>Change (%)</b>
	<b>Retail</b>	<b>Business</b>	<b>Total</b>	<b>Retail</b>	<b>Business</b>	<b>Total</b>		
NSW <sup>1</sup>	3.7	4.0	7.7	3.8	4.0	7.8	(0.1)	(1.7)
Queensland	1.9	2.3	4.2	2.0	1.9	3.9	0.2	6.3
Victoria	1.6	2.6	4.1	1.4	2.4	3.8	0.4	9.3
South Australia	0.7	1.4	2.1	0.6	0.9	1.6	0.5	33.9
<b>Total volumes sold</b>	<b>7.8</b>	<b>10.3</b>	<b>18.1</b>	<b>7.9</b>	<b>9.2</b>	<b>17.1</b>	<b>1.0</b>	<b>5.9</b>

1 Australian Capital Territory customers are included in New South Wales.

Source: Origin Energy Half Year 2023 Report, page 19

**Figure 49: Origin retail volumes – gas**

<b>Volume summary</b>								
<b>Volume sold (PJ)</b>	<b>HY23</b>			<b>HY22</b>			<b>Change (PJ)</b>	<b>Change (%)</b>
	<b>Retail</b>	<b>Business</b>	<b>Total</b>	<b>Retail</b>	<b>Business</b>	<b>Total</b>		
NSW <sup>1</sup>	6.9	12.2	19.0	7.0	9.6	16.6	2.4	14
Queensland	1.7	39.4	41.2	1.5	33.2	34.7	6.5	19
Victoria	14.8	23.2	37.9	14.4	21.6	36.1	1.9	5
South Australia <sup>2</sup>	3.2	7.1	10.3	3.3	5.6	8.9	1.4	16
<b>External volumes sold</b>	<b>26.6</b>	<b>81.8</b>	<b>108.4</b>	<b>26.3</b>	<b>70.0</b>	<b>96.3</b>	<b>12.2</b>	<b>13</b>
Internal sales (generation)			15.2			19.1	(3.9)	(20)
<b>Total volumes sold</b>			<b>123.7</b>			<b>115.4</b>	<b>8.2</b>	<b>7</b>

1 Australian Capital Territory customers are included in New South Wales.

2 Northern Territory and Western Australia customers are included in South Australia.

Source: Origin Energy 2023 Half Year Report, page 21

616 Origin is one of the three largest retailers in Eastern Australia. Reflecting its history, Origin's market share is highest in Queensland and lowest in Victoria and South Australia. Estimated market shares are set out at **Figure 65**.

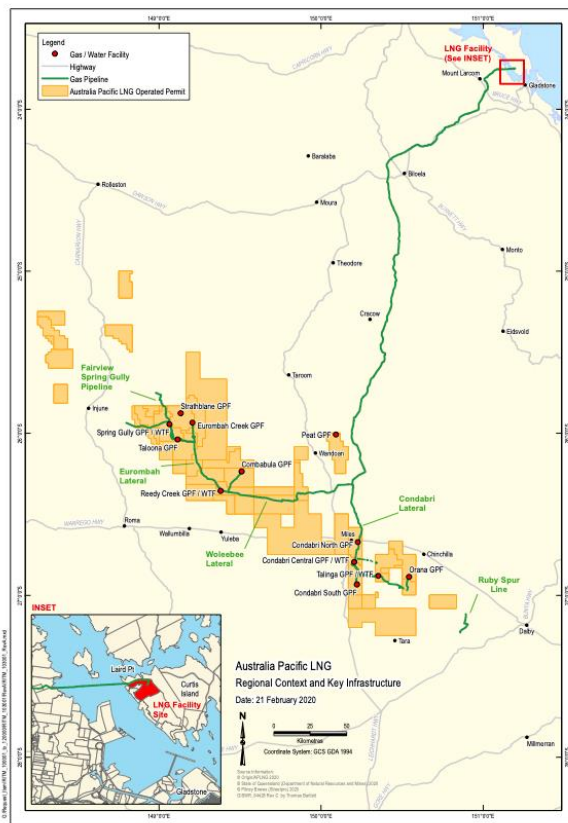
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- 617 The recently launched Origin Zero business is focused on providing energy and low carbon solutions for large business customers.
- 618 Origin also offers high-speed broadband to its retail customers, through a white label agreement with Aussie Broadband.

### **Integrated gas business**

- 619 Origin holds a 27.5% shareholding in APLNG, an incorporated joint venture between Origin Energy, ConocoPhillips (47.5%) and Sinopec (25%).<sup>195</sup> APLNG is a coal seam gas (CSG) to LNG gas project.
- 620 APLNG supplies Australian customers with natural gas and international customers with LNG. There are two export offtake agreements in place for the LNG produced by APLNG - 7.6 MTPA to JV partner Sinopec, and 1 MTPA to Kansai Electric, both for 20 years. APLNG shipped its first LNG cargo in January 2016 after nearly five years of development and construction.
- 621 Origin operates APLNG's gas fields, upstream exploration, production and pipeline system. It also acts as APLNG's CSG Marketing Agent as its Corporate Services Provider. ConocoPhillips operates the downstream LNG export facility and the LNG export sales business. The map contained in **Figure 50** below sets out APLNG's areas of operation.

**Figure 50: APLNG areas of operation**



Source: <https://aplng.com.au/where-we-operate/>

- 622 In addition to its interest in APLNG Origin has non-producing, gas exploration interests set out in **Figure 51** below:

<sup>195</sup> APLNG is a separate legal entity. Operating, management and funding decisions require the unanimous support of the foundation shareholders, which includes Origin and ConocoPhillips. Accordingly, joint control exists, and Origin has classified the investment in APLNG as a joint venture.

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**Figure 51: Origin's other integrated gas projects**

Name	Origin interest	Additional information
<b>Cooper-Eromanga Basin (QLD)</b>	75% interest and operatorship of five permits. 100% interest and operatorship in 12 permits.	Origin will transfer its interest in five permits back to Bridgeport, the remaining 12 permits are under a strategic review with a view to exiting those permits over time. <sup>196</sup> <b>Confidential to Origin.</b>
<b>Canning Basin (WA)</b>	Origin entered into agreements in December 2020 with Buru Energy to farm in to a 50% equity share in five permits, and a 40% equity share in two permits.	An agreement has been executed with Buru Energy Limited to exit Origin's interest in Canning Basin. <sup>197</sup>
<b>Browse Basin (Offshore WA)</b>	In 2014 Origin acquired a 40% interest in exploration permits in the Poseidon area of the Browse Basin.	Inactive

Source: Origin

### **Origin's other interests / businesses**

- 623 **Octopus Energy:** Origin owns 20% of Octopus Energy, a UK-based energy retailer and technology company.<sup>198</sup> Octopus Energy has no assets in Australia. The other shareholders in Octopus Energy are Octopus Investments (see 624 below), CPP Investment Board, Tokyo Gas and Generation. As described at paragraph 595 above, Tokyo Gas has entered into an agreement to sell its LNG interests to MidOcean Energy.
- 624 For completeness we note that Octopus Investments owns 40% of Octopus Energy. Octopus Investments also wholly owns Octopus Australia. Octopus Australia is targeting major investments in large-scale wind, solar and storage assets in Australia and owns and operates the Darlington Point solar farm. Origin has no interests in Octopus Australia or its generation assets and projects.
- 625 In addition to its interest in Octopus Energy, Origin also has a range of ownership interests across various energy and energy-adjacent sectors in Australia and abroad, including:
- (a) **Gasbot:** Origin has a 32% ownership interest in Gasbot Pty Limited, an Australian-based provider of scalable remote monitoring solutions (hardware and software) for the management and optimisation of gas logistics across LPG distributors' fleet of LPG tanks and cylinders. There are approximately 20 other shareholders in Gasbot, including a number of individuals and small private companies.
  - (b) **Gaschem:** Origin has a 25% ownership interest in Gaschem Sydney, Gaschem Brisbane and Gaschem Melbourne. Gaschem is a German-based provider of worldwide shipping services and commercial management for different sizes and types of liquefied gas

<sup>196</sup> Origin Energy, *2023 Half Year Report*, page 9 <[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>, page 9. (Annexure 13)

<sup>197</sup> Origin Energy, *2023 Half Year Report*, page 9 <[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>, page 9. (Annexure 13)

<sup>198</sup> Origin's investment is equity accounted as a result of Origin's active participation on the board of Octopus Energy and Origin's ability to impact decision making, leading to the assessment that significant influence exists.



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cargoes. There are a large number of other shareholders in each Gaschem entity, including a number of individuals.

## 5 Industry context

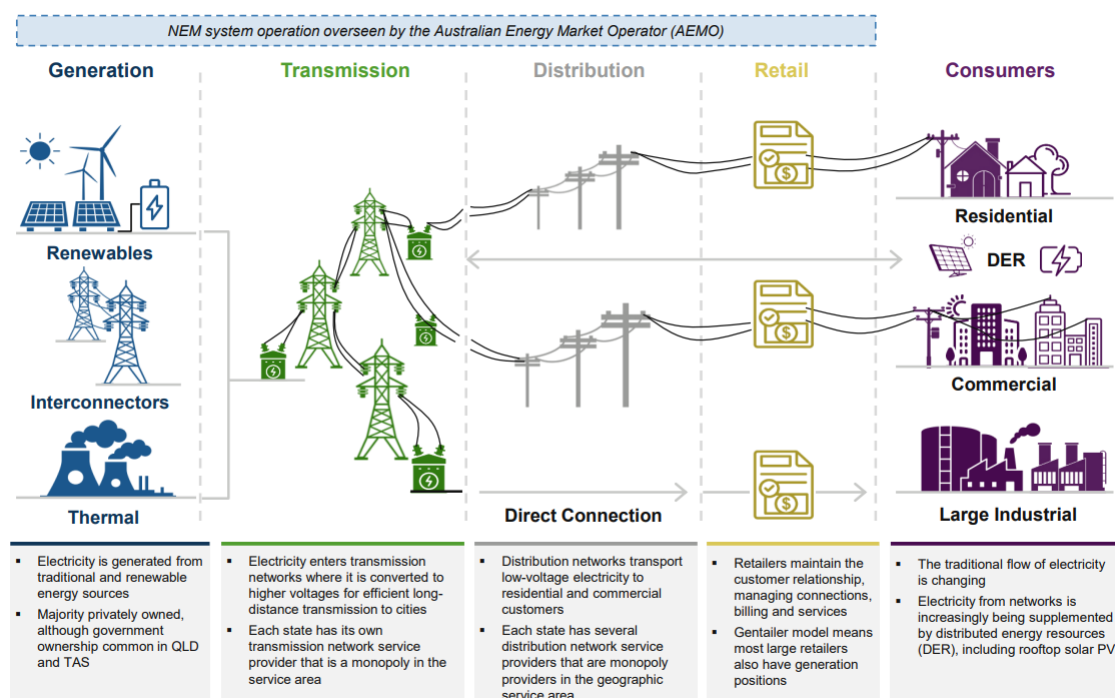
This section provides a high level overview of the electricity, gas and smart meter industries in Australia. The electricity and gas sections are drawn, and quote extensively, from the State of the Energy Market 2022 Report prepared by the Australian Energy Regulator (**AER**). **Annexure A** to this Application describes in more detail the regulatory regime that applies to the electricity and gas sectors in eastern Australia, focussing in particular on the regulation of electricity transmission and electricity and gas distribution networks in Victoria, ie, the regulatory regime relevant to AusNet). **Annexure A** is intended to provide a detailed description of the features of the regulatory regime relevant to the discussion of why vertical foreclosure is not possible as discussed in Chapters 8 to 12 below.

### 5.1 Industry overview: electricity

626 **Overview of the NEM:** Around 325 generating units produce electricity for sale into the NEM.<sup>199</sup> Electricity generated in eastern and southern Australia is traded through the NEM.<sup>200</sup> The NEM covers five regions – Queensland, New South Wales, the Australian Capital Territory, Victoria, South Australia and Tasmania.<sup>201</sup> A transmission grid carries this electricity along high voltage power lines to industrial energy users and local distribution networks. Energy retailers complete the supply chain by purchasing electricity from the NEM and packaging it with transmission and distribution network services for sale to residential, commercial and industrial energy users.<sup>202</sup>

627 **Figure 52** below explains how the electricity supply chain in the NEM operates.

**Figure 52: Electricity supply chain in the NEM**



628 Generators make offers to sell electricity into the market and AEMO schedules the lowest priced generation available to meet demand. The amount of electricity generated needs to match demand in real time.<sup>203</sup> In this regard, the NEM consists of a wholesale spot market for selling

<sup>199</sup> State of the Energy Market 2022 – Report, page 16–17 (Annexure 12).

<sup>200</sup> State of the Energy Market 2022 – Report, page 16 (Annexure 12).

<sup>201</sup> State of the Energy Market 2022 – Report, page 16 (Annexure 12).

<sup>202</sup> State of the Energy Market 2022 – Report, page 17 (Annexure 12).

<sup>203</sup> State of the Energy Market 2022 – Report, page 16 (Annexure 12).

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electricity and a transmission grid for transporting it to energy customers. Generators make offers to supply quantities of electricity in different price bands for each 5-minute dispatch interval. Scheduled loads, or consumers of electricity such as pumped hydro and batteries, also offer into the market. Electricity generated by rooftop solar systems is not traded through the NEM, but it does lower the demand that market generators need to meet.<sup>204</sup>

- 629 A separate price is determined for each of the five NEM regions. As the power system operator, AEMO uses forecasting and monitoring tools to track electricity demand, generator bidding and network capability to determine which generators should be dispatched to produce electricity. It repeats this exercise every five minutes for every region. It dispatches the cheapest generator bids first then progressively more expensive offers until enough electricity can be produced to meet demand. The highest priced offer needed to cover demand sets the five-minute price in each region.<sup>205</sup>
- 630 While the market is designed to meet electricity demand in a cost-efficient way, other factors can intervene. At times, dispatching the lowest cost generator may overload the network or risk system security, so AEMO dispatches more expensive (out of merit order) generators instead.<sup>206</sup>
- 631 Retailers buy power from the wholesale market and package it with network services to sell as a retail product to their customers. They manage the risk of volatile prices in the wholesale market by taking out hedge contracts (derivatives) that lock in a firm price for electricity supplies in the future, by controlling generation plants or taking out demand response contracts with their retail customers.<sup>207</sup>
- 632 Generators also manage their market exposure by locking in prices for which they will trade electricity in the future. An alternative strategy adopted by some participants is to internally manage risk through vertical integration – that is, operating as both a generator and a retailer (**gentailers**) to offset the risks in each segment. Typically, vertically integrated gentailers are imperfectly hedged – their position in generation may be ‘short’ (not enough generation) or ‘long’ (too much generation) relative to their retail position. For this reason, gentailers participate in contract markets to manage outstanding exposures, although usually to a lesser extent than standalone generators and retailers do.<sup>208</sup>
- 633 **Generation in the NEM:** The NEM uses a mix of technologies to produce electricity. Traditionally, the majority of Australia's electricity was generated using coal, gas and hydro power stations but the sector is evolving to include a more diverse range of renewable sources such as wind and solar (with a number of coal-generated power stations being decommissioned).
- 634 Private entities control most generation output in New South Wales, Victoria and South Australia:<sup>209</sup>
- (a) In New South Wales, AGL Energy and Origin produced around 60% of output in 2021 and own more than 40% of the region's capacity. EnergyAustralia and Delta are other major players. Snowy Hydro, owned by the Australian Government produced 4% of output in the region but owns 19% of its capacity.
  - (b) In Victoria, AGL Energy and Alinta produced around 57% of output in 2021 and own more than 30% of the region's capacity. EnergyAustralia produced a slightly smaller share of output than Alinta. Snowy Hydro produced 5% of output in the region but owns 16% of its capacity.

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<sup>204</sup> *State of the Energy Market 2022 – Report*, page 18 (**Annexure 12**).

<sup>205</sup> *State of the Energy Market 2022 – Report*, page 18 (**Annexure 12**).

<sup>206</sup> *State of the Energy Market 2022 – Report*, page 18 (**Annexure 12**).

<sup>207</sup> *State of the Energy Market 2022 – Report*, page 18 (**Annexure 12**).

<sup>208</sup> *State of the Energy Market 2022 – Report*, page 25–26 (**Annexure 12**).

<sup>209</sup> *State of the Energy Market 2022 – Report*, page 48 (**Annexure 12**).

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(c) In South Australia, AGL Energy and Engie produced 50% of output in 2021 and own 45% of the region’s capacity. The other significant generator is Origin.

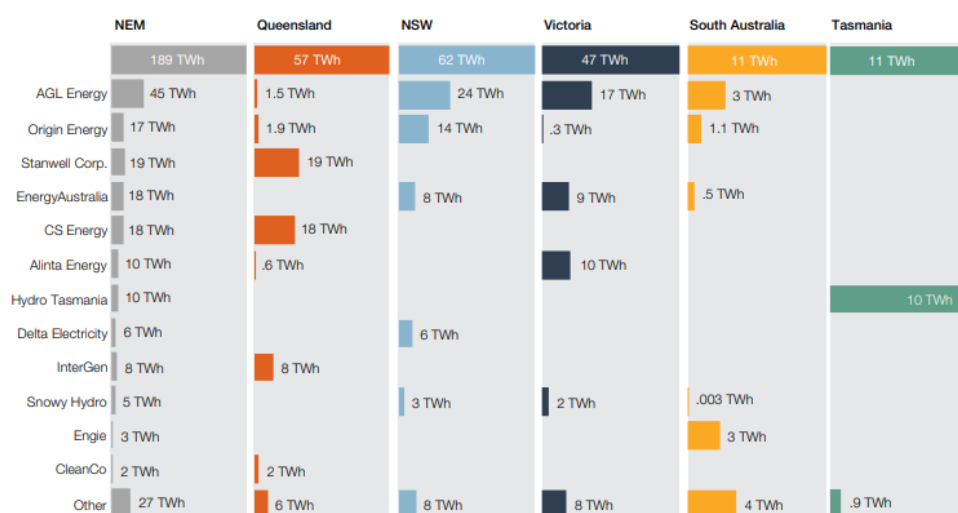
635 Government-owned entities control most generation output in Queensland and Tasmania:<sup>210</sup>

(a) In Queensland, state-owned corporations Stanwell and CS Energy controlled 65% of generation output in 2021 and own 42% of its capacity. A third State-owned entity, CleanCo, produced 4% of the state’s output. It was created in 2019 to increase competition and support growth in renewables. The largest private operator by output is InterGen.

(b) In Tasmania, the state-owned Hydro Tasmania owns most of the generation capacity.

636 The graph in **Figure 53** below shows the market shares of electricity generators by generation output in 2021.

**Figure 53: Market shares by electricity generation output**



Note: Output in 2021. Market shares are attributed to the owner of the plant or the intermediary (should one be declared to AEMO). Output is split on a pro rata basis if the owner or intermediary changed in 2021. Data exclude output from rooftop solar systems and interconnectors.

Source: AER, *State of the Energy Market 2022 – Report*, Figure 2.22 (**Annexure 12**)

637 Most large generators in the NEM are vertically integrated, with portfolios in both generation and retail. As discussed above, vertical integration allows generators and retailers to insure internally against price risk in the wholesale market, reducing their need to participate in hedge (contract) markets.<sup>211</sup>

638 AGL Energy, Origin and EnergyAustralia supplied 44% of electricity generation in 2021–22 and 64% of residential energy customers in Q1 2022.<sup>212</sup> Red Energy and Lumo Energy (Snowy Hydro), Simply Energy (Engie) and Alinta also own major generation assets, and supplied 9% of electricity generation in 2021–22 and 13% of residential energy customers in Q1 2022.<sup>213</sup> Several smaller retailers are also vertically integrated.<sup>214</sup>

639 At the end of 2021, black coal provided the most generating capacity in the NEM at over 17 GW, closely followed by rooftop solar with 14 GW of generating capacity. While rooftop solar capacity is not considered as generation in the NEM, its output reduces demand from the grid. Wind and solar farms provided an additional 14 GW.<sup>215</sup>

<sup>210</sup> *State of the Energy Market 2022 – Report*, page 48 (**Annexure 12**).

<sup>211</sup> *State of the Energy Market 2022 – Report*, page 49 (**Annexure 12**).

<sup>212</sup> *State of the Energy Market 2022 – Report*, page 49 (**Annexure 12**).

<sup>213</sup> *State of the Energy Market 2022 – Report*, page 49 (**Annexure 12**).

<sup>214</sup> *State of the Energy Market 2022 – Report*, page 50 (**Annexure 12**).

<sup>215</sup> *State of the Energy Market 2022 – Report*, page 33 (**Annexure 12**).

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640 Around 12,500 MW of new utility-scale solar, wind and battery investment was added to the NEM in the four years to 2022. Over the same period, a net 150 MW of gas capacity was withdrawn. In 2021, more than 3 GW of renewable capacity entered the market, comprising:

- (a) 1.5 GW of solar capacity, which was located mostly in New South Wales and Queensland;
- (b) 1 GW of wind capacity, which was located mostly in Victoria; and
- (c) 0.5 GW of battery capacity (two batteries in Victoria, one in Queensland and one in New South Wales).<sup>216</sup>

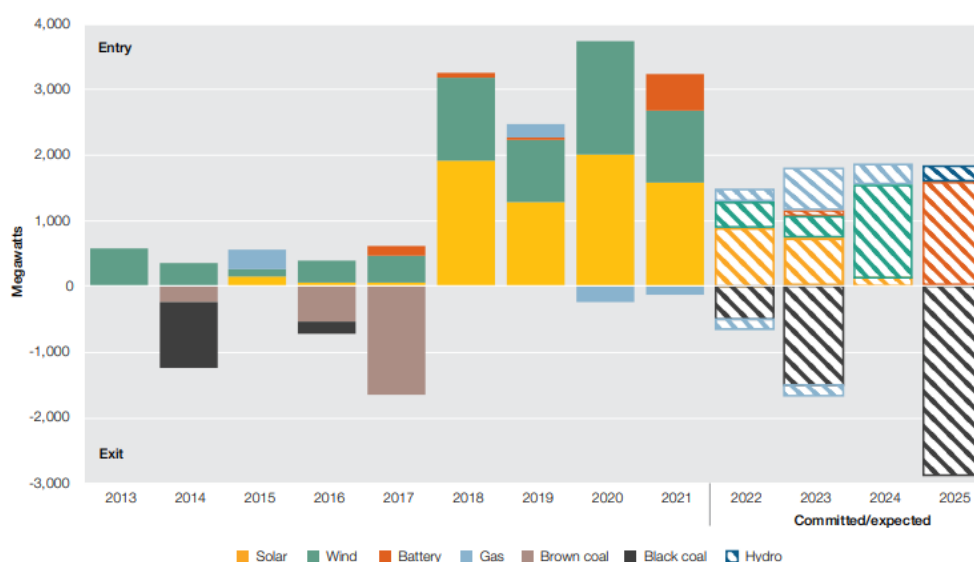
641 This new entry included the NEM's largest wind farm (Stockyard Hill), largest solar farm (Western Downs Green Power Hub) and largest battery (the Victorian Big Battery). 150 MW of gas capacity exited the NEM in 2021 – namely, the Mackay Gas Turbine (30 MW) in Queensland and the third unit (120 MW) at Torrens Island A Power Station in South Australia.

642 More than 5,000 MW of additional capacity is committed to come online in 2022 and 2023. As well as solar and wind, committed new entry includes the 660 MW Kurri Kurri gas-powered power station and more than 500 MW of new batteries.<sup>217</sup>

643 2,300 MW of base load capacity is expected to retire in 2022 and 2023. Exits in 2022 include AGL's Hunter Valley Gas Turbines (50 MW) in January, the first black coal unit (500 MW) at AGL's Liddell Power Station in April (with full closure taking place in April 2023) and AGL's final Torrens Island gas-powered unit (120 MW) in September.<sup>218</sup> Further fossil fuel plant withdrawals are expected, including 8,200 MW of coal-fired generation expected to retire between 2023 and 2029.<sup>219</sup>

644 The graph in **Figure 54** below shows past and committed / expected generation investment and plant closures in the NEM.

**Figure 54: New generation investment and plant withdrawal**



Note: Capacity includes scheduled and semi-scheduled generation, but not rooftop solar capacity. Actual and expected investment and closures from 1 January 2022 are shown as shaded components. These include Liddell and Osborne power stations in 2023 and Eraring power station in 2025.

Source: AER, *State of the Energy Market 2022 – Report*, Figure 2.23 (Annexure 12)

<sup>216</sup> *State of the Energy Market 2022 – Report*, page 50 (Annexure 12).

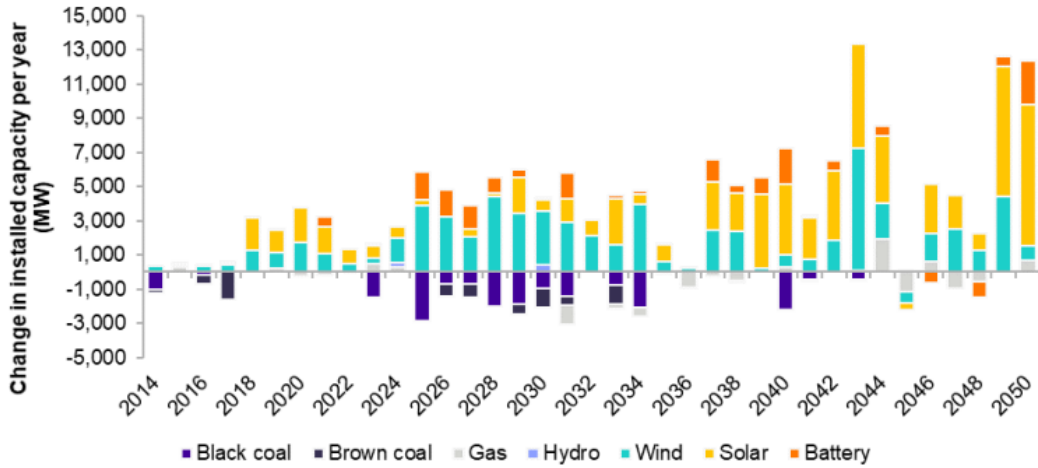
<sup>217</sup> *State of the Energy Market 2022 – Report*, page 51 (Annexure 12).

<sup>218</sup> *State of the Energy Market 2022 – Report*, page 51 (Annexure 12).

<sup>219</sup> *State of the Energy Market 2022 – Report*, page 51 (Annexure 12).

645 The graph in **Figure 55** below illustrates the expected shift from coal-fired generation to new fuel types in the coming decades.

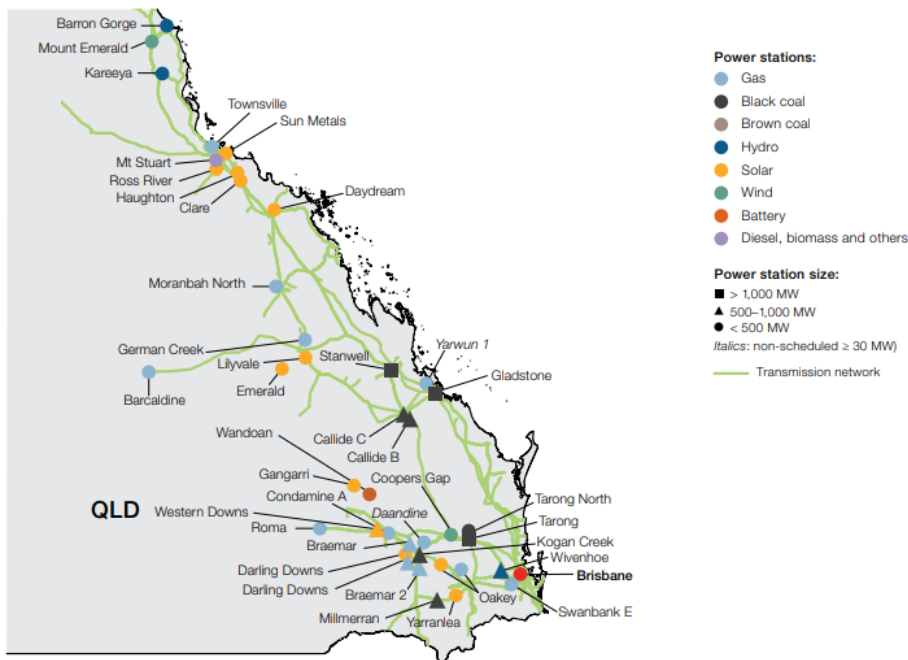
**Figure 55: Entry into and exits from the NEM by fuel type (in MW), 2014-2025M**



Source: ACCC Inquiry into the National Electricity Market – November 2022 Report

646 **Figure 56 to Figure 59** below map the locations of generation plants and the different types of technology in use across the NEM mainland states.

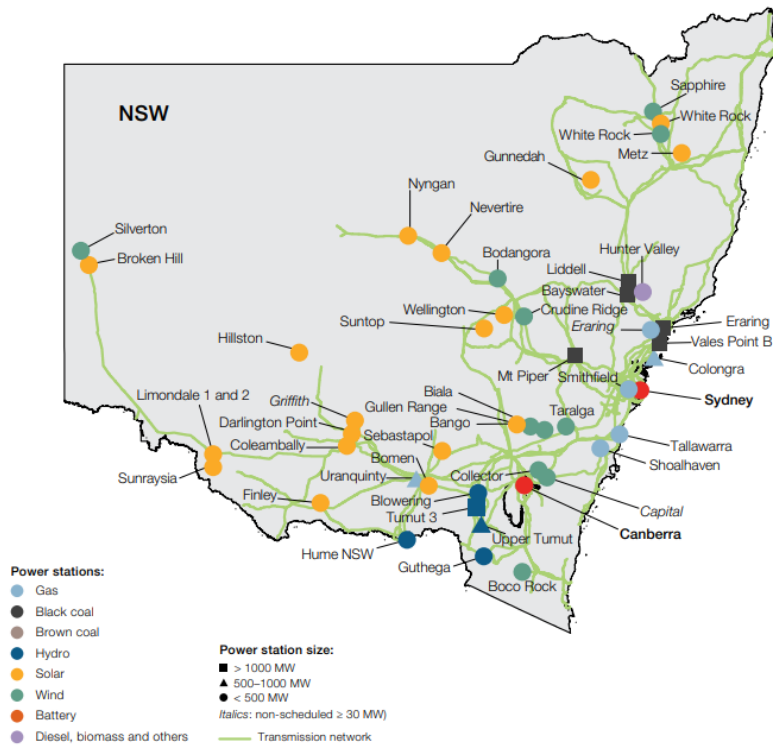
**Figure 56: Generators in the NEM (Queensland)**



Source: AER, *State of the Energy Market 2022 – Report*, Figure 2.19 (Annexure 12)

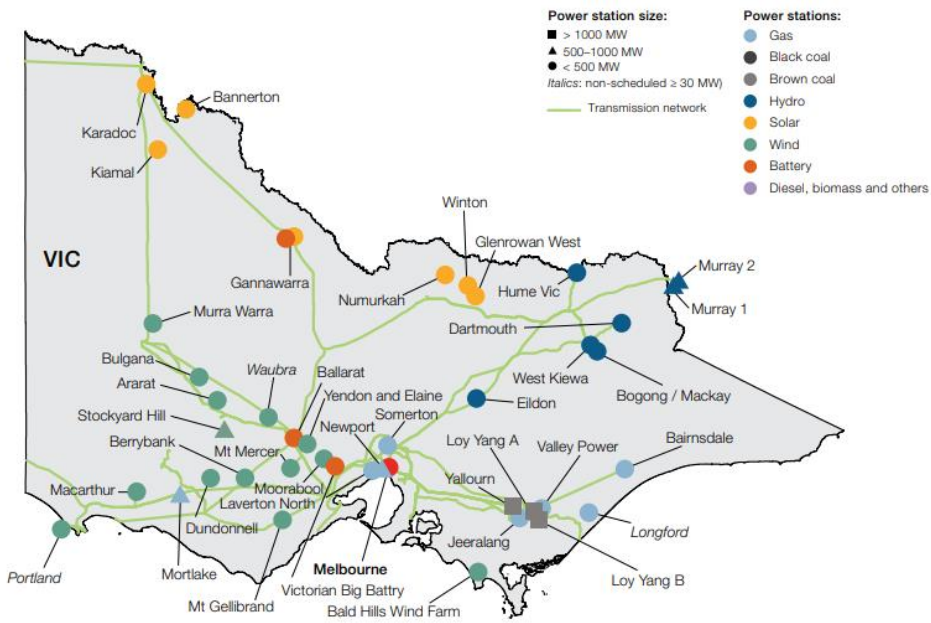
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**Figure 57: Generators in the NEM (New South Wales)**



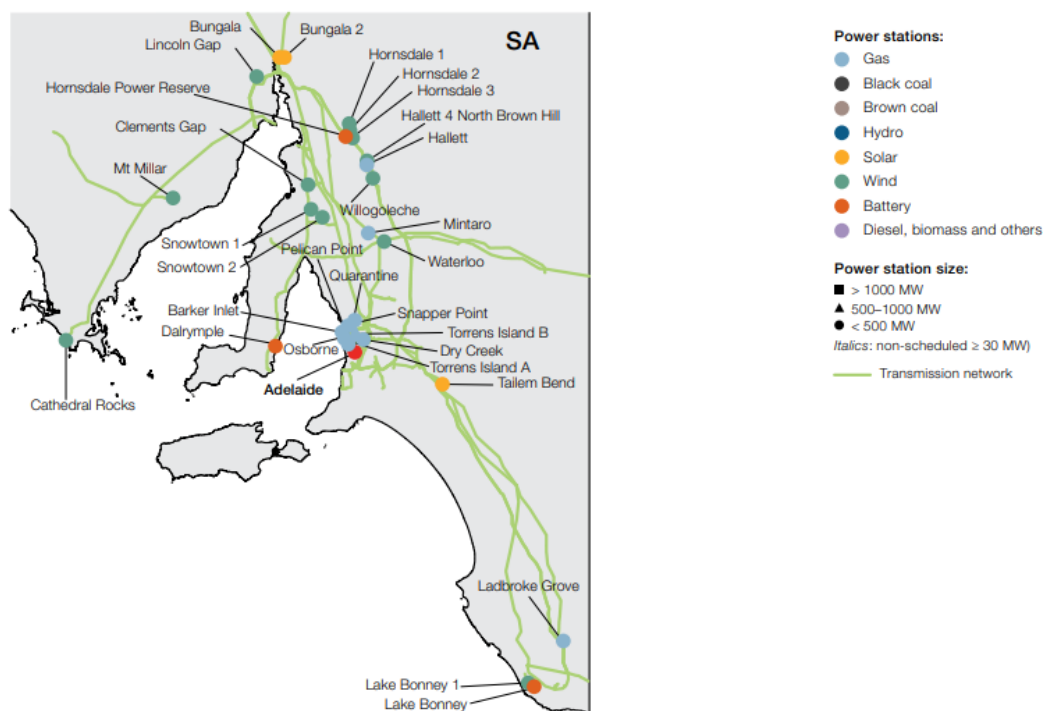
Source: AER, *State of the Energy Market 2022 – Report*, Figure 2.19 (Annexure 12)

**Figure 58: Generators in the NEM (Victoria)**



Source: AER, *State of the Energy Market 2022 – Report*, Figure 2.19 (Annexure 12)

Figure 59: Generators in the NEM (South Australia)



Source: AER, *State of the Energy Market 2022 – Report*, Figure 2.19 (Annexure 12)

- 647 **Regulation of generation in the NEM:** as a competitive sector, generation in the NEM is only lightly regulated, other than the requirement that almost all generators in the NEM must sell their electricity via the mandatory NEM spot market. AEMO is responsible for the settlement of all electricity bought and sold through the NEM's wholesale electricity pool. All electricity in the wholesale electricity market is bought and sold at the spot price (as between the generator, AEMO and the retailer).
- 648 The NEM itself is subject to a number of regulatory constraints, for example the requirement for generators to register with AEMO and submit bids via the AEMO bidding system, a minimum and maximum price (plus the prospect of administered pricing in abnormal situations) and the requirement to provide credit support to AEMO.
- 649 **Transmission and distribution:** Australia's electricity network infrastructure consists of transmission and distribution networks, as well as smaller standalone regional systems. Together, these networks transport electricity from generators to residential and industrial customers.<sup>220</sup>
- 650 Transmission networks provide the link between power generators and customers by transporting high-voltage electricity to major load centres. Electricity is injected from points along the transmission grid into the distribution networks that deliver electricity to residential homes and commercial and industrial premises. When electricity enters a distribution network, it is stepped down to lower voltages for safe delivery to customers.<sup>221</sup>
- 651 Electricity distributors transport and deliver electricity to customers, but they do not sell it. Instead, retailers purchase electricity from the wholesale market and package it with network services to sell to customers.<sup>222</sup>

<sup>220</sup> *State of the Energy Market 2022 – Report*, page 58 (Annexure 12).

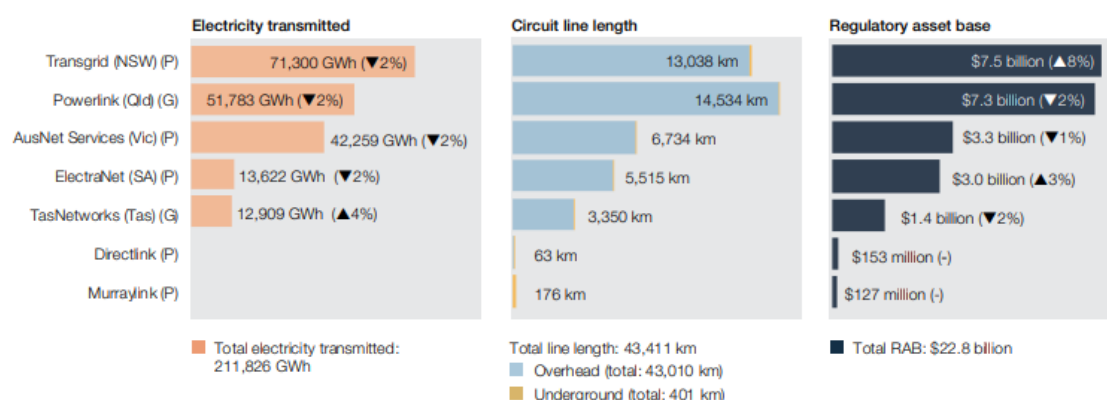
<sup>221</sup> *State of the Energy Market 2022 – Report*, page 58 (Annexure 12).

<sup>222</sup> *State of the Energy Market 2022 – Report*, page 58 (Annexure 12).



- 652 Electricity networks have traditionally provided a one-way delivery service to customers. However, the role of electricity networks is evolving as new technologies change how electricity is generated and used. Many small-scale generators such as rooftop solar systems are now embedded within distribution networks, resulting in two-way electricity flows along the networks. Energy users with rooftop solar systems can now source electricity from the distribution network when they need it and sell the surplus electricity they generate at other times. Electricity generated using rooftop solar systems is also increasingly being stored using battery storage systems. Due to the versatility and falling cost of battery technology, its use is expected to continue to grow over the coming years.<sup>223</sup>
- 653 Alongside the major distribution networks, smaller localised ‘embedded’ networks distribute energy to sites such as apartment blocks, retirement villages, caravan parks and shopping centres. Electricity is delivered from the distribution network to a single connection point at these sites, then sold by the embedded network operator to tenants or residents. The revenues of embedded networks are not regulated.<sup>224</sup>
- 654 There is one core transmission network operating in each of the states comprising the NEM (New South Wales, Queensland, Victoria, South Australia and Tasmania), but increasingly there is contestability in respect of the augmentation of transmission networks including building new transmission lines to connect new renewable generators to the existing transmission network. The state-based core transmission networks are linked by cross-border inter-connectors. Three interconnectors (Queensland–New South Wales, Heywood and Victoria–New South Wales) are owned by State Governments and three interconnectors (Directlink, Murraylink and Basslink) are privately owned.<sup>225</sup> The graph in **Figure 60** below shows the relative size of electricity transmission networks regulated by the AER.

**Figure 60: Electricity networks regulated by the AER transmission**



Source: AER, *State of the Energy Market 2022 – Report*, Figure 3.2 (**Annexure 12**)

- 655 The transmission grid connects with 13 distribution networks.<sup>226</sup> Customers in Queensland, New South Wales and Victoria are serviced by multiple distribution networks, each of which owns and operates its network within a defined geographic region. South Australia, Tasmania and the Australian Capital Territory are serviced by single distribution networks operating within each

<sup>223</sup> *State of the Energy Market 2022 – Report*, page 58 (**Annexure 12**).

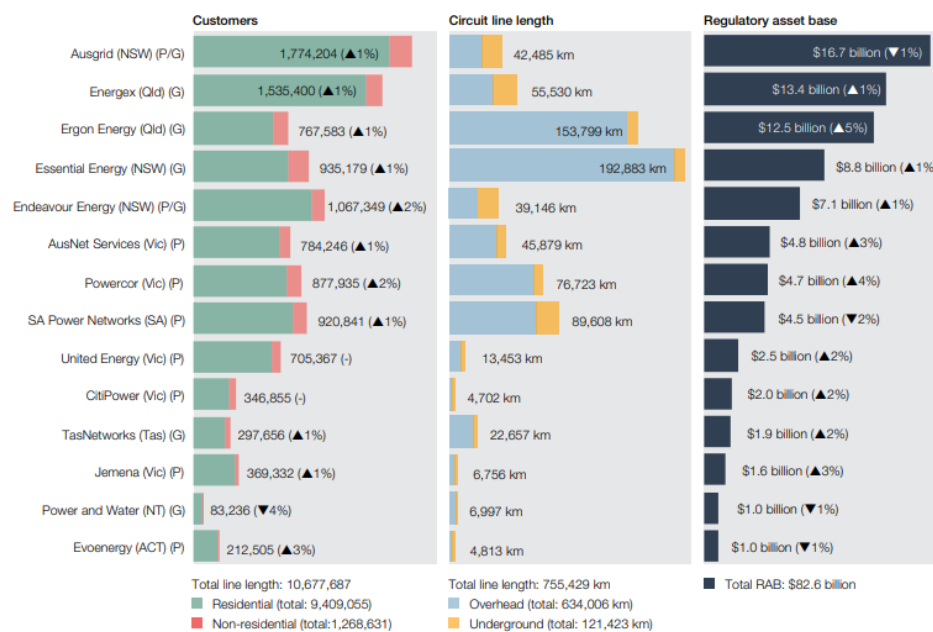
<sup>224</sup> *State of the Energy Market 2022 – Report*, page 58 (**Annexure 12**).

<sup>225</sup> *State of the Energy Market 2022 – Report*, page 59 (**Annexure 12**).

<sup>226</sup> For completeness, the Northern Territory has 3 separate networks – the Darwin–Katherine, Alice Springs and Tennant Creek systems – all owned by Power and Water Corporation. The 3 networks are classified as a single distribution network for regulatory purposes but do not connect to each other or the NEM. The AER regulates all major networks in the NEM, other than the Basslink interconnector linking Victoria and Tasmania. It also regulates the Northern Territory’s distribution network. The AER also does not regulate electricity networks in Western Australia, where the Economic Regulation Authority administers state-based arrangements. Western Power (owned by the Western Australian Government) is the state’s principal network, covering the populated south-west region, including Perth. Another state-owned corporation – Horizon Power – services Western Australia’s regional and remote areas (see *State of the Energy Market 2022 – Report*, page 59 (**Annexure 12**)).

jurisdiction.<sup>227</sup> The graph in **Figure 61** below shows the relative size of electricity distribution networks regulated by the AER.

**Figure 61: Electricity networks regulated by the AER - distribution**



(G): state government owned; (P): privately owned; GWh: gigawatt hours; km: kilometres; % values represent change from previous year.

Note: Regulatory asset base is adjusted to June 2022 dollars based on forecasts of CPI. Line length and asset base are as at 30 June 2021 (31 March 2021 for AusNet Services transmission). Electricity transmitted is for the year to 30 June 2021 (year to 31 March 2021 for AusNet Services). Customer numbers, line length and asset base are as at 30 June 2021 for the distribution networks. For regulatory purposes, Northern Territory transmission assets are treated as part of the distribution system.

Source: *State of the Energy Market 2022 – Report*, Figure 3.3 (Annexure 12)

656 **Regulation of transmission and distribution in the NEM:** The electricity transmission and distribution sectors are treated as a natural monopoly and are highly regulated.

657 Key features include the following:

- (a) The overall planning of the NEM is coordinated by AEMO under its Integrated System Planning function.
- (b) TNSPs and DNSPs are subject to a mandatory third party open access regime, as well as revenue regulation by the AER for most participants. The pricing for most transmission and distribution services is regulated by the AER, which sets a fresh Maximum Allowed Revenue for TNSPs and DNSPs every five years.
- (c) TUOS charges are paid by distributors who receive electricity rather than generators who supply electricity. Distribution use of system (**DUOS**) charges are paid by retailers who use the distribution system to deliver electricity to their retail customers.
- (d) TNSPs and DNSPs are required to provide open access to all generators who meet the regulated technical requirements.
- (e) Generators do not pay TUOS or DUOS charges. They only pay the TNSP or DNSP the incremental costs associated with the generator connecting to the transmission network.
- (f) TNSPs and DNSPs are subject to strict performance requirements and their regulated Maximum Allowed Revenue includes a financial service performance regime (otherwise referred to as STPIS).

<sup>227</sup> *State of the Energy Market 2022 – Report*, page 59 (Annexure 12).

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- (g) Under the NER, all TNSPs and DNSPs are required to comply with ring-fencing guidelines that require the separation of monopoly services (such as those offered by a TNSP or DNSP) and contestable services where a regulated business also offers services into a competitive market. An aim of ring-fencing is to prevent regulated business from using revenue earned from regulated services to cross subsidise contestable services, and discriminating in favour of their related parties to disadvantage competitors operating in the same market.

658 In the transmission sector (where most generators connect), a number of unique legacy transmission regulatory arrangements apply in Victoria (where AusNet operates). Notably the Victorian TNSP functions are split between AusNet and AEMO (which has functions covering topics including planning, major augmentations and connections). Key features in Victoria include:

- (a) AEMO is responsible for most transmission planning, both as the NEM system-wide planner and as the local TNSP planner in Victoria.
- (b) AEMO is also responsible for procuring large augmentation and connection assets. As a result, these assets are 'contestable' in Victoria, providing a competitive market for these TNSP works.
- (c) In Victoria, the TNSP generator connection process is mostly managed by AEMO, with AusNet providing limited input.

659 The table in **Figure 62** demonstrates the TNSP functions conducted by AEMO in Victoria.

**Figure 62: TNSP and AEMO functions**

Function	Standard TNSP		Victorian TNSP	
	TNSP	AEMO	TNSP	AEMO
ISP		✓		✓
System Planner	✓			✓
Transmission Annual Planning Report (TAPR)*	✓			✓ <small>▶ In Victoria, AEMO publishes the VAPR.*</small>
RIT-T	✓			✓
Projected Assessment of System Adequacy (PASA)		✓		✓
Competitive procurement process for augmentations	N/A	▶ TNSP (with confirmation from AEMO) identify the 'preferred option' per the RIT-T process and ISP.		✓
Submission of pricing methodology for AER five-year MAR determination of prescribed transmission services	✓		✓	✓ <small>▶ The pricing methodology for AusNet only addresses pricing matters for which AusNet has responsibility (prescribed entry services and prescribed exit services). AEMO is responsible for the pricing of all other prescribed transmission services.</small>
Management of connection process and applications	✓			✓
Transmission maintenance of existing assets	✓		✓	

Source: *Brookfield*

660 **VicGrid:** VicGrid is a state body established within the Department of Energy, Environment and Climate Action and plays a role in transmission development in Victoria. VicGrid was established in 2021 to coordinate the development of REZs in Victoria.

661 In June 2022, the Victorian Government released a Preliminary Design of the Victorian Transmission Investment Framework Consultation Paper (**VTIF Consultation Paper**),<sup>228</sup> which sets out the proposed framework for how Victoria will plan and develop the REZs in Victoria. The VTIF Consultation Paper notes that VicGrid's role would include identifying the optimal REZ

<sup>228</sup> Department of Environment, Land, Water and Planning, *Victorian Transmission Investment Framework Preliminary Design Consultation Paper* (July 2022) <<https://engage.vic.gov.au/victorian-transmission-investment-framework>> (**VTIF Consultation Paper**)

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pathways, overseeing investment decisions relating to the \$540 million REZ fund and conducting consultation with the community. It was noted in the VTIF Consultation Paper that further consultation will be needed to determine how such new functions undertaken by VicGrid would operate in conjunction with the existing functions currently performed by AEMO.<sup>229</sup> In particular, in flagging the need to consider AEMO's existing functions, the VTIF Consultation Paper notes that it may be appropriate in the future to have a single entity be responsible for all Victorian transmission planning and investment functions to ensure a holistic, end-to-end transmission planning process.<sup>230</sup> Consultation on the paper closed on 15 August 2022. VicGrid is considering stakeholder feedback, which will inform the final decision on the Victorian Transmission Investment Framework.

- 662 VicGrid is also leading the development of a coordinated transmission infrastructure approach for offshore wind.<sup>231</sup> VicGrid will develop transmission infrastructure with common connection points for offshore wind farms to minimise transmission duplication.<sup>232</sup> As part of this role, VicGrid is working closely with AEMO, Victoria's transmission planner. VicGrid expects to announce transmission connection point locations in Gippsland and Portland in late 2023.<sup>233</sup>
- 663 **Retail:** Retail energy markets are the final link in the energy supply chain. Retailers enter into contracts with consumers (such as households and small businesses) to supply energy for an agreed price. The agreed price is used by the retailer to pay for energy it has purchased, as well as the cost of transporting the energy and other system costs.<sup>234</sup>
- 664 Retailers purchase electricity from the NEM. Retailers are exposed to financial risk through spot price volatility in the wholesale electricity market. To manage this risk, most retailers purchase hedging contracts that limit part, or all of the wholesale price they pay. Hedging lets retailers offer stable annual prices to consumers, so that consumers have more predictable energy bills instead of bearing the financial risk of energy prices themselves.<sup>235</sup> This interaction between various levels of the retail energy market supply chain is depicted in **Figure 63**.

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<sup>229</sup> VTIF Consultation Paper, page 63.

<sup>230</sup> VTIF Consultation Paper, page 63.

<sup>231</sup> Victorian State Government, *Offshore Wind Implementation Statement 1* (October 2022), page 6

<[https://www.energy.vic.gov.au/\\_data/assets/pdf\\_file/0030/603399/The-Victorian-Offshore-Wind-Implementation-Statement-1.pdf](https://www.energy.vic.gov.au/_data/assets/pdf_file/0030/603399/The-Victorian-Offshore-Wind-Implementation-Statement-1.pdf)>

<sup>232</sup> Victorian State Government, *Offshore Wind Implementation Statement 1* (October 2022), page 13

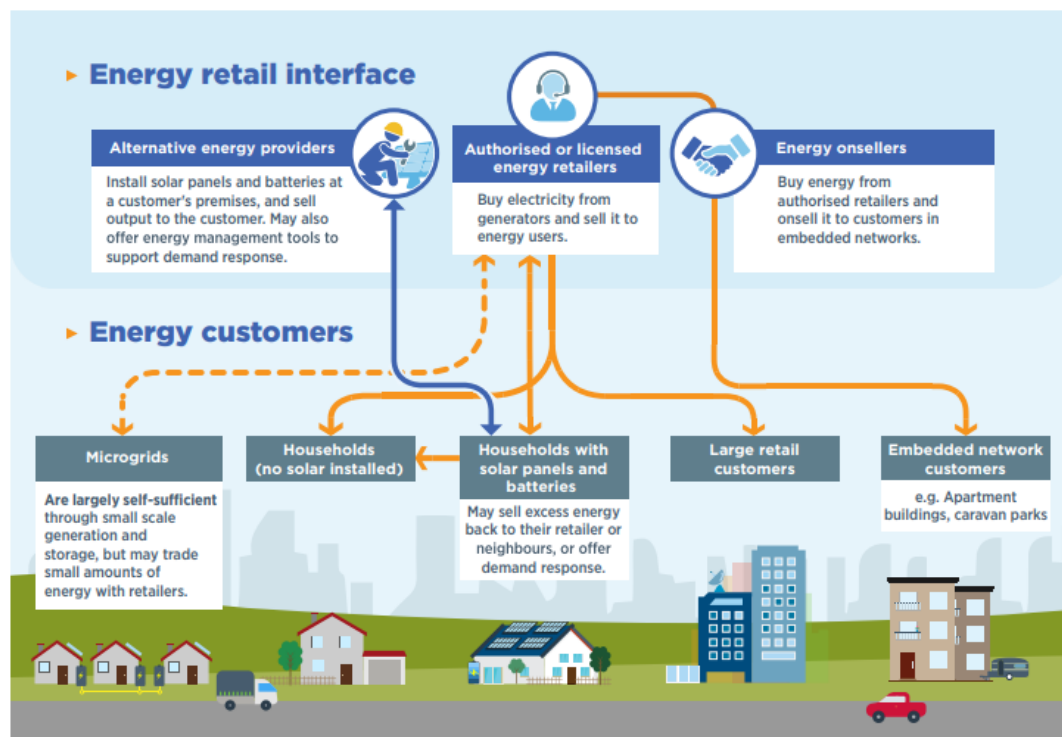
<[https://www.energy.vic.gov.au/\\_data/assets/pdf\\_file/0017/622241/offshore-wind-implementation-statement-2.pdf](https://www.energy.vic.gov.au/_data/assets/pdf_file/0017/622241/offshore-wind-implementation-statement-2.pdf)> (**OSW Implementation Statement 2**)

<sup>233</sup> OSW Implementation Statement 2, page 6.

<sup>234</sup> *State of the Energy Market 2022 – Report*, page 177 (**Annexure 12**).

<sup>235</sup> *State of the Energy Market 2022 – Report*, page 177 (**Annexure 12**).

Figure 63: Retail energy market supply chain



Source: *State of the Energy Market 2022 – Report*, Figure 6.1

665 Retail competition in the electricity sector has been progressively introduced in Australia since the early to mid-2000s. Retail competition across New South Wales, South Australia, South East Queensland, and Victoria has been growing steadily.<sup>236</sup>

666 As illustrated below in **Figure 64** and **Figure 65**, Origin, AGL and EnergyAustralia have a significant share in the residential electricity and gas markets of New South Wales and South Australia and a lesser but still substantial portion of the Queensland and Victorian markets.<sup>237</sup> There has been significant growth in the number of alternative retailers operating across the sector. During the course of 2021, the retail energy market continued to attract new entry. In 2020-21 small energy customers in southern and eastern Australia were served by almost 60 retail brands.<sup>238</sup> Alternative retailers have increased their share of small customers in each year since at least 2016–17. Over that period each of Origin, AGL and EnergyAustralia have lost customers, with Origin the most impacted, falling from 31% in 2016–17 to 27% in March 2022. AGL has seen the smallest decrease, but this was largely driven by the transition of customers following its acquisition of Click Energy (which in 2019-20 served around 150,000 small customers) in October 2020.<sup>239</sup>

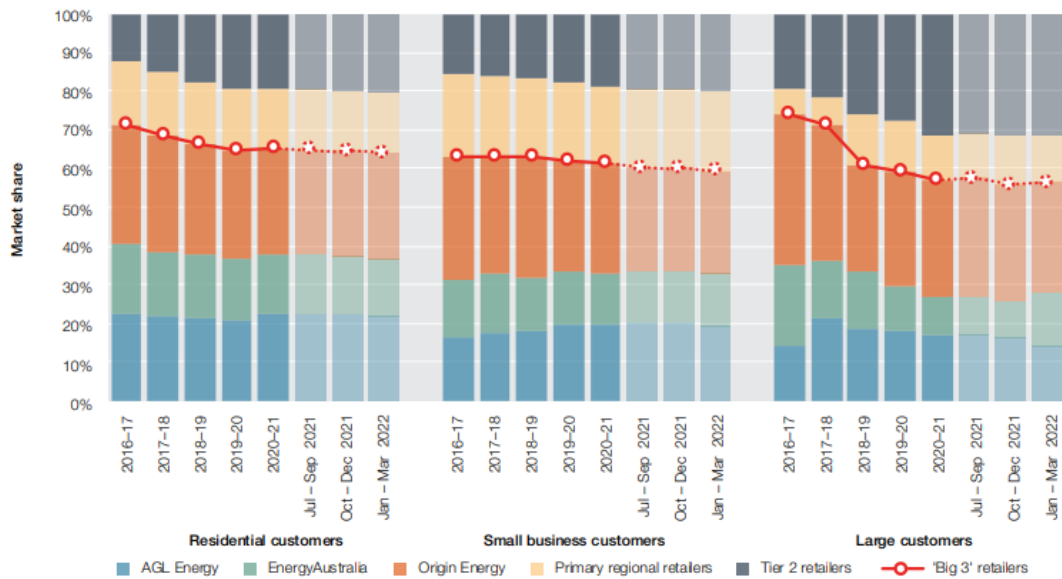
<sup>236</sup> ACCC, *Inquiry into the National Electricity Market – November 2022 Report* (23 November 2022), page 66 <<https://www.accc.gov.au/system/files/Inquiry%20into%20the%20National%20Electricity%20Market%20-%20November%202022%20report.pdf>>

<sup>237</sup> *State of the Energy Market 2022 – Report*, page 201 (**Annexure 12**).

<sup>238</sup> *State of the Energy Market 2022 – Report*, page 201 (**Annexure 12**).

<sup>239</sup> *State of the Energy Market 2022 – Report*, page 202 (**Annexure 12**).

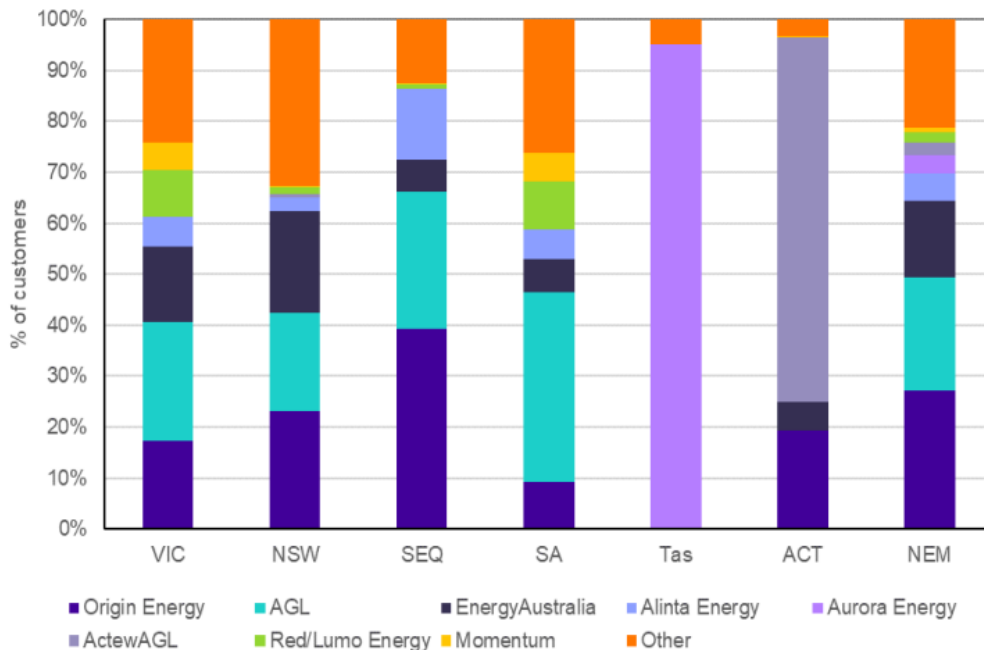
Figure 64: Retail market share in the NEM – electricity



Note: All data at 31 March 2022. Data includes customers in Queensland, NSW, South Australia, Tasmania and the ACT. Some differences may occur between annual and quarterly data to account for retailers revising their data when making their annual submission.

Source: State of the Energy Market 2022 – Report, Figure 6.17

Figure 65: Retail market share by region, 2021-22



Source: AER, Annual Retail Market Report 2021–22, Commonwealth of Australia, 30 November 2022; Essential Services Commission (ESC), Victorian Energy Market Report 2020–21 – Appendix: Retailer performance [data set], ESC website, 30 November 2021, accessed 9 November 2022.

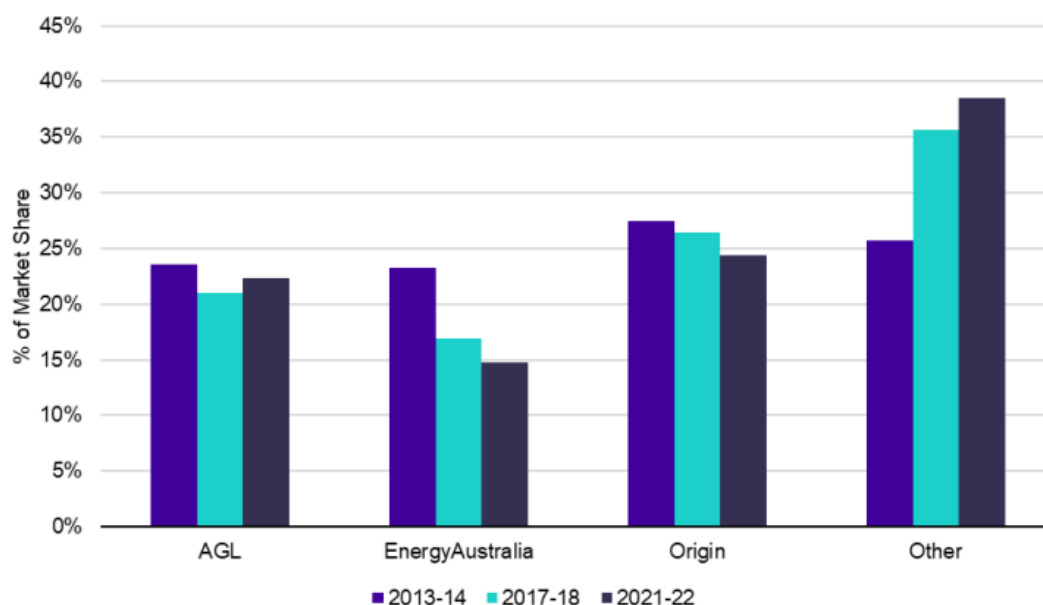
Note: Victorian data is for June 2021, while New South Wales, South East Queensland, Tasmania, Australian Capital Territory, National Electricity Market data is from June 2022. South-east Queensland data has been calculated by subtracting Ergon Energy customers from Queensland market share figures and rebasing percentages. NEM = National Electricity Market.

Source: ACCC Inquiry into the National Electricity Market – November 2022 Report, Figure 4.1

667 There has been a gradual decline in market share in respect of the three largest electricity retailers in respect of small customers, with other retailers gaining market share, illustrated in

**Figure 66.** There have also been changes in ownership of other retailers including Shell's acquisition of Powershop from Meridian Energy.

**Figure 66: NEM electricity small customer market share**



Source: AER, *Annual Retail Market Report 2021–22*, Commonwealth of Australia, 30 November 2022; Essential Services Commission (ESC), *Victorian Energy Market Report 2020–21 – Appendix: Retailer performance* [data set], ESC website, 30 November 2021, accessed 9 November 2022.

Note: Data for Victoria is as of June 2021, while National Electricity Market data is from Q4 2021–22.

Source: ACCC Inquiry into the National Electricity Market – November 2022 Report, Figure 4.2

668 **Regulation of electricity retailing in the NEM:** While electricity retailing is generally competitive, small electricity consumers enjoy a number of protections under the National Energy Customer Framework (*NECF*) and relevant Victorian regulations.

669 Most energy consumers can enter a market contract with their retailer of choice. Market contracts allow retailers to tailor their energy products, offering different tariff structures, discounted prices, carbon offsets, non-price incentives, billing options, fixed or variable terms and other features. Contracts may be subject to fees and charges, such as establishment or exit fees. Retailers must obtain a customer's explicit informed consent before entering them into a market contract. Most consumers are currently on a market contract (except small consumers in regional Queensland).<sup>240</sup>

670 Customers without a market contract are placed on a standing offer with the retailer that most recently supplied energy at their premises (or, for new connections, with the retailer designated for that area). Standing offers provide a safety net for customers unable or unwilling to engage in the market, with prescribed terms and conditions and a suite of consumer protections that the retailer cannot change. Standing offer contracts are generally more expensive than market retail contracts and prices are either set annually under regulation or can be changed no more than once every six months. Since 1 July 2019 standing offer electricity prices have been set or capped by regulators in all jurisdictions.<sup>241</sup>

671 Standing offer prices for gas contracts are not regulated and the prices are set by retailers.

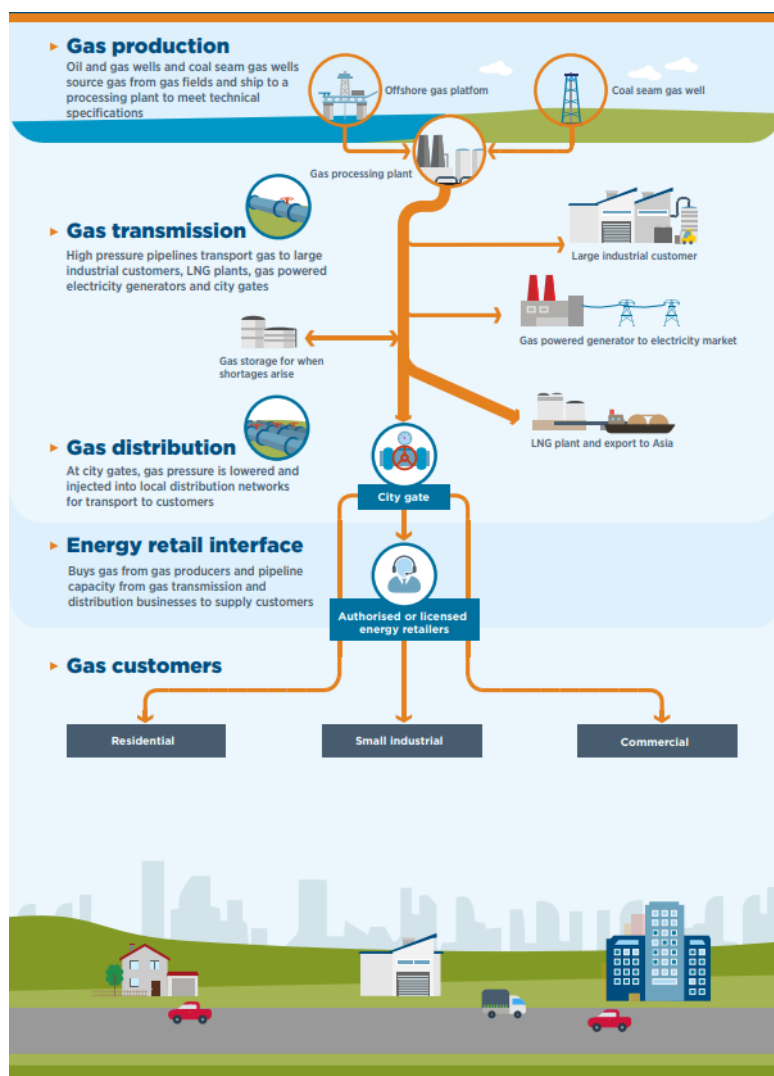
<sup>240</sup> *State of the Energy Market 2022 – Report*, page 205 (**Annexure 12**).

<sup>241</sup> *State of the Energy Market 2022 – Report*, page 205 (**Annexure 12**).

## 5.2 Industry overview: gas

672 **Figure 67** below explains how the vertically-integrated gas supply chain in Australia operates:

**Figure 67: Gas supply chain**



Source: *State of the Energy Market 2022 – Report*, page 14

673 **Gas reserves and production:** Australia’s gas reserves are primarily located in three distinct regions across Australia:

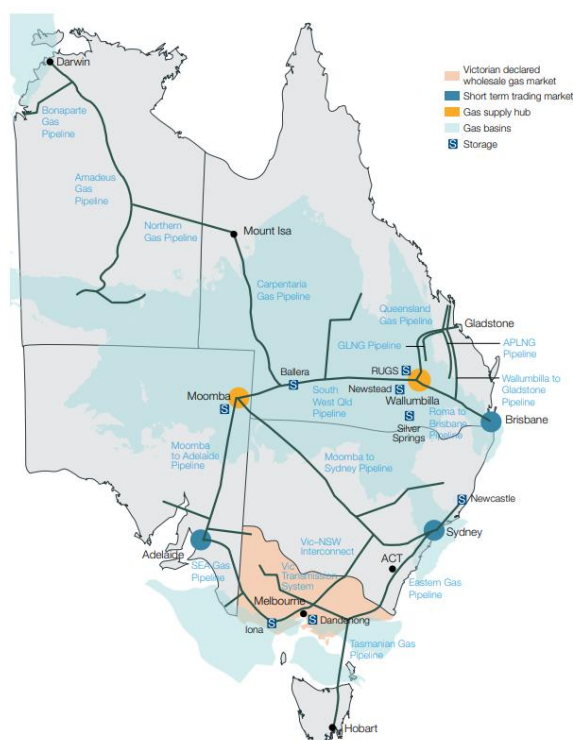
- (a) Eastern Australia: The largest production basin in eastern Australia is the Surat–Bowen Basin in Queensland. There are smaller basins in South Australia, New South Wales, off coastal Victoria and in the Northern Territory. Combined, these basins account for around 37% of Australia’s total gas production.<sup>242</sup> The eastern gas market is interconnected by transmission pipelines, which source gas from these basins and deliver it to liquefied natural gas (**LNG**) facilities for export and to large industrial customers and major population centres for domestic use.<sup>243</sup> A map of the Eastern Australia gas basins, markets, major pipelines and storage is provided at **Figure 68** below.

<sup>242</sup> *State of the Energy Market 2022 – Report*, page 118 (**Annexure 12**).

<sup>243</sup> *State of the Energy Market 2022 – Report*, page 118 (**Annexure 12**).



Figure 68: Eastern gas basins, markets, major pipelines and storage



Source: *State of the Energy Market 2022 – Report*, Figure 4.1

- (b) Western Australia: more than 60% of Australia’s recoverable and conventional gas reserves are in WA, located in the Carnarvon and Perth basins.<sup>244</sup> This market is heavily focussed on exports but also supplies domestic consumption in Western Australia. Western Australia has five LNG projects with a combined capacity of around 50 mtpa – including the North West Shelf, which is Australia’s largest LNG project by capacity (16.3 mtpa). The other projects are Gorgon (15.6 mtpa), Wheatstone (8.9 mtpa), Pluto (4.9 mtpa) and Prelude (3.6 mtpa).<sup>245</sup>
- (c) Northern Australia: The Northern Territory’s LNG projects are Darwin LNG (3.7 mtpa capacity) and Ichthys LNG (8.9 mtpa capacity). Both projects connect to the Territory’s domestic gas market as emergency supply sources but otherwise produce gas for export.<sup>246</sup>

674 Around 70% of domestic gas production in eastern gas markets (excluding the Northern Territory) is exported and the balance is sold into the domestic market.<sup>247</sup> In eastern Australia, export gas is liquefied in processing facilities in Queensland to make it economic to store and ship in large quantities.<sup>248</sup> Australia’s LNG export projects are set out in the map at **Figure 69** below.

<sup>244</sup> DomGas Alliance, *Welcome to DomGas Alliance* <<https://www.domgas.com.au/>>.

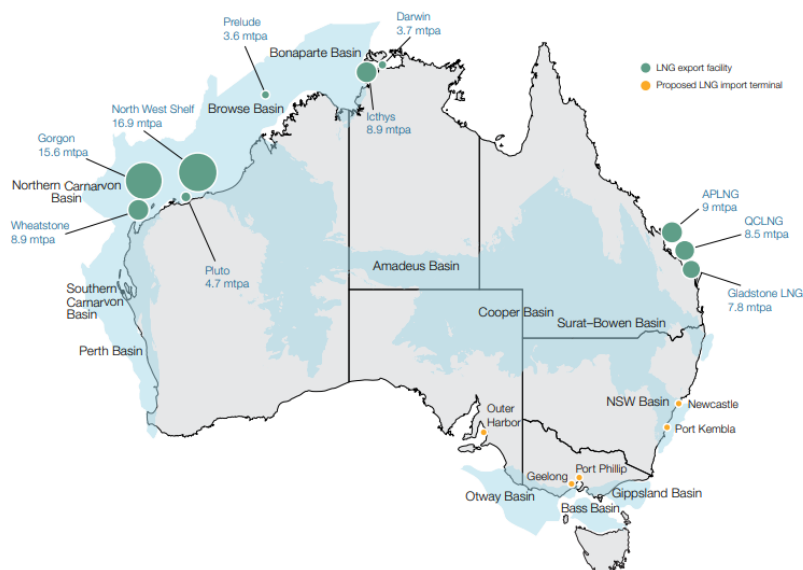
<sup>245</sup> *State of the Energy Market 2022 – Report*, page 132 (**Annexure 12**).

<sup>246</sup> *State of the Energy Market 2022 – Report*, page 132 (**Annexure 12**).

<sup>247</sup> *State of the Energy Market 2022 – Report*, page 126 (**Annexure 12**).

<sup>248</sup> *State of the Energy Market 2022 – Report*, page 130 (**Annexure 12**).

Figure 69: Australia's LNG export projects



Note: Capacity in million tonnes per annum (mtpa).

Source: *State of the Energy Market 2022 – Report*, Figure 4.9

675 Queensland's LNG industry comprises three major projects, which source gas mainly from the Surat–Bowen Basin:<sup>249</sup>

- (a) QCLNG project has capacity to produce 8.5 million tonnes of LNG per annum (mtpa). Shell (73.75%), CNOOC (50% equity in Train 1) and Tokyo Gas (2.5% equity in Train 2) own the project.
- (b) GLNG has capacity to produce 7.8 mtpa. Santos (30%), Petronas and Total (27.5% each) and Kogas (15%) own the project.
- (c) APLNG has capacity to produce 9 mtpa. Origin (27.5%), ConocoPhillips (47.5%) and Sinopec (25%) own the project.

676 Eastern Australia had 37,639 PJ of 'proven and probable' (2P) gas reserves in February 2022, having produced more than 2,000 PJ of gas in 2021.<sup>250</sup> The graph in **Figure 70** below sets out holdings of 2C resources, PC reserves and production.

<sup>249</sup> *State of the Energy Market 2022 – Report*, page 131 (**Annexure 12**).

<sup>250</sup> *State of the Energy Market 2022 – Report*, page 134 (**Annexure 12**).

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**Figure 70: Holdings of 2C resources, 2P reserves, and production in 2020 / 21**



Source: ACCC Gas Inquiry 2017-2025, Table 5.2. This table predates Origin’s sale of its Beetaloo interest and accordingly, it does not now hold any 2C reserves.

677 **Regulation of gas wholesale markets:** For the most part, the gas wholesale market is an unregulated commercial market. However, there are two important regulatory overlays.

678 **First,** there are four mandatory wholesale spot markets administered by AEMO in accordance with the NGL and NGR. Participants wishing to buy and sell gas in these locations must participate in these markets:

- (a) the Declared Wholesale Gas Market operates in Victoria; and

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- (b) the Short Term Trading Market (**STTM**), which applies to hubs in Sydney, Brisbane and Adelaide.

679 **Second**, the broader wholesale market is subject to a range of government interventions aimed primarily at ensuring the adequacy and security of gas supply to the domestic market. These comprise:

- (a) **the Australian Domestic Gas Security Mechanism**

- (i) The Australian Domestic Gas Security Mechanism (**ADGSM**) has been in effect since 1 July 2017 and is contained in Division 6 of Part 3 of the *Customs (Prohibited Exports) Regulations 1958* (Cth). The objective of the ADGSM is to ensure that there is a sufficient supply of natural gas to meet the forecast needs of Australian gas consumers by controlling, if necessary, LNG exports. Under the ADGSM, the Minister for Resources has the power to require LNG projects to limit exports, or find offsetting sources of new gas, if a supply shortfall is considered to be likely.
- (ii) The government has recently implemented reforms to the ADGSM designed to make the mechanism more responsive and secure, to ensure that enough gas is supplied to meet domestic demand. These reforms are reflected in the *Customs (Prohibited Exports) (Operation of the Australian Domestic Gas Security Mechanism) Guidelines 2023* (Cth), made under regulation 13GF of the *Customs (Prohibited Exports) Regulations 1958* (Cth). The reforms commenced on 1 April 2023.
- (iii) The following are key changes to the AGSM:
  - (A) the decision to activate ADGSM can be made quarterly;
  - (B) new protections have been put in place for long-term gas contracts; and
  - (C) LNG exporters will share equal responsibility for preventing shortfalls.
- (iv) The ADGSM has a differential impact on the Proposed Acquisition. As a regulation imposed on LNG exporters, the ADGSM:
  - (A) will directly impact APLNG; and
  - (B) will have no direct impact on Origin (excluding APLNG), other than potentially ensuring additional wholesale gas is available to retailers such as Origin.

These impacts are not materially altered by the Proposed Acquisition.

- (b) **the Gas Price Cap and Mandatory Code of Conduct**

- (i) On 22 December 2022, the Australian Government introduced a \$12/GJ cap on wholesale gas prices. The cap took effect on 23 December 2022 and will remain in effect for a period of 12 months. The cap is given effect through the *Competition and Consumer (Gas Market Emergency Price) Order 2022* (Cth) (**Price Cap Order**), made pursuant to section 53M of the CCA. The Price Cap Order prohibits producers of natural gas and their affiliates from entering into agreements to supply gas, supplying gas under such agreements, or making offers on a gas trading exchange at a price above \$12/GJ. The price cap applies in all jurisdictions except for Western Australia, and to all agreements made, or varied, after 23 December 2022.
- (ii) In addition to the Price Cap, the government has stated its intention to introduce a mandatory Code of Conduct via regulations made under Part IVBB of the CCA. In

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May 2023, the Commonwealth government released a consultation draft of the Code of Conduct, which included the following proposed features.

- (A) The gas price cap will be continued beyond the initial 12 month period, and will apply until at least 1 July 2025.
  - (B) The price cap is initially set at \$12/GJ and will be reviewed by 1 July 2025. The ACCC will be responsible for setting future prices.
  - (C) An automatic exemption applies to small producers (ie those who produce less than 100PJ of gas in the previous financial year) who exclusively supply the domestic market.
  - (D) Some conditional exemptions to the price cap are available at the discretion of the Minister for Climate Change and Energy and the Minister for Resources (acting jointly), to other producers who have given satisfactory voluntary enforceable domestic supply commitments.
  - (E) Mandatory 'conduct requirements' have been introduced, which establish minimum conduct and process standards for commercial negotiations. These standards apply for sales involving a tender process with buyers being invited to make expressions of interest to purchase gas and general bilateral negotiations.
  - (F) The consultation draft of the Code of Conduct proposes to introduce a requirement for gas producers to publish details about available uncontracted gas, including information relating to when this gas will be brought to the domestic market.
- (iii) As with the ADGSM, the cap on wholesale gas prices and mandatory Code of Conduct have a differential impact on the Proposed Acquisition. As a regulation imposed on LNG exporters, the price cap:
- (A) will directly impact APLNG and the price at which it sells natural gas in the domestic market; and
  - (B) will have no direct impact on Origin (excluding APLNG), other than potentially ensuring a portion of wholesale gas is available at less than \$12 per GJ to retailers such as Origin.

These impacts are not materially altered by the Proposed Acquisition.

### (c) **the Gas Supply Guarantee**

- (i) The Gas Supply Guarantee is a mechanism developed by the gas industry to facilitate the production facility operators and pipeline operators' commitments to make gas available to meet peak demand periods in the NEM. The mechanism was formalised through the Gas Supply Guarantee Guidelines. The Guidelines set out a process for AEMO to initiate the Guarantee to facilitate an industry response to anticipated gas supply shortfall events. However, the Guideline does not have legislative or regulatory force. The mechanism was effective from 1 December 2017 to 31 March 2023.
- (ii) In August 2022, the Energy Minister announced that new functions would be conferred on AEMO. Under these new functions, AEMO will be given broad powers to monitor and manage system reliability and supply adequacy in the east coast gas market, including the power to give binding directions to gas market participants when necessary to address a threat to the reliability or adequacy of

gas supply. These reforms are contained in the *National Gas (South Australia) (East Coast Gas System) Amendment Act 2023*, which commenced on 27 April 2023. The corresponding rule amendments came into effect on 4 May 2023. AEMO is in the process of consulting with relevant market participants on the draft Procedures and Guidelines which underpin the East Coast Gas System Framework.

- (iii) Depending on the form of the final Procedures and Guidelines, these may directly impact the gas operations of APLNG and Origin.

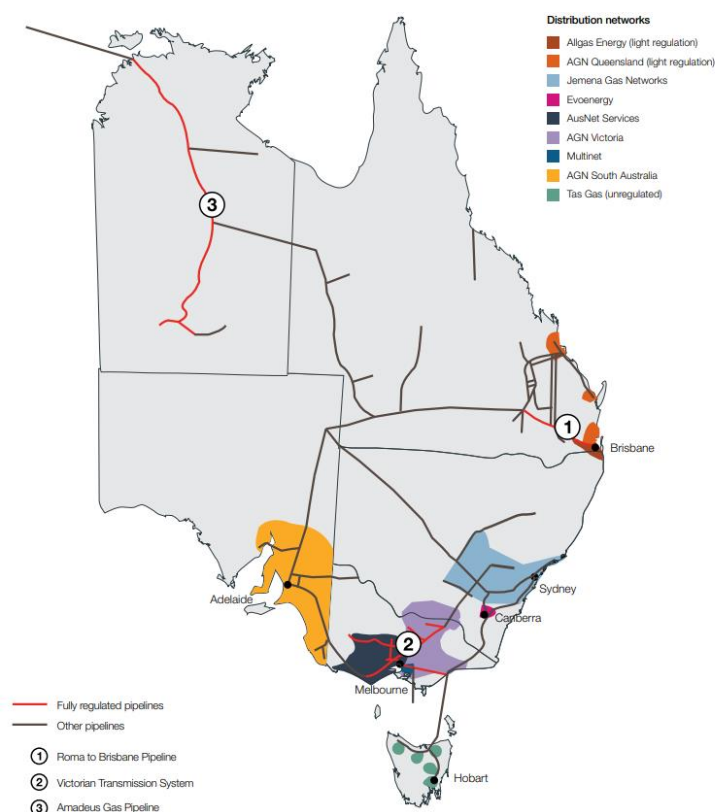
These impacts are not materially altered by the Proposed Acquisition.

680 **Transmission and distribution:** Gas pipeline networks transport gas from upstream producers to residential, commercial and industrial customers. Australia's gas pipeline networks consist of:

- (a) long haul transmission pipelines, which carry gas from producing basins to major population centres, power stations and large industrial and commercial plants; and
- (b) smaller urban and regional distribution networks, which transport gas to customers in local communities.<sup>251</sup>

681 **Figure 71** shows the major gas transmission pipelines and distribution networks in the NEM.

**Figure 71: Major gas transmission pipelines and distribution networks**



Source: *State of the Energy Market 2022 – Report*, Figure 5.1

682 Given the Proposed Acquisition the discussion below focuses on gas pipelines in Eastern Australia.

683 The total length of gas distribution networks in eastern Australia is around 77,000 kilometres. Gas is distributed to most Australian capital cities, major regional areas and towns. Queensland and

<sup>251</sup> *State of the Energy Market 2022 – Report*, page 157 (Annexure 12).

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Victoria each have multiple distribution networks, while New South Wales, South Australia, Tasmania and the Australian Capital Territory are each served by a single regulated network.<sup>252</sup>

684 Gas distributors transport gas to energy customers, but they do not sell gas. Energy retailers purchase gas from producers, and pipeline services from pipeline businesses, and sell them as a packaged retail product to their customers. Many retailers offer both gas and electricity products.<sup>253</sup>

685 Australia's gas pipelines are privately owned. **Figure 72** and **Figure 73** below set out the ownership of gas distribution networks and key gas transmission pipelines.

**Figure 72: Ownership of gas distribution networks**

PIPELINE	LOCATION	LENGTH (KM)	REGULATORY STATUS <sup>1</sup>	OWNER
Jemena Gas Networks	NSW	25,481	Full regulation	Jemena (State Grid Corporation of China 60%, Singapore Power 40%)
AusNet Services	Vic	12,337	Full regulation	Australian Energy Holdings No 4 Pty Limited
Multinet Gas Network	Vic	10,143	Full regulation	CK Infrastructure Holdings
Australian Gas Networks	Vic	11,984	Full regulation	CK Infrastructure Holdings
Australian Gas Networks	SA	8,420	Full regulation	CK Infrastructure Holdings
Evoenergy	ACT	4,614	Full regulation	ICONWater (ACT Government), 50%; Jemena, 50%
Allgas Energy	Qld	3,218	Light regulation	Marubeni, 40%, SAS Trustee Corp, 40%; APA Group, 20%
Australian Gas Networks	Qld	3,463	Light regulation	CK Infrastructure Holdings

Source: *State of the Energy Market 2022 – Report*, Table 5.1

<sup>252</sup> *State of the Energy Market 2022 – Report*, page 159 (Annexure 12).

<sup>253</sup> *State of the Energy Market 2022 – Report*, page 159 (Annexure 12).

Figure 73: Ownership of key gas transmission pipelines

PIPELINE	LOCATION	LENGTH (KM)	CAPACITY (TJ/DAY)	REGULATORY STATUS <sup>1</sup>	OWNER
Roma (Wallumbilla) to Brisbane	Qld	438	211 (125)	Full regulation	APA Group
Victorian Transmission System (GasNet)	Vic	2,035	1,030	Full regulation	APA Group
Amadeus Gas Pipeline	NT	1,658	120	Full regulation	APA Group
South West Queensland Pipeline (Wallumbilla to Moomba)	Qld-SA	937	404 (340)	Part 23 regulation	APA Group
Queensland Gas Pipeline (Wallumbilla to Gladstone)	Qld	627	140 (40)	Part 23 regulation	Jemena (State Grid Corporation of China 60%, Singapore Power 40%)
Carpentaria Pipeline (South West Qld to Mount Isa)	Qld	840	119	Light regulation	APA Group
GLNG Pipeline (Surat-Bowen Basin to Gladstone)	Qld	435	1,430	15 year no coverage	Santos 30%, PETRONAS 27.5%, Total 27.5%, KOGAS 15%
Wallumbilla Gladstone Pipeline	Qld	334	1,588	Part 23 and 15 year no coverage	APA Group
APLNG Pipeline (Surat-Bowen Basin to Gladstone)	Qld	530	1,560	15 year no coverage	Origin Energy 37.5%, ConocoPhillips 37.5%, Sinopec 25%
Moomba to Sydney Pipeline	SA-NSW	2,029	489 (120)	Partial light regulation/ partial Part 23 Regulation <sup>2</sup>	APA Group
Moomba to Adelaide Pipeline	SA	1,184	241 (85)	Part 23 regulation	QIC Global Infrastructure
Eastern Gas Pipeline (Longford to Sydney)	Vic-NSW	797	358	Part 23 regulation	Jemena (State Grid Corporation of China 60%, Singapore Power 40%)
Vic-NSW Interconnect	Vic-NSW		223 (150)	Part 23 regulation	Jemena (State Grid Corporation of China 60%, Singapore Power 40%)
SEA Gas Pipeline (Port Campbell to Adelaide)	Vic-SA	680	314	Part 23 regulation	APA Group 50%, Retail Employees Superannuation Trust 50%
Tasmanian Gas Pipeline (Longford to Hobart)	Vic-Tas	734	129 (120)	Part 23 regulation	Palisade Investment Partners
Northern Gas Pipeline (Tennant Creek to Mount Isa)	NT-Qld	622	90	Part 23 regulation	Jemena (State Grid Corporation of China 60%, Singapore Power 40%)
Bonaparte Pipeline	NT	287	80	Part 23 exemption	Energy Infrastructure Investments (APA Group 19.9%, Marubeni 49.9%, Osaka Gas 30.2%)

TJ/day: terajoules per day.

Note: For bi-directional pipelines, reverse capacity is shown in brackets.

1 Full regulation pipelines have their prices assessed by the AER. Light regulation pipelines do not have their prices assessed by the AER, but parties can seek arbitration to address a dispute. Part 23 pipelines are subject to information disclosure and arbitration provisions. Exempt pipelines are subject to no economic regulation. Chapter 5 outlines the various tiers of regulation.

2 The Moomba to Sydney Pipeline is subject to Part 23 regulation only from Moomba to Marsden. Light regulation applies to the remainder of the pipeline.

Source: *State of the Energy Market 2022 – Report*, Table 5.2

686 **Regulation of gas transmission and distribution:** Most gas distribution systems (including the AusNet gas distribution system) are treated as a natural monopoly and are highly regulated under the NGR. Key features include the following

- (a) Gas distributors are subject to a mandatory third party open access regime, as well as revenue regulation by the AER for most participants. The pricing for most distribution services is regulated by the AER, which sets a fresh Maximum Allowed Revenue for gas distributors every five years.
- (b) Gas distributors are required to provide open access to all shippers and customers who meet the regulated technical requirements.
- (c) Under the NGR, gas distributors are required to comply with ring-fencing rules that require the separation of monopoly services (such as those offered by a gas distributors) and contestable services.

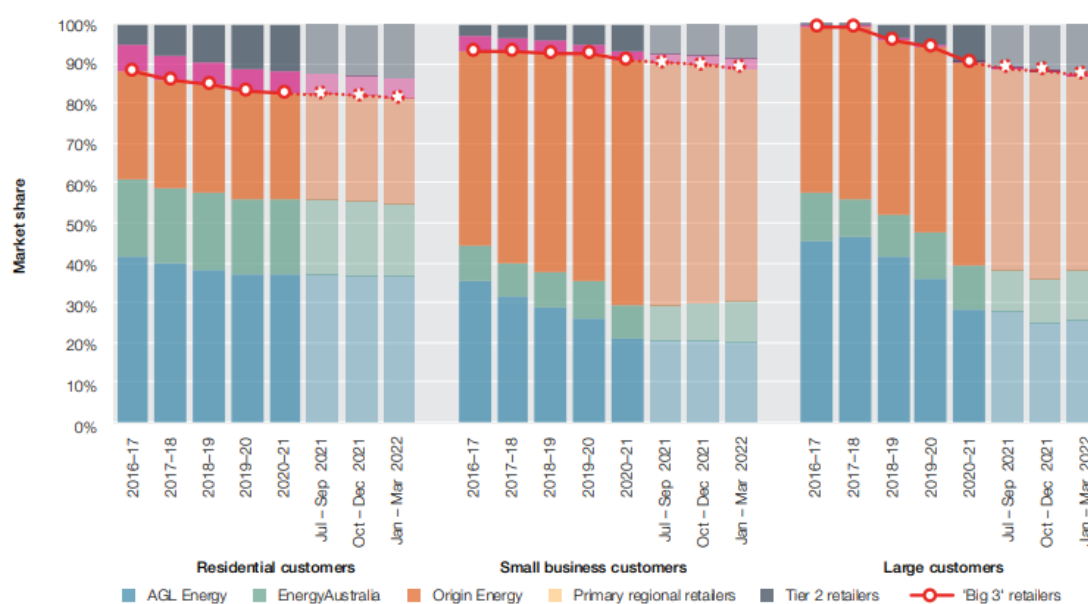


687 **Retail:** As with electricity, the retail gas market is the final link in the gas supply chain. Retailers enter into contracts with consumers (such as households and small businesses) to supply gas for an agreed price. The agreed price is used by the retailer to pay for gas it has purchased, as well as the cost of transporting the gas and other system costs.<sup>254</sup>

688 Gas markets are generally more concentrated than electricity markets, given their smaller scale and issues in sourcing gas and pipeline services in some jurisdictions.<sup>255</sup> AGL, Origin and EnergyAustralia are the largest retailers in the gas market, serving more than 1.9 million (82% of a total 2.4 million) small customers.<sup>256</sup>

689 There has, however, been a steady growth in the shares of other gas retailers. AGL, Origin and EnergyAustralia have lost 6.8 percentage points of their small customer share to other retailers since 2016–17, as illustrated in the graph contained in **Figure 74** below.<sup>257</sup>

**Figure 74: Energy retail market share – gas**



Note: All data at 31 March 2022. Data includes customers in Queensland, NSW, South Australia and the ACT.

Source: *State of the Energy Market 2022 – Report*, Figure 6.18

690 **Regulation of gas retail market:** The gas retail market is regulated in a substantially similar way to the electricity retail market. In Victoria (where the AusNet gas distribution network is located), the NECF does not apply. Instead a set of broadly similar retail customer protections apply, administered mainly by the ESC and AEMO.

691 In Victoria, the Energy Retail Code provides that a gas retailer must offer a 'standard retail contract' on model terms and conditions that is subject to certain minimum requirements. Gas retail market offers or tariffs are not capped, which means that gas retailers set their own prices, although the Energy Retail Code provides additional customer protections such as limiting price increases to one per annum.

692 **Recent changes to the regulation of gas pipelines were made to the NGL and NGR:** Recent changes to the regulation of gas pipelines were made to the NGL and NGR in March 2023. The instruments giving effect to these reforms are the *Statutes Amendment (National Energy Laws) (Gas Pipelines) Act 2022* (SA) and the *National Gas Rules (Gas Pipelines) Amendment Rules*

<sup>254</sup> *State of the Energy Market 2022 – Report*, page 177 (Annexure 12).

<sup>255</sup> *State of the Energy Market 2022 – Report*, page 201 (Annexure 12).

<sup>256</sup> *State of the Energy Market 2022 – Report*, page 203 (Annexure 12).

<sup>257</sup> *State of the Energy Market 2022 – Report*, page 203 (Annexure 12).

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2023. These reforms simplify the gas regulatory framework while continuing to facilitate the safe, reliable and efficient use of and investment in gas pipelines. Under the reforms, all pipelines must provide third party access to pipeline services and are subject to a range of uniform access, transparency and ring-fencing requirements. Further, scheme pipelines must submit an access arrangement to the AER for approval and are subject to a regulatory-oriented access dispute resolution process. Whereas non-scheme pipelines are not required to submit an access arrangement to the regulator for approval, and are subject to a commercially-oriented access dispute resolution process.

693 Other key features of the gas pipeline reforms include the following:

- (a) the AER will apply a regulation test to determine which form of regulation should apply;
- (b) a pipeline will be classified as a scheme pipeline if a scheme pipeline determination or election applies to it, or if it is a designated pipeline. All other pipelines are classified as non-scheme pipelines;
- (c) if a pipeline is not classified as a distribution or transmission pipeline under a licence or authorisation, the service provider must apply to the AER for a classification decision;
- (d) the AER will monitor the behaviour of pipeline service providers;
- (e) greenfields pipeline projects are eligible to apply to the AER for a greenfields incentive determination or greenfields price protection determination;
- (f) small shippers have greater protections under access disputes; and
- (g) expansions of the capacity of scheme pipelines are automatically treated as part of the scheme pipeline and will be regulated as such.

694 These reforms are unlikely to have a material impact on the competition assessment of the Transaction.

- (a) The reforms may provide each of Origin and APLNG with additional rights to access third party pipelines and, conversely, additional risks that their own pipelines may be subject to additional third party access.
- (b) The AusNet gas distribution system remains in the most highly regulated category of gas pipeline; it is currently a covered pipeline and will become a scheme pipeline. Its access arrangement obligations will continue largely unaffected.

### 5.3 Industry overview: smart meters

695 Smart meters are two way communication devices that digitally measure when and how much electricity, gas or water is used.<sup>258</sup> An Intellihub smart meter is depicted in **Figure 75** below. Smart meters record usage in five minute intervals and transmit this information back to retailers, enabling remote reading and servicing. This is in contrast to legacy accumulation meters, which provide basic usage data and require manual readings.

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<sup>258</sup> AER, *Smart meters* <<https://www.aer.gov.au/consumers/my-energy-service/smart-meters>>.

Figure 75: Intellihub smart meter



Source: Intellihub

696 Smart meters also play a role in facilitating the uptake of renewable and distributed energy by enabling higher penetration of intermittent generation and distributed energy resources. Greater renewable energy penetration and demand management for electricity, gas and water is enabled through applications including dynamic load control,<sup>259</sup> energy / water theft and leak detection.<sup>260</sup>

697 Smart meters are primarily used in Australia in the electricity sector, and currently only to a very limited extent by water and gas retail customers. The supply of smart metering services in the water and gas sectors is not contestable (ie, these sectors remain similar to the legacy arrangements in the electricity sector prior to the Power of Choice reforms discussed below). For this reason, the focus in this Application is on the use of smart meters in the electricity sector.

#### Rollout of electricity smart meters in Australia

698 Historically, the responsibility for installing and maintaining smart meters sat with Distribution Network Service Providers (*DNSPs*). However, in 2012, the AEMC announced<sup>261</sup> the Power of Choice reforms which were intended to enhance competition in this space and help mass market consumers (ie, residential customers and small-medium enterprises) better manage their electricity usage.

699 It is now the responsibility of mass market electricity retailers in the NEM (excluding Victoria) to appoint a metering coordinator to maintain and install meters.<sup>262</sup> The Power of Choice review recommended a number of reforms, including making it mandatory for a smart meter to be installed when a new or replacement meter is needed across the NEM mass market (excluding Victoria).<sup>263</sup> This recommendation was finalised and brought into force in 2017.<sup>264</sup> This has meant that contestability and competition for metering services has been established in the NEM (excluding Victoria) since 2017.

<sup>259</sup> 'Dynamic load control' refers to the functionality of a smart meter which allows retailers to remotely and dynamically manage load-controlled systems (eg, hot water, pool pumps).

<sup>260</sup> 'Leak detection' refers to the functionality of a smart meter which allows users to detect water leakage (eg, through flow monitoring and identification of abnormal water use).

<sup>261</sup> AEMC, *Directions Paper – Power of choice – giving consumers options in the way they use electricity*, 23 March 2012 <<https://www.aemc.gov.au/sites/default/files/content/e78d940f-7257-4e5b-8a0d-b7f968d1f988/Directions-Paper.PDF>>

<sup>262</sup> AEMC, *Rule Determination – National Electricity Amendment (Expanding competition in metering and related services) Rule 105* (26 November 2015), pages v-vi <<https://www.aemc.gov.au/sites/default/files/content/ed88c96e-da1f-42c7-9f2a-51a411e83574/Final-rule-determination-for-publication.pdf>>

<sup>263</sup> For completeness, smart meters are being rolled out in WA and NT through a network-led, regulated mode not connected to the NEM. This is similar to the approach that was previously adopted in Victoria (and which led to Victoria having existing high levels of smart meter penetration at the time of the reforms) and reflects the ongoing description of the electricity smart metering services market as “NEM (excluding Victoria)”.

<sup>264</sup> AEMC, *Expanding competition in metering and related services*, Final determination – see <<https://www.aemc.gov.au/rule-changes/expanding-competition-in-metering-and-related-serv>>, page 17 <<https://www.aemc.gov.au/sites/default/files/2018-12/Final%20Determination.pdf>>

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- 700 The mass market NEM (excluding Victoria) had a ~30% smart meter penetration rate in 2022,<sup>265</sup> with the Australian Energy Market Commission (**AEMC**) expecting full deployment of smart meters by 2040 if the current rate of installation continued at the same pace.<sup>266</sup> The AEMC, seeking a faster rollout, has put forward a recommendation for a 100% uptake of smart meters in the mass market by 2030, as part of the transition to net zero.<sup>267</sup>
- 701 Victoria was subject to a network-led, regulated roll-out of mass market smart meters from 2008 to 2014. There is near universal smart meter penetration in Victoria.<sup>268</sup>
- 702 **The use of smart meters by energy retailers:** Smart meters are used not only by electricity retailers servicing the mass market, but also by energy retailers servicing embedded networks (ie, high-density residential buildings, retail, aged care communities and corporate parks) and commercial and industrial customers (ie, large businesses with direct access to the wholesale electricity market who may have hundreds of meters per customer).
- 703 The role of smart meters, and smart meter providers, and the manner in which providers are contracted, in respect of each of these customer segments is set out below.
- 704 **Mass market deployment:**
- (a) The mass market deployment of smart meters occurs in residential buildings and small-medium sized enterprises. This is depicted in **Figure 76** below, which identifies the retailer as the key decision maker for determining the choice of the metering provider, with meters installed at the customer's home or business. **Figure 76** also illustrates that the metering coordinator, metering provider and metering data provider are often viewed as one function (ie, from the retailers perspective, they acquire a complete smart metering service from a single provider). The individual components of the overall product may either be supplied entirely by the metering service provider or some parts may be outsourced – for example, field service providers are often contracted by the metering service provider to install and maintain smart meters on site.
  - (b) Energy retailers typically hold tenders to award smart meter deployment contracts, with smart meter providers competing vigorously to win volumes. Contracts are typically awarded for long terms (ie, the most recent tenders have all been for 7+ years) but, in some instances, are awarded for shorter periods of time.
  - (c) Energy retailers have significant volumes available for deployment. Each energy retailer's approach to allocating those volumes differs. The most common approach is for an energy retailer to award a significant volume to the winning tenderer on an exclusive basis (or non-exclusive but sole basis<sup>269</sup> over a long term time horizon) while retaining some flexibility to retain relationships with other smart meter providers. Other retailers adopt panel arrangements, whereby smart meter providers must continue to offer a high quality service to continue to be awarded volumes. In either case, smart meter providers compete vigorously to be awarded large volume contracts or be appointed to a retailers panel, as the consequence of not providing the best possible terms could result in a long term loss in business (noting the infrequent nature of these tenders). Many of energy

<sup>265</sup> AEMC, Review of the regulatory framework for metering services – Draft Report (3 November 2022) p 6  
<<https://www.aemc.gov.au/sites/default/files/2022-11/Draft%20report.pdf>>

<sup>266</sup> AEMC, Review of the regulatory framework for metering services (16 September 2021), page 3  
<<https://www.aemc.gov.au/sites/default/files/2021-09/EMO0040%20Metering%20Review%20Directions%20paper%20FINAL.pdf#:~:text=Outside%20of%20Victoria%2C%20the%20current,not%20occur%20until%20after%202040>>

<sup>267</sup> AEMC, Draft Report – Review of the regulatory framework for metering services (3 November 2022), page ii  
<https://www.aemc.gov.au/sites/default/files/2022-11/Draft%20report.pdf>.

<sup>268</sup> AEMC, Draft Report – Review of the regulatory framework for metering services (3 November 2022), page 63  
<https://www.aemc.gov.au/sites/default/files/2022-11/Draft%20report.pdf>.

<sup>269</sup> That is, a contract may be awarded to a single meter coordinator, but this is not exclusive and the energy retailer reserves the right to appoint another meter coordinator at any point.

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retailers still have significant volumes to award ahead of AEMC's expected 2030 deadline.

- (d) When choosing a smart meter provider, energy retailers have regard to a number of factors including pricing, adherence to regulatory standards, reputation, safety history, customer perception, rollout ability, amongst other things. The weight placed on each factor differs between energy retailers.
- (e) There is no obligation on a smart meter provider to provide metering services and no regulation of the price of these services.<sup>270</sup> The price of services is subject to commercial negotiations between the smart meter provider and the energy retailer. In terms of pricing, it is common for smart meter providers to charge the energy retailer a monthly fee covering asset costs and IT costs, including the provision of data from the smart meter, for the life of the meter, or for the period during which the customer has a contract for energy with the energy retailer. Smart meter providers do not generally charge an upfront fee for the deployment of the smart meter itself because the end customer (ie, residential customer or small medium enterprise) at the date of installation may, at a future point in time, switch to a different energy retailer (and the smart meter stays with the property rather than moves with the end customer if they move premises). It would not make sense if a new smart meter had to be installed every time a customer moved properties or switched energy retailers. To solve this, smart meter providers commonly charge the energy retailers a monthly bundled service charge (as opposed to an upfront fee), and the price is charged to the energy retailer (rather than the customer of the energy retailer) depending on which energy retailer the customer uses.
- (f) The manner in which energy retailers recoup the cost of providing smart meters and related services to end customers varies between energy retailers. In some instances, energy retailers recover the costs associated with a new or replacement smart meter by incorporating the cost into the customer's electricity supply or usage charges.<sup>271</sup> Other energy retailers may charge a lump sum or a monthly fee to customers, which could appear on their energy bill.<sup>272</sup> Others charge no upfront fees or offer 'free' meter installation as part of certain energy offers. There is no direct contractual relationship between the smart meter provider and the end mass market customer.

Most smart meter providers have contracts in place with all major energy retailers for the costs of providing smart meter services to customers which switch to an energy retailer even if the original meter was installed when the customer was receiving electricity from another energy retailer. In the rare instances where a smart meter provider does not have such a contract in place with an energy retailer, the smart meter provider will provide the metering services to the energy retailer on an uncontracted basis, until a formal contract can be signed.<sup>273</sup> In practice, this means that even if there is not an existing service agreement in place with an energy retailer, this has not prevented the supply of services by a smart meter provider.

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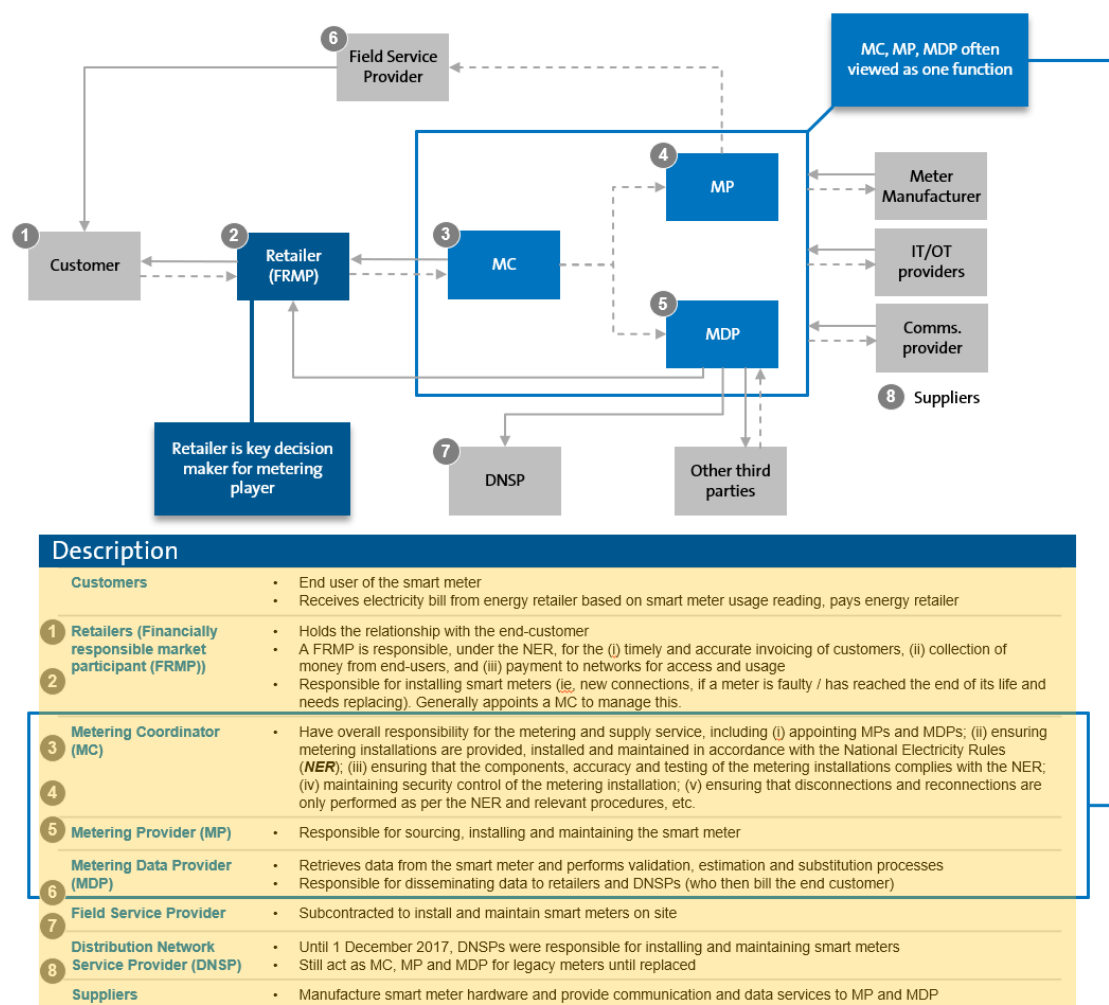
<sup>270</sup> AEMC, *Rule Determination – National Electricity Amendment (Expanding competition in metering and related services) Rule 2015* (26 November 2015), page xi <<https://www.aemc.gov.au/sites/default/files/content/ed88c96e-da1f-42c7-9f2a-51a411e83574/Final-rule-determination-for-publication.pdf>>

<sup>271</sup> ACCC, *Inquiry into the National Electricity Market May 2022 Report*, page 59 <<https://www.accc.gov.au/publications/serial-publications/inquiry-into-the-national-electricity-market-2018-2025/inquiry-into-the-national-electricity-market-may-2022-report>>

<sup>272</sup> ACCC, *Inquiry into the National Electricity Market May 2022 Report* (20 June 2022), page 59 <<https://www.accc.gov.au/publications/serial-publications/inquiry-into-the-national-electricity-market-2018-2025/inquiry-into-the-national-electricity-market-may-2022-report>>.

<sup>273</sup> **Confidential to Intellihub: Intellihub's pricing for its services reflects the highly competitive nature of the market.**

Figure 76: Australian smart metering 'mass market' value chain



Source: Intellihub

705 **Embedded network deployment:**

- (a) As depicted in **Figure 77** below, embedded electricity networks are privately owned and managed electricity networks that often supply all premises within a specific area or building (eg, apartment buildings). Embedded Network Operators generally buy electricity in bulk and then on-sell it to customers inside their network.<sup>274</sup> Some mass-market energy retailers also operate Embedded Network Operator services.
- (b) There is a different regulatory environment applicable to embedded networks as they are classified as 'exempt networks'. The 'Power of Choice' regime does not apply. There are limited regulations governing the use of smart meters in embedded networks, other than the AER exempt network guidelines<sup>275</sup> which provide that new electricity meters in exempt networks must comply with requirements under the *National Measurement Act 1960* (Cth), minimum specifications for advanced metering under NER schedule 7.5 (if installed after 1 December 2017), and other applicable Australian standards. There is otherwise no requirement for smart meters to be installed in embedded networks across

<sup>274</sup> Consumer Affairs Victoria, *Embedded electricity networks* <<https://www.consumer.vic.gov.au/products-and-services/energy-products-and-services/embedded-electricity-networks>>.

<sup>275</sup> AER, *Electricity Network Service Provider – Registration Exemption Guideline*, Version 6, March 2018 <<https://www.aer.gov.au/system/files/AER%20electricity%20NSP%20Registration%20Exemption%20Guideline%20-%20Version%206%20-%20201%20March%202018.pdf>>

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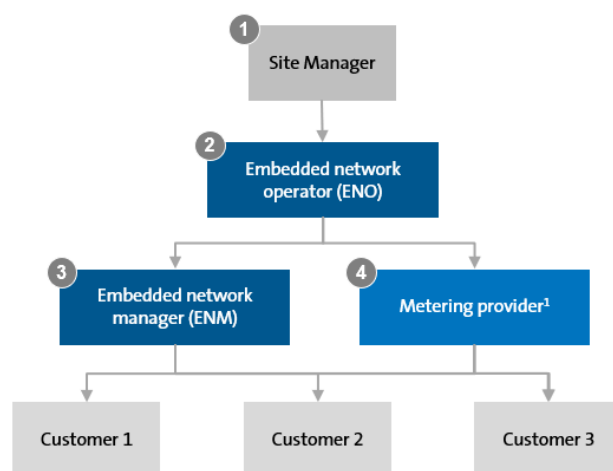
the NEM (including Victoria). Because of this, there is a continued use of legacy meters or manually-read meters (as opposed to remotely-read smart meters).

- (c) Site managers do not need to appoint metering providers but must become or appoint an Embedded Network Manager (**ENM**) as a minimum.<sup>276</sup> There are many embedded network customer sites that retain ownership of the meters themselves or engage providers for manual meter reading services only. Others do, however, through their Embedded Network Operators, appoint metering providers.
- (d) Competition for embedded network contracts occurs in a similar way to the mass market – but in a much more fragmented manner (ie, on an embedded customer by embedded customer basis). Embedded Network Operators typically run tender processes on behalf of the embedded network customer. These can be for 100% of the customer's smart meter needs (as embedded network customers require a much smaller rollout than the typical mass market rollout), but can also be for only a portion of their requirements. In some instances, tenders are run on an even more granular basis – building-by-building (for example, when there is a new-build adjacent to an existing development (ie, a customer might run a new tender for its incremental requirements, rather than awarding the additional volumes to its existing provider).
- (e) Similar factors are taken into account when appointing a metering provider – pricing, adherence to regulatory standards, reputation, safety history, customer perception, rollout ability, amongst other things. Metering providers tender vigorously for the embedded network contracts.
- (f) Pricing depends on the commercial model chosen by the site manager. Where a metering provider is appointed to install and maintain the smart meter, and provide accompanying data services, a pricing model similar to the one described for mass metering is adopted (ie, a simple annuity model). Some site managers, however, as discussed above, choose to purchase the smart meters (including installation) in a once-off transaction, and then negotiate a separate annuity-based arrangement for the provision of data services.

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<sup>276</sup> AER, *Embedded Network Managers*, <<https://www.aer.gov.au/networks-pipelines/network-exemptions/embedded-network-managers>>

Figure 77: Australian smart metering embedded network value chain



Description	
1	<p><b>Site manager</b></p> <ul style="list-style-type: none"> <li>The embedded network is owned by the site manager (e.g. developers, owners corporations, shopping centre owners, aged care facility owners, or caravan park owners, etc.)</li> <li>Typically appoint an ENO to manage their responsibilities.</li> </ul>
2	<p><b>Embedded network operator</b></p> <ul style="list-style-type: none"> <li>Controls or operates the embedded network on behalf of the site manager</li> <li>Appoints the ENM and MP</li> <li>Responsible for purchasing electricity at the gate meter and on-selling to customers within the EN, managing billing, customer relationships and other operational elements</li> <li>ENO's must be registered with the AER</li> </ul>
3	<p><b>Embedded network manager</b></p> <ul style="list-style-type: none"> <li>Primary role is to provide market interface services which facilitate EN customers' access to on-market tariffs</li> <li>Responsible for applying to and registering with AEMO for a National Metering Identifier at child connection points (ie, points that connect customers within the embedded network to the parent meter)</li> <li>ENM must be accredited by AEMO</li> </ul>
4	<p><b>Metering provider</b></p> <ul style="list-style-type: none"> <li>Responsible for sourcing, installing and maintaining the smart meters</li> <li>Responsible for disseminating billing data to the ENO, who charges the end customer</li> </ul>

Source: Intellihub

706 **Commercial & Industrial (C&I) deployment:**

- (a) C&I customers comprise large businesses with direct access to the wholesale electricity market. It has been a requirement since 2002 (later formalised across jurisdictions in ~2008) that meter types 1, 2 and 3 (ie, those meters used in C&I) have electronic remote access to measurement data.<sup>277</sup> The responsibility for collecting metering data for meter types 1, 2 and 3 formally transferred from AEMO to Metering Data Providers in late 2010 and early 2011<sup>278</sup> (with the responsible person for each site, being the FRMP (energy retailer) by default, then appointing both Metering Provider / Metering Data Provider).
- (b) In terms of the 'Power of Choice' reforms, the C&I customer can enable a FRMP (energy retailer) to appoint a Metering Coordinator on its behalf, or it can appoint the Metering Coordinator itself – see **Figure 78** below for the value chain in respect of C&I customers.
- (c) Given that it has been a requirement for well over 10 years for C&I customers to have smart meters installed with a responsible Metering Provider / Metering Data Provider, this segment is almost fully penetrated across the NEM (including Victoria). Supply is driven primarily by replacement / greenfield development activities.

<sup>277</sup> AEMC, *Integration of NEM Metrology Requirements*, <<https://www.aemc.gov.au/rule-changes/integration-of-nem-metrology-requirements>>.

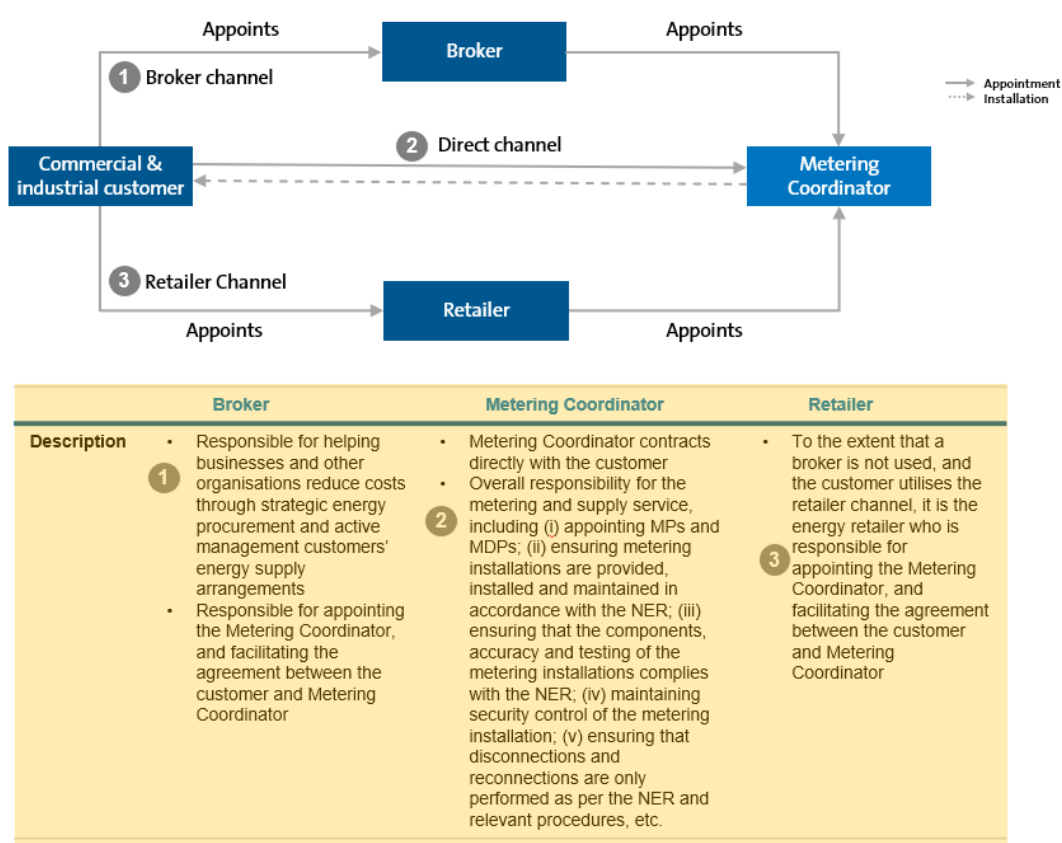
<sup>278</sup> AEMC, *Provision of Metering Data Services and Clarification of Existing Metrology Requirements* <<https://www.aemc.gov.au/rule-changes/provision-of-metering-data-services-and-clarificat>>.



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- (d) Contracts for C&I customers are generally tendered for in a similar way to mass market and embedded networks. The C&I customer itself can run a tender to appoint a Metering Coordinator, or it might indirectly appoint a Metering Coordinator through an energy retailer or broker. Brokers<sup>279</sup> are typically appointed by C&I customers to run tenders to appoint the energy retailer, with some also offering ancillary smart metering tender services for a fee.
- (e) Tenders in this customer segment are a lot more fragmented – with separate tenders being run for each C&I customer depending on their requirements. The terms of the contracts with C&I customers are typically of a shorter duration than mass market (around three to five years). C&I tenders run on a very competitive renewal cycle. Incumbent smart meter providers are often forced to reprice to remain competitive when the contract comes up for tender again.
- (f) Pricing across this customer segment is also generally annuity-based, but with pricing being higher than in the other customer segments as smart meter providers need to recoup their investment in a shorter period of time (given the short duration of contracts).

**Figure 78: Australian smart metering commercial and industrial customers value chain**



Source: Intellihub

707 **Key suppliers of electricity smart meters in Australia:** There are a number of suppliers of smart meters and related services to energy retailers for deployment across the mass market including Intellihub, Vector,<sup>280</sup> Spotless,<sup>281</sup> Yurika,<sup>282</sup> PlusES,<sup>283</sup> Metropolis<sup>284</sup> and others.

<sup>279</sup> Brokers include Power Choice, Watt Utilities, Eutility, Bulk Energy, Energy Action, Choice Energy, Energy ROI, Energy Alliance, and Kinect Energy.

<sup>280</sup> Vector Metering, *Metering Solutions for a new energy future* <<https://vectormetering.com/au/>>.

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708 These players also service embedded networks and C&I customers, but this comprises a much smaller proportion of their respective businesses than mass market deployment. A number of smaller players have particularly strong offerings for embedded networks (such as Spotless) or C&I customers (such as Mondo<sup>285</sup> and PowerMetric<sup>286</sup>).

709 A brief description of each of the key smart meter providers in Australia is set out below.

- (a) **Vector:** Vector is a New Zealand-based gas and electricity distributor that was established in 2003. In 2007 Vector established its Advanced Metering Services business, which it then rebranded as Vector Metering in 2020.<sup>287</sup> Vector has more than 2 million installed advanced meters across both Australia and New Zealand, with 528,000 advanced meters installed in Australia as at 31 December 2022.<sup>288</sup> Vector cites its customers as some of Australia and New Zealand's 'leading electricity and gas retailers',<sup>289</sup> with services offered for both residential and small business customers. In the first half of FY23, Vector's metering business recorded a revenue of NZD128.3 million.<sup>290</sup> In December 2022, Vector announced that it had entered into a conditional agreement with QIC Private Capital Pty Limited (**QIC**) for the sale of a 50% interest in Vector Metering.<sup>291</sup>
- (b) **Yurika:** Yurika is a Queensland-based metering business that was established in 2016 following a joint venture between Ergon, Ergon Retail and Energex.<sup>292</sup> Yurika has installed more than 500,000 meters across the NEM for residential, commercial and industrial customers.<sup>293</sup> Yurika cites long-standing partnerships with customers including Coles, Wesfarmers, McDonald's, the South Australian government, and Boral, as well as recently entered metering service agreements with a number of energy retailers including Ergon Retail, Telstra, Next Business Energy, and Iberdrola.<sup>294</sup>
- (c) **PLUS ES:** PLUS ES is an Australian metering business that was established in 2017 when Ausgrid acquired AGL's digital metering subsidiary and merged it with its existing metering business. PLUS ES is now owned by a partnership between the NSW Government, and a consortium of IFM Investors and AustralianSuper which hold a combined 50.4% interest.<sup>295</sup> By 2022, PLUS ES had installed more than 1 million meters across the NEM,<sup>296</sup> and works in partnership with utilities providers to collect, store and deliver data services for more than 2.5 million meters.<sup>297</sup> PLUS ES cites its customers as 'Australia's leading energy retailers, brokers and consultants', as well as direct

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<sup>281</sup> Spotless, *Integrated facilities services* <<https://www.spotless.com/>>

<sup>282</sup> Yurika, *Connecting Australians to a sustainable energy future* <<https://www.yurika.com.au/>>

<sup>283</sup> Pluses, *Enabling businesses to build out future communities* <<https://pluses.com.au/>>.

<sup>284</sup> Metropolis, *What we do* <<https://www.metropolis.net.au/>>

<sup>285</sup> Mondo, *Business Metering* <<https://mondo.com.au/business/metering/>>.

<sup>286</sup> PowerMetric, *What we do* <<https://powermetric.com.au/what-we-do/metering/>>.

<sup>287</sup> Vector Metering, *Who we are* <<https://vectormetering.com.au/who-we-are/>>.

<sup>288</sup> Vector, *Market release – Vector announces solid half year results* (21 February 2023) p 6 <<https://blob-static.vector.co.nz/blob/vector/media/news-articles/04-vct-vector-announces-solid-half-year-results.pdf>>.

<sup>289</sup> Vector Metering, *Metering solutions for a new energy future* <<https://vectormetering.com.au/>>.

<sup>290</sup> Vector, *Market release – Vector announces solid half year results* (21 February 2023) p 6 <<https://blob-static.vector.co.nz/blob/vector/media/news-articles/04-vct-vector-announces-solid-half-year-results.pdf>>.

<sup>291</sup> Vector, *Market release – Vector Metering Announcement* (21 December 2022) <<https://www.vector.co.nz/news/vector-metering-announcement/>>.

<sup>292</sup> Yurika, *Our history* <<https://www.yurika.com.au/about-us/story/>>. Each of Ergon, Ergon Energy and Energex are wholly owned subsidiaries of Energy Queensland Ltd.

<sup>293</sup> Yurika, *Our approach* <<https://www.yurika.com.au/our-approach/>>.

<sup>294</sup> Energy Queensland, *Annual Report 2021-22* (19 August 2022)

<[https://www.energyq.com.au/\\_data/assets/pdf\\_file/0019/1030834/EQL-Annual-Report-2021-22\\_DIGITAL.pdf](https://www.energyq.com.au/_data/assets/pdf_file/0019/1030834/EQL-Annual-Report-2021-22_DIGITAL.pdf)>.

<sup>295</sup> PLUS ES, *About PLUS ES* <<https://pluses.com.au/about-us/#:~:text=Marking%20a%20new%20era%20in%20emerging%20energy%20solutions%2C,hold%20a%20combined%2050.4%25%20interest%20in%20PLUS%20ES.>>.

<sup>296</sup> PLUS ES, *PLUS ES installs one millionth meter two years ahead of schedule* <<https://pluses.com.au/plus-es-installs-one-millionth-meter-two-years-ahead-of-schedule/>>.

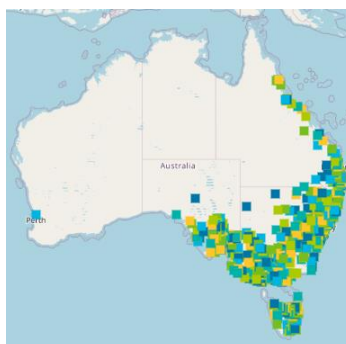
<sup>297</sup> PLUS ES, *PLUS ES Utility Services* <<https://pluses.com.au/utility-services/>>.

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commercial customers including utilities, embedded network operators and infrastructure owners.<sup>298</sup>

- (d) **Metropolis Metering:** Metropolis Metering is an Australian metering business that was established in 2007.<sup>299</sup> While Metropolis Metering does not publish the exact number of meters that it has installed across the NEM, it has published a map of its installed base which indicates that it has a significant reach across the NEM (see **Figure 79** below). Metropolis Metering also provides services including digital meter installation and asset management, data generation, management and optimisation, and off the shelf and custom applications.<sup>300</sup> Metropolis Metering cites its customers as retailers, energy brokers and consultants, direct customers, and embedded networks.<sup>301</sup>

**Figure 79: Metropolis Metering installed base**



Source: Metropolis Metering<sup>302</sup>

- (e) **Spotless:** Spotless is an Australian metering business that was established in 1957. Spotless was acquired by the Downer Group in 2017.<sup>303</sup> In 2016, Spotless' CEO was quoted stating that Spotless had installed 1 million smart meters as part of the Victorian Advanced Metering Infrastructure Program, and read 3.5 million and 1.5 million meters four times a year in NSW and Southeast Queensland.<sup>304</sup>
- (f) **Mondo:** Mondo is an Australian energy services business owned by AusNet that was established in 2017. Mondo initially offered distributed energy products and services, before expanding its offering in late 2018 (after it merged with AusNet Services' commercial energy businesses).<sup>305</sup> Mondo has installed more than 24,000 meters across the NEM,<sup>306</sup> and provides Metering Coordinator, Metering Provider, Metering Data Provider and Embedded Network Manager services.<sup>307</sup> Mondo cites its metering services customers as commercial and industrial customers, electricity authorities, energy retailers, and consultants. Mondo cites its metering services customers as commercial and industrial customers, electricity authorities, energy retailers, and consultants.

<sup>298</sup> PLUS ES, *Metering* <<https://pluses.com.au/metering/>>.

<sup>299</sup> Metropolis Metering, *First Australian Residential Smart Meter Turns 15* <<https://www.metropolis.net.au/2022/02/14/first-australian-residential-smart-meter-turns-15/>>.

<sup>300</sup> Wikipedia, *Spotless Group Holdings* <[https://en.wikipedia.org/wiki/Spotless\\_Group\\_Holdings](https://en.wikipedia.org/wiki/Spotless_Group_Holdings)>.

<sup>301</sup> Metropolis Metering, *What we do* <<https://www.metropolis.net.au/what-we-do/>>.

<sup>302</sup> Metropolis Metering, *Projects – Our National Reach* <<https://www.metropolis.net.au/projects/>>.

<sup>303</sup> Downer Group, *Spotless Acquisition* (28 August 2017) <<https://www.downergroup.com/spotless-acquisition>>.

<sup>304</sup> Renew Economy, *Spotless advanced metering delivers 'power of choice'* (29 November 2016) <<https://reneweconomy.com.au/spotless-advanced-metering-delivers-power-choice-56324/>>.

<sup>305</sup> AusNet Services, *AusNet Services Group's commercial businesses to unite as Mondo and help build a bright future* (3 December 2018) <<https://www.ausnetservices.com.au/news/ausnet-services-commercial-businesses-to-unite-as-mondo-and-help-build-a-bright-future>>.

<sup>306</sup> Mondo, *Low Voltage Electricity Metering* <<https://mondo.com.au/business/low-voltage-electricity-metering>>.

<sup>307</sup> Mondo, *Business* <<https://mondo.com.au/business>>.

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- (g) **PowerMetric:** PowerMetric is an Australian metering business that was established in 2013.<sup>308</sup> In 2019, PowerMetric (previously ERM Power) was acquired by Shell Energy Operations Pty Ltd.<sup>309</sup> PowerMetric operates across the NEM, as well as providing some services in Western Australia.<sup>310</sup> PowerMetric and provides Metering Coordinator, Metering Provider and Metering Data Provider services.<sup>311</sup> PowerMetric cites its customers as energy brokers, energy retailers, embedded networks, and direct metering customers including dnata and yesgroup.<sup>312</sup>

710 **Estimated market shares:** Mass market shares can be considered in two ways:

- (a) 'stock': being the number of cumulative meters installed and managed by a market participant as at a point in time, divided by the total cumulative number of smart meters in the market at that point in time; and
- (b) 'flow': being the number of new smart meters deployed by a market participant in a given period, divided by the total number of new smart meters deployed by all market participants over that same period.

711 Market shares are not a reliable indicator of the competitive position of smart metering providers for the following reasons:

- (a) The estimates are informed by past competitive performance (ie, tender wins), and are not a reliable indicator of performance in future tenders (which can be affected by external factors such as retailer rollout preferences).
- (b) The significant volumes associated with each retailer contract, and the lumpy nature of deployment contracts being awarded, means that estimated shares can change rapidly as retailer rollouts occur.
- (c) Annual flows are primarily driven by retailer rollout decisions (ie, after contracts have been awarded). A market participant may have a number of successful tender wins, but if the contracted retailers do not prioritise their smart meter rollouts, this will not translate into deployment flow. Similarly, if a market participant had a single contracted retailer who is prioritising their smart meter rollout, this will translate into deployment flow which would overrepresent their market position.
- (d) Existing stock does not provide a material competitive advantage in tender processes. No mass meter smart service provider is expected to hold any advantage for future tenders.

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<sup>308</sup> PowerMetric, *About Us* <<https://powermetric.com.au/about-us/>>.

<sup>309</sup> Shell, *Shell completes acquisition of ERM Power Limited* (29 November 2019) <<https://www.shell.com.au/media/2019-media-releases/shell-completes-acquisition-of-erm-power-limited.html>>.

<sup>310</sup> PowerMetric, *Who we work with* <<https://powermetric.com.au/who-we-work-with/>>.

<sup>311</sup> PowerMetric, *About Us* <<https://powermetric.com.au/about-us/>>.

<sup>312</sup> PowerMetric, *Who we work with* <<https://powermetric.com.au/who-we-work-with/>>.

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712 However, set out in **Figure 80** below are the estimated number of smart meters deployed to energy retailers servicing the mass market in the NEM (excluding Victoria).<sup>313</sup>

**Figure 80: Estimated number of smart meters deployed in the mass market in the NEM (excluding Victoria) as at 31 December 2022**

Supplier	Estimated number of smart meters deployed	Estimated share
Intellihub	Confidential to Intellihub: 485,000 – 725,000	Confidential to Intellihub: 20 – 30%
Vector	Confidential to Intellihub: 240,000 – 485,000	Confidential to Intellihub: 10 – 20%
Spotless	Confidential to Intellihub: 0 – 130,000	Confidential to Intellihub: 0 – 5%
Yurika	Confidential to Intellihub: 485,000 – 725,000	Confidential to Intellihub: 20 – 30%
PlusES	Confidential to Intellihub: 485,000 – 725,000	Confidential to Intellihub: 20 – 30%
Other	Confidential to Intellihub: 0 – 130,000	Confidential to Intellihub: 0 – 5%
<b>Total</b>	<b>Confidential to Intellihub: 1,700,000 – 2,920,000</b>	<b>100%</b>

Source: Intellihub's internal estimates

713 Set out in **Figure 81** below are estimated shares of the supply of smart meters to embedded network energy retailers servicing embedded network customers.

**Figure 81: Estimated number of smart meters deployed for embedded network customers in the NEM (including Victoria) as at 30 June 2022**

Supplier	Estimated number of smart meters deployed	Estimated share
Intellihub	Confidential to Intellihub: 130,000 – 200,000	Confidential to Intellihub: 20 – 30%
PlusES	Confidential to Intellihub: 130,000 – 260,000	Confidential to Intellihub: 20 – 40%
Yurika	Confidential to Intellihub: 0 – 65,000	Confidential to Intellihub: 0 – 10%
Spotless	Confidential to Intellihub: 30,000 – 130,000	Confidential to Intellihub: 5 – 20%
Other		
Customer-Managed	Confidential to Intellihub: 65,000 – 200,000	Confidential to Intellihub: 10 – 30%
<b>Total</b>	<b>Confidential to Intellihub: 355,000 – 850,000</b>	<b>100%</b>

Source: Intellihub's internal estimates

<sup>313</sup> Intellihub estimates its and each of its key competitors' share of mass-market stock by assuming deployment estimates from 2017 (Power of Choice commencement) up to 2019 (AER reporting commencement) and triangulates those figures with total stock reported in 2021 by distributors (individual DNSP RIN submissions to AER). All estimates exclude legacy smart meters.

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714 Set out in **Figure 82** below are estimated shares of the supply of smart meters directly or indirectly to commercial and industrial customers in the NEM (excluding Victoria) for 2022.<sup>314</sup>

**Figure 82: Estimated number of supply of smart meters deployed directly or indirectly to commercial and industrial customers in the NEM (including Victoria) as at 30 June 2022**

Supplier	Estimated number of smart meters deployed	Estimated share
Intellihub	Confidential to Intellihub: 7,000 – 14,000	Confidential to Intellihub: 5 – 10%
PlusES	Confidential to Intellihub: 27,000 – 40,500	Confidential to Intellihub: 20 – 30%
Yurika	Confidential to Intellihub: 27,000 – 40,500	Confidential to Intellihub: 20 – 30%
Mondo	Confidential to Intellihub: 14,000 – 27,000	Confidential to Intellihub: 10 – 20%
PowerMetric	Confidential to Intellihub: 7,000 – 14,000	Confidential to Intellihub: 5 – 10%
Other	Confidential to Intellihub: 7,000 – 14,000	Confidential to Intellihub: 5 – 10%
<b>Total</b>	<b>~135,000</b>	<b>100%</b>

Source: Intellihub's internal estimates

<sup>314</sup> Intellihub estimates share of C&I metering stock based on Intellihub management's understanding of the industry only (and own meter asset data). Due to the same limitations as above, it is not possible to estimate a time series, however the C&I market is relatively mature and stable (as opposed to mass-market).

## B. Public benefits

### 6 Public benefits

#### 6.1 Background

715 Climate change will continue to have a devastating impact on the world's economies, communities and ecosystems if immediate action is not taken. Such action must include transitioning the world's energy system. Australia is particularly vulnerable to the impacts of climate change.<sup>315</sup>

716 As a nation, Australia has committed to addressing climate change in alignment with the Paris Agreement. This commitment will necessitate investment of a scale and at a pace not seen before in Australia.

717 Origin has a central role in Australia's commitment to the global energy transition. It is a key Australian generator and retailer of energy and the owner and operator of Australia's largest black coal-fired power station (Eraring). Origin considers that its medium-term emissions intensity target and long-term net zero emissions ambition are consistent with the goals of the Paris Agreement, although it faces a number of critical challenges in transitioning its business, notably capital constraints arising from its listed company structure.

718 The BGTF Consortium has ambitious yet realistic plans for Origin Energy Markets. The BGTF Consortium will expand Origin Energy Markets' renewable generation capacity and is uniquely placed to do so. The BGTF Consortium's plans rely on its (i) access to long term, total return capital specifically dedicated to the transition, (ii) global renewables development and operational expertise, (iii) global procurement capabilities, and (iv) track record of success in delivering on renewable development. The Proposed Acquisition, particularly the acquisition of the Origin Energy Markets business by the BGTF Consortium, will accelerate Origin Energy Market's progress in energy transition, and thereby assist Australia to achieve its zero emissions goals. Importantly, the Proposed Acquisition will help address Origin Energy Markets challenges much sooner and with more certainty than if the Proposed Acquisition did not proceed, delivering substantial public benefits, including for future generations of Australians.

719 For the reasons outlined in section 6.13, no material public detriments arise from the Proposed Acquisition. Any possible public detriments would be outweighed by the substantial public benefits that arise from the Proposed Acquisition, as set out below.

720 This section is structured as follows:

- (a) **Section 6.2** examines the climate change crisis.
- (b) **Section 6.3** addresses the Paris Agreement.
- (c) **Section 6.4** explores the Australian Government's initiatives to address climate change.
- (d) **Section 6.5** explores the key challenges for Australia's energy transition.
- (e) **Section 6.6** addresses the adverse consequences of inadequate investment in Australia's energy transition.
- (f) **Section 6.7** considers Origin Energy Markets unique position in the energy transition, its strategies and some of the challenges it faces in reaching net zero.
- (g) **Section 6.8** outlines BGTF's skill set and experience within the sector.

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<sup>315</sup> Department of Climate Change, Energy, the Environment and Water, *Annual Climate Change Statement 2022*, page 3 <<https://www.dceew.gov.au/sites/default/files/documents/annual-climate-change-statement-2022.pdf>> (*Annual Climate Change Statement 2022*) (Annexure 14).

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- (h) **Section 6.9** describes the BGTF Consortium's 'green build-out' plan for Origin Energy Markets.
- (i) **Section 6.10** explores the key reasons that the BGTF Consortium is uniquely placed to deliver on its 'green build-out' plan for Origin Energy Markets.
- (j) **Section 6.11** describes the substantial public benefits arising from the 'green build-out' plan including (i) a faster and more certain transition to net zero, (ii) the development of new technologies, (iii) job creation, and (iv) downward pressure on consumer pricing. Opportunities for the Proposed Acquisition to benefit local supply chains.
- (k) **Section 6.12** explores the other public benefits arising from the Proposed Acquisition including the acceleration of behind the meter solutions for consumers, the development of local supply chains, facilitating the growth of Australia's renewable power industry, and driving ESG market outcomes.
- (l) **Section 6.13**: considers whether any possible public detriments would arise from the Proposed Acquisition that the ACCC should take into account in weighing public benefits and public detriments.

## 6.2 The climate change crisis

- 721 Fossil fuels such as oil, gas and coal account for more than 76%<sup>316</sup> of global greenhouse gas emissions and nearly 90% of all carbon dioxide emissions.<sup>317</sup> These emissions form a layer of gases around the Earth which traps heat, leading to an increase in the temperature of the Earth's surface and climate change.<sup>318</sup> The devastating effects of climate change are well documented. These include hotter temperatures on land and in oceans, rising sea levels, melting of ice at the Earth's poles, more frequent extreme weather conditions like hurricanes, heatwaves, wildfires, droughts, floods, and rainfall, all of which have devastating impacts for economies, communities and ecosystems.
- 722 Unlike fossil fuels, renewable energy sources, commonly termed 'green' or 'clean' energy sources, are available in abundance as they are replenished faster than they are consumed.<sup>319</sup> Examples of renewable energy sources include solar, wind, hydro, geothermal and biomass.<sup>320</sup> Generating energy from renewable sources emits little to no greenhouse gas or pollutants into the atmosphere.<sup>321</sup> This transition from fossil fuel based energy sources to renewable energy sources is vital for reducing greenhouse gas emissions and addressing climate change.<sup>322</sup> This process is commonly referred to as the 'global energy transition.'<sup>323</sup>

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<sup>316</sup> Centre for Climate and Energy Solutions, *Global Emissions*, <https://www.c2es.org/content/international-emissions/#:-:text=CO2%20accounts%20for%20about%2076.6%20percent%20to%20global%20emissions>

<sup>317</sup> United Nations, *Renewable energy – powering a safe future* <<https://www.un.org/en/climatechange/raising-ambition/renewable-energy/>>.

<sup>318</sup> NRDC, *Fossil Fuels – The Dirty Facts* <<https://www.nrdc.org/stories/fossil-fuels-dirty-facts>>; NASA, *Global Warming vs Climate Change* <<https://climate.nasa.gov/global-warming-vs-climate-change/>>.

<sup>319</sup> Australian Renewable Energy Agency, *Renewable Energy* <<https://arena.gov.au/what-is-renewable-energy/>>.

<sup>320</sup> Australian Renewable Energy Agency, *Renewable Energy* <<https://arena.gov.au/what-is-renewable-energy/>>.

<sup>321</sup> United Nations, *Renewable energy – powering a safe future* <<https://www.un.org/en/climatechange/raising-ambition/renewable-energy/>>.

<sup>322</sup> S&P Global, *What is Energy Transition* <<https://www.spglobal.com/en/research-insights/articles/what-is-energy-transition>>; United Nations Climate Change, *The Paris Agreement* <<https://www.spglobal.com/en/research-insights/articles/what-is-energy-transition>>.

<sup>323</sup> Origin Energy, *Climate Transition Action Plan* (August 2022), page 7 <[https://www.originenergy.com.au/wp-content/uploads/Climate-Transition-Action-Plan-2022\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Climate-Transition-Action-Plan-2022_FINAL.pdf)>. (*Origin Energy CTAP 2022*) (Annexure 15).



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723 As a nation commonly subject to devastating natural disasters, Australia is particularly vulnerable to the impacts of climate change.<sup>324</sup> As outlined in the Federal Government's First Annual Climate Change Statement released on 1 December 2022:<sup>325</sup>

Australians are already feeling the effects of climate change. More frequent extreme and cascading weather events are disrupting our communities, livelihoods, economy, environment and national security.<sup>326</sup>

### 6.3 The Paris Agreement

724 On 12 December 2015, a landmark global commitment to transition global energy sources to green energy was formalised through the adoption of the Paris Agreement, a legally binding international treaty for the coordination of a global response to climate change.<sup>327</sup>

725 Under the Paris Agreement, 194 of the 198 convention countries<sup>328</sup> committed to limiting global temperature increases (or global warming) within the century to under 2°C as compared to pre-industrial levels, alongside efforts to further limit temperature increases to 1.5°C.<sup>329</sup> In the shorter term, the Paris Agreement's targets mean that global greenhouse gas emissions need to be reduced by 45% by 2030 and 'net zero' targets<sup>330</sup> must be reached by 2050.<sup>331</sup>

726 Australia signed the Paris Agreement on 22 April 2016 and has since made corresponding commitments to address climate change in accordance with the Paris Agreement's objectives.<sup>332</sup> Critically, Australia has committed to reducing greenhouse gas emissions by 43% below 2005 levels by 2030 and achieving net zero by 2050.<sup>333</sup> These targets were legislated in the Federal Government's *Climate Change Act 2022* (Cth)<sup>334</sup> which came into effect on 14 September 2022. How Australia achieves this commitment, is a matter of intense importance and interest to the business and general communities.

### 6.4 Australian Governments' initiatives

727 While the stakes are particularly high for Australia, it also has much to gain from taking immediate action on climate change.<sup>335</sup> As the Hon Chris Bowen, Federal Minister for Climate Change and Energy has said:

With the right ambition, action and cooperation, Australia can seize the once-in-a-generation opportunity ahead of us and thrive in a net zero world.<sup>336</sup>

728 **Federal Government:** In 2012, the Federal Government established the Australian Renewable Energy Agency (**ARENA**).<sup>337</sup> Its purpose is to support the global transition to net zero emissions by accelerating pre-commercial innovation. ARENA focuses on accelerating the affordability of new technologies and building investor confidence in those technologies. As at 2022, ARENA has invested \$2.04 billion in 653 projects across all Australian states and territories. These projects

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<sup>324</sup> Annual Climate Change Statement 2022, page 3 (**Annexure 14**).

<sup>325</sup> Annual Climate Change Statement 2022 (**Annexure 14**).

<sup>326</sup> Annual Climate Change Statement 2022, page 17 (**Annexure 14**).

<sup>327</sup> United Nations, *The Paris Agreement* <<https://www.spglobal.com/en/research-insights/articles/what-is-energy-transition>>

<sup>328</sup> Countries that signed up to the United Nations Framework Convention on Climate Change.

<sup>329</sup> United Nations Climate Change, *The Paris Agreement* <<https://www.spglobal.com/en/research-insights/articles/what-is-energy-transition>>.

<sup>330</sup> That is, the reduction of emissions to as close to zero as possible.

<sup>331</sup> United Nations, *For a liveable climate – Net-zero commitments must be backed by credible action* <<https://www.un.org/en/climatechange/net-zero-coalition>>.

<sup>332</sup> Explanatory Memorandum to Climate Change Bill 2022 (introduced 27 July 2022).

<sup>333</sup> Australian Government Department of Industry, Science, Energy and Resources, *Australia's Nationally Determined Contribution – Communication 2022* <<https://unfccc.int/sites/default/files/NDC/2022-06/Australias%20NDC%20June%202022%20Update%20%283%29.pdf>>

<sup>334</sup> s4 Climate Change Act.

<sup>335</sup> Annual Climate Change Statement 2022, page 3.

<sup>336</sup> Prime Minister of Australia, Minister for Climate Change and Energy, *Stronger Action on Climate Change* (16 June 2022) <<https://www.pm.gov.au/media/stronger-action-climate-change>><<https://www.un.org/en/climatechange/net-zero-coalition>>.

<sup>337</sup> Australian Renewable Energy Agency, *Our Purpose*, <<https://arena.gov.au/about/>>.

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relate to a range of established and emerging renewable technologies (ie, bioenergy, geothermal, grid integration, hydrogen, solar PV, solar thermal and storage).<sup>338</sup>

729 The Federal Government has also committed to achieve its emissions targets through a variety of measures as part of its 'Powering Australia' plan, a defining component of which is increasing renewable energy development.<sup>339</sup> The Powering Australia plan includes the following measures.

- (a) **Capacity Investment Scheme:** In December 2022, the Federal Government announced plans to establish a *Capacity Investment Scheme* to support new renewable dispatchable generation capacity. The scheme, which received endorsement from State and Territory Energy Ministers, will involve open tenders to determine the projects to gain support, is designed to encourage more investment and decrease risk for investors. An agreed revenue 'floor' will help cover project operating costs and debt repayments, with the Federal Government paying the difference when revenues fall short, and a share of profits returned when revenues exceed an agreed 'ceiling'.<sup>340</sup>
- (b) **National cooperation on energy:** On 12 August 2022, Federal, State and Territory Energy Ministers established the new National Energy Transformation Partnership to facilitate national alignment and cooperation specifically in respect of the transition of Australia's energy sector.<sup>341</sup>
- (c) **Rewiring the Nation:** The 2022-23 Federal Budget established the \$20 billion '*Rewiring the Nation*' plan which provides low-cost finance for investments to expand and modernise Australia's electricity grids in accordance with AEMO's ISP. On 19 October 2022, the Federal Government announced the first tranche of investments under the plan: electricity transmission projects VNI West (KerangLink) between Victoria and New South Wales; and the Marinus Link between Tasmania and Victoria.<sup>342</sup> These projects will (i) facilitate the connection of new renewable energy, (ii) provide grid support for early coal generator closures, (iii) deliver additional power from Snowy 2.0, and (iv) give mainland Australian states access to Tasmanian hydro power. The Rewiring the Nation plan has also allocated low-cost loans or finance to the value of over \$2.5 billion to various state-based projects, like the North West Transmission Developments in Tasmania, eligible Tasmanian Battery of the Nation projects, and Victorian renewable energy zones and offshore wind projects. In December 2022, the Federal Government agreed to contribute \$4.7 billion to connect eight transmission and NSW Renewable Energy Zone projects and plug Snowy 2.0 into the grid, delivering more reliable access to electricity in the NEM. These funds were combined with \$3.1 billion from the NSW Transmission Acceleration Facility and will support NSW in advancing its Electricity Infrastructure Roadmap, the State's 20-year plan to transform its electricity system into one that is cheap, clean and reliable.<sup>343</sup>

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<sup>338</sup> Australian Renewable Energy Agency, *Arena at a Glance*, <<https://arena.gov.au/assets/2019/07/arena-at-a-glance.pdf>>.

<sup>339</sup> Department of Climate Change, Energy, the Environment and Water, *Powering Australia* <<https://www.energy.gov.au/government-priorities/australias-energy-strategies-and-frameworks/powering-australia>>.

<sup>340</sup> Department of Climate Change, Energy, the Environment and Water, *Capacity Investment Scheme to power Australian energy market transformation* (8 December 2022) <<https://minister.dcceew.gov.au/bowen/media-releases/capacity-investment-scheme-power-australian-energy-market-transformation>>.

<sup>341</sup> Energy ministers, *National Energy Transformation Partnership* (August 2022) <<https://www.energy.gov.au/sites/default/files/2022-08/National%20Energy%20Transformation%20Partnership.pdf>>.

<sup>342</sup> Department of Climate Change, Energy, the Environment and Water, *Rewiring the Nation supports its first two transmission projects* <<https://www.energy.gov.au/news-media/news/rewiring-nation-supports-its-first-two-transmission-projects>>.

<sup>343</sup> Prime Minister of Australia Media Release, *Landmark Rewiring the Nation deal to fast-track clean energy jobs and security in NSW* (21 December 2022) <<https://www.pm.gov.au/media/landmark-rewiring-nation-deal-fast-track-clean-energy-jobs-and-security-nsw>>.

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- (d) **Funding for renewables:** The Federal Government has set a goal of increasing the proportion of low cost renewables in the NEM to 82% by 2030.<sup>344</sup> The 2022-23 Federal Budget has allocated specific funding for renewable generation and storage projects, including \$224.3 million over four years to deploy 400 community batteries across Australia,<sup>345</sup> and \$102.2 million over four years for the 'Community Solar Banks' initiative that will deliver an initial 85 solar banks around Australia.<sup>346</sup>
- (e) **Decarbonisation in the regions:** The Federal Government is establishing a \$1.9 billion 'Powering the Regions Fund' to support the decarbonisation of existing regional industries and the creation of clean energy industries and related jobs.<sup>347</sup> Consultation on the design of the fund commenced in December 2022, and closed on 3 February 2023.<sup>348</sup>
- (f) **Electric vehicles:** On 28 September 2022, the Federal Government released a consultation paper on the 'National Electric Vehicle Strategy' proposing a national strategy for consumer access to electric vehicles to help achieve Australia's emissions targets.<sup>349</sup>

730 Most recently, on 5 May 2023, the Commonwealth Government announced that it will create by legislation a national Net Zero Authority. The new legislated Net Zero Authority will:

Support workers in emissions-intensive sectors to access new employment, skills and support as the net zero transformation continues.

Coordinate programs and policies across government to support regions and communities to attract and take advantage of new clean energy industries and set those industries up for success.

Help investors and companies to engage with net zero transformation opportunities.<sup>350</sup>

731 These measures, in conjunction with Commonwealth legislated emissions targets, indicate the critical role of renewables in achieving Australia's net zero commitment. Indeed, the Hon Dr Jim Chalmers, Federal Treasurer noted that, for Australia to emerge a 'more resilient, more cohesive and more purposeful country', three objectives need to be achieved, the first being:<sup>351</sup>

An orderly energy and climate transition, with implications for living costs, employment, where and how we live, the commercialisation of technology, and the trajectory of our economic development. This means introducing cleaner, cheaper, more reliable and increasingly renewable energy, and adopting practices and technologies that limit our emissions. All while creating new industries, empowering workers and regions, and leveraging our traditional strengths.

732 **State and Territory Governments:** Australian states and territories have also set greenhouse gas emissions targets of net zero by 2050 with the exception of Tasmania which has a more aggressive commitment to achieve net zero by 2030.<sup>352</sup> The Victorian Government has an

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<sup>344</sup> Giles Parkinson and Sophie Vorrath, *Bowen says coal and gas price caps won't derail Labor's 82 percent renewables target*, Renew Economy (6 December 2022) <<https://reneweconomy.com.au/bowen-says-coal-and-gas-price-caps-wont-derail-labors-82-percent-renewables-target/>>.

<sup>345</sup> Department of Climate Change, Energy, the Environment and Water, *Powering Australia* <<https://www.energy.gov.au/government-priorities/australias-energy-strategies-and-frameworks/powering-australia>>.

<sup>346</sup> Alicia Payne MP, *Solar Banks* <<https://www.aliciapayne.com.au/policy-folder/solar-banks/>>.

<sup>347</sup> Alicia Payne MP, *Powering the Regions Fund* <<https://www.aliciapayne.com.au/policy-folder/powering-the-regions-fund/>>.

<sup>348</sup> Department of Climate Change, Energy, the Environment and Water, *Powering the Regions Fund – Consultation Update, January 2023* <[https://storage.googleapis.com/files-au-climate/climate-au/p/prj241b38d0d41c438186c1f/public\\_assets/PRF%20-%20Consultation%20Update%20Paper%20-%20January%202023.pdf](https://storage.googleapis.com/files-au-climate/climate-au/p/prj241b38d0d41c438186c1f/public_assets/PRF%20-%20Consultation%20Update%20Paper%20-%20January%202023.pdf)>

<sup>349</sup> Australian Government Department of Climate Change, Energy, the Environment and Water, *National Electric Vehicle Strategy – Consultation Paper* (September 2022) <[https://storage.googleapis.com/converlens-au-industry/industry/p/prj21fdd5bb6514260f47fcd/public\\_assets/National%20Electric%20Vehicle%20Strategy%20Consultation%20Paper.pdf](https://storage.googleapis.com/converlens-au-industry/industry/p/prj21fdd5bb6514260f47fcd/public_assets/National%20Electric%20Vehicle%20Strategy%20Consultation%20Paper.pdf)>.

<sup>350</sup> Prime Minister, Treasurer and Minister for Climate Change and Energy, *National Net Zero Authority*, Media Release 5 May 2023 <<https://www.pm.gov.au/media/national-net-zero-authority>>.

<sup>351</sup> The Hon Dr Jim Chalmers, Federal Treasurer *Capitalism after the Crises* (February 2023), <<https://www.themonthly.com.au/issue/2023/february/jim-chalmers/capitalism-after-crises#mtr>>.

<sup>352</sup> Emma Brancatisano, *Where each Australian state and territory stands on net zero*, SBS News (16 October 2021) <<https://www.sbs.com.au/news/article/where-each-australian-state-and-territory-stands-on-net-zero/v6sphcls4>>; Point Advisory, *Tasmania: Net Zero by 2030 – Emissions Pathway Review Summary Report*

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emissions reduction target of 75-80% by 2035, and has brought forward Victoria's net zero emissions target by five years to 2045.<sup>353</sup> The newly elected NSW Government has announced it will establish the NSW Energy Security Corporation seeded with an initial \$1 billion investment from the Restart NSW Fund. Its mandate will be to partner with industry to deliver energy transition infrastructure, including medium to long-duration storage such as pumped hydro, community batteries, and other technologies which provide dispatchable grid stability.<sup>354</sup> The New South Wales Transmission Acceleration Fund, is a \$1.2 billion fund aimed at fast-tracking the required Renewable Energy Zones by funding the development stages of transmission and other infrastructure.<sup>355</sup>

733 Labor Energy Minister for NSW, Penny Sharpe, has noted the need to accelerate the state's transition to renewables in NSW:

We're trying to undertake a momentous task in the shortest period of time that's ever been asked for us to do it.

The infrastructure to replace the coal-fired power stations in the past would have taken around 30 years, I'm told, to build. We're trying to do it in 15.<sup>356</sup>

## 6.5 The challenges for Australia's energy transition

### 6.5.1 Australia has ambitious targets

734 Australia has ambitious targets enshrined in legislation to reduce greenhouse gas emissions to 43% below 2005 levels by 2030 and to achieve net zero by 2050.<sup>357</sup> The Federal Government's Powering Australia plan contemplates that Australia will achieve 82% renewable generation by 2030.<sup>358</sup> AEMO's ISP similarly contemplates that Australia will achieve 83% renewable generation by 2030/2031.<sup>359</sup>

735 Achieving close to 100% renewables by 2050 coupled with a proposed electrification of the broader economy (moving to electric vehicles, hot water and cooking systems, etc.) will require continued, very significant renewables development in the period 2030 to 2050.

### 6.5.2 Achieving those targets will require unprecedented new investment

736 AEMO estimates that -

- (a) over 125 GW of new renewable energy sources (solar and wind only) are needed by 2050 to meet demand as coal-fired generators are retired;<sup>360</sup>
- (b) this requires maintaining the current rate of renewables development every year to nearly treble the existing 16 GW of wind and solar generation by 2030, and then doubling that capacity by 2040, and again by 2050; and<sup>361</sup>

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<[https://www.dpac.tas.gov.au/data/assets/pdf\\_file/0029/136829/Tasmanian\\_Emissions\\_Pathway\\_Review\\_-\\_Summary\\_Report.pdf](https://www.dpac.tas.gov.au/data/assets/pdf_file/0029/136829/Tasmanian_Emissions_Pathway_Review_-_Summary_Report.pdf)>.

<sup>353</sup> Dan Andrews, *Labour's plan for net zero emissions* <<https://www.danandrews.com.au/labors-plan-for-net-zero-emissions>>.

<sup>354</sup> Infrastructure Partnerships Australia, Election Monitor NSW – Red Book, <<https://infrastructure.org.au/infrastructure-election-monitor-nsw-red-book/#energy>>.

<sup>355</sup> Matt Kean, *\$1.2 Billion to fast track renewable energy zones*, Treasury NSW (10 June 2022)

<<https://www.treasury.nsw.gov.au/sites/default/files/2022-06/Matt-Kean-med-rel-%241.2-billion-to-fast-track-renewable-energy-zones.pdf>>.

<sup>356</sup> The Guardian, *Labor warns NSW facing a 'momentous task' in transition to renewables*, 2 May 2023

<<https://www.theguardian.com/australia-news/2023/may/04/labor-warns-nsw-facing-a-momentous-task-in-transition-to-renewables>>.

<sup>357</sup> Australian Government Department of Industry, Science, Energy and Resources, *Australia's Nationally Determined Contribution – Communication 2022* <<https://unfccc.int/sites/default/files/NDC/2022-06/Australias%20NDC%20June%202022%20Update%20%283%29.pdf>>.

<sup>358</sup> The Australian Government, Department of Climate Change, Energy, the Environment and Water, *Powering Australia* <<https://www.energy.gov.au/government-priorities/australias-energy-strategies-and-frameworks/powering-australia>>.

<sup>359</sup> AEMO 2022 ISP, page 7 (**Annexure 8**).

<sup>360</sup> AEMO 2022 ISP, page 38 (**Annexure 8**).

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- (c) the total spend needed to develop, operate and maintain the generation, storage and transmission investments in the NEM to 2050 is around \$320 billion.<sup>362</sup>
- 737 The extent of the task ahead was echoed in a speech by Origin CEO, Frank Calabria, in November 2022<sup>363</sup> where Calabria outlined the path to achieve Australia's 2030 targets:
- (a) around \$76 billion needs to be invested in energy infrastructure;<sup>364</sup>
  - (b) 44 GW of renewables need to be built – of which 28 GW will come from utility scale assets that connect to the grid like renewables (which represents ~110 projects of around 250 MW each) and 16 GW in behind the meter solutions;<sup>365</sup>
  - (c) 15 GW of firming capacity needs to be installed<sup>366</sup> (from sources of energy such as battery storage and pumped hydro that effectively 'firm up' supply from renewable energy resource when required) (which represents a trebling of current firming capacity);<sup>367</sup> and
  - (d) 10,000 kilometres of new transmission needs to be built.<sup>368</sup>
- 738 Investments of this magnitude will be challenging, given inflationary pressures and the reality that infrastructure projects in Australia tend to take longer and cost more than initially expected.<sup>369</sup> This is exacerbated by the global supply chain shortages arising from the increased and concurrent global demand for infrastructure, labour, materials and equipment.<sup>370</sup> In addition, demand for skilled labour in large-scale renewables is forecast to double by 2027 (compared to 2022 levels).<sup>371</sup>
- 739 It is estimated that Australia will need to double its electricity output to ~320 TWh per year by 2050 to serve the increasing electrification of transport, industry, office and home – replacing gas, petrol and other fuels.<sup>372</sup> The graph in below depicts the exponential increase in renewable capacity needed before 2050 to: (i) support the decline in coal-fired capacity in the NEM (with 14 GW expected to withdraw by 2030); and (ii) double the generation of electricity.<sup>373</sup> Absent coal, nearly nine times more utility-scale variable renewable energy (**VRE**) capacity and five times more solar photovoltaics (**PV**) must be developed to meet this expected demand.<sup>374</sup>

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<sup>361</sup> AEMO, *2022 Integrated System Plan – For the National electricity Market (June 2022)*, page 36 <<https://aemo.com.au/-/media/files/major-publications/isp/2022/2022-documents/2022-integrated-system-plan-isp.pdf?la=en>> (**AEMO 2022 ISP**) (**Annexure 8**).

<sup>362</sup> AEMO 2022 ISP, page 15 fn 4 (**Annexure 8**).

<sup>363</sup> Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/delivering-the-biggest-infrastructure-challenge-in-a-century/>> (**Annexure 9**).

<sup>364</sup> RepuTex Energy, *The Economic Impact of the ALP's Powering Australia Plan* (December 2021), page 5 <[https://d3n8a8pro7vhmx.cloudfront.net/lean/pages/530/attachments/original/1638498499/REPUTEX\\_The\\_economic\\_impact\\_of\\_the\\_ALP's\\_Powering\\_Australia\\_Plan\\_Summary\\_Report\\_1221.pdf?1638498499](https://d3n8a8pro7vhmx.cloudfront.net/lean/pages/530/attachments/original/1638498499/REPUTEX_The_economic_impact_of_the_ALP's_Powering_Australia_Plan_Summary_Report_1221.pdf?1638498499)>.

<sup>365</sup> Based on internal Origin calculations using AEMO 2022 ISP data, see Figure 1 <<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Faemo.com.au%2F-%2Fmedia%2Ffiles%2Fmajor-publications%2Fisp%2F2022%2F2022-documents%2Fchart-data.xlsb%3F%3Den%3DwdOrigin=BROWSELINK>>

<sup>366</sup> Based on internal Origin calculations using AEMO 2022 ISP data, see Figure 1 <<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Faemo.com.au%2F-%2Fmedia%2Ffiles%2Fmajor-publications%2Fisp%2F2022%2F2022-documents%2Fchart-data.xlsb%3F%3Den%3DwdOrigin=BROWSELINK>>

<sup>367</sup> AEMO 2022 ISP, page 8 (**Annexure 8**).

<sup>368</sup> AEMO 2022 ISP, page 8 (**Annexure 8**).

<sup>369</sup> Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/delivering-the-biggest-infrastructure-challenge-in-a-century/>> (**Annexure 9**); Frank Calabria, *Examining the impact of the energy transition on customers* (7 June 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/examining-the-impact-of-the-energy-transition-on-customers/>> (**Annexure 16**).

<sup>370</sup> AEMO 2022 ISP, page 96 (**Annexure 8**).

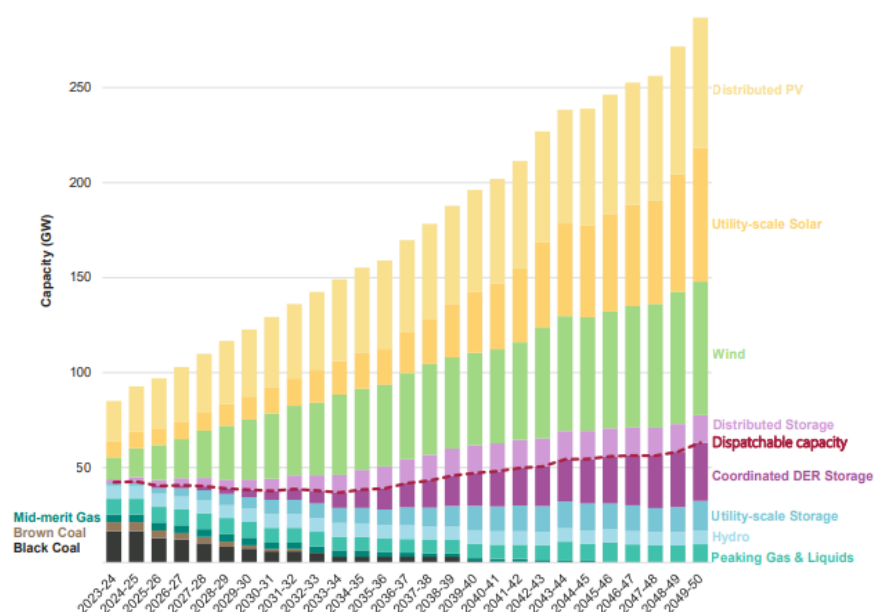
<sup>371</sup> AEMO 2022 ISP, page 98 (**Annexure 8**).

<sup>372</sup> AEMO 2022 ISP, page 9 (**Annexure 8**).

<sup>373</sup> AEMO 2022 ISP, page 9 (**Annexure 8**).

<sup>374</sup> AEMO 2022 ISP, page 8. (**Annexure 8**).

Figure 83: Forecast NEM capacity to 2050, Step Change scenario<sup>375</sup>



Source: AEMO, 2022 Integrated System Plan – For the National electricity Market (June 2022), page 9

### 6.5.3 The current rate of investment will not achieve those targets by 2030

740 The current rate of investment in renewables is below that required to meet the targets referred to above. Put simply, unless something changes, and the level of investment increases, Australia will not meet its 2030 targets.

741 In a recent speech at a CEDA forum, Ian Learmonth, CEFC chief executive said:

We estimate that some \$120 billion of capital expenditure is needed to finance new solar, wind, transmission, storage and ancillary services to 2030 in order to meet our ambitious national renewable energy and emissions goals.

We need to install an estimated 29 GW of large-scale renewable generation – that’s about 3.6 GW a year or 300 MW per month (a decent sized wind farm a month) – in order to reach 82 per cent renewables by 2030. To give you an understanding of the uplift required to get there, last year we installed just 2.3 GW of large-scale renewable energy capacity.<sup>376</sup>

742 The comparatively slow pace of renewables development is illustrated in the latest AER Wholesale markets quarterly Q4 2022, which observed that:<sup>377</sup>

- (a) in CY 21, around 2.6 GW of solar, wind and battery capacity entered the NEM;
- (b) in CY 22, around 2.5 GW of solar, wind and battery capacity entered the NEM;
- (c) the AER expects that, of the 3.8 GW of proposed utility scale wind, solar and storage capacity that has been classified by AEMO as committed, approximately 2.2 GW will enter the NEM in CY 23.

743 This was echoed in a recent report by the Clean Energy Council<sup>378</sup> on renewable projects in Australia over the first quarter of 2023, which observed that:

<sup>375</sup> AEMO 2022 ISP, page 9. (Annexure 8).

<sup>376</sup> The Australian Business Review, Australia 'behind the pace' on 2030 renewables targets: CEFC, 15 May 2023.

<sup>377</sup> AER, Wholesale markets quarterly Q4 2022, published February 2023 <<https://www.aer.gov.au/wholesale-markets/performance-reporting/wholesale-markets-quarterly-q4-2022>>.

<sup>378</sup> Clean Energy Council, Renewable Projects Quarterly Report Q1 2023.

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- (a) quarterly investment in financially committed generation and storage projects reached \$400 million, the second lowest quarterly result since data collection began in Q1 2017.
- (b) for the first time since the Clean Energy Council began recording data in 2017, zero generation projects reached the critical stage of financial commitment.
- (c) the first quarter of 2023 didn't see any generation projects reach financial close.
- (d) the Rangebank BESS in Victoria was the only storage project and indeed the only renewable energy project to reach financial close in Q1 2023, adding 400 MWh of storage. This was half of what was seen in Q4 2022, and nearly 2,500 MWh less than what was seen 12 months ago in Q2 2022.

744 **Figure 84** shows Brookfield's estimates of historical renewables in the NEM over the last 10 years, compared to the renewables development that will be needed to meet the target assumed for 2030 in AEMO's ISP. Over the last 10 years, the average volume of renewable capacity developed was 1.7 GW per year, and the average volume over the last two years was 2.6 GW per year. This will need to accelerate to 4.2 GW per year over the next seven years in order to achieve the 2030 target.

**Figure 84: Historical and forecast renewables development in Australia (2013 – 2030)**

Summary							
Metrics	Start Date	Capacity at Start (GW)	End Date	Capacity at End (GW)	Difference (GW)	Years	Avg. GW per year
Historical Developments over the last 10 years	Aug 2013	10.1	May 2023	27.5	17.3	10	1.7
Historical Developments over the last 7 years	Aug 2016	11.9	May 2023	27.5	15.5	7	2.2
Historical Developments over the last 5 years	Jul 2018	14.2	May 2023	27.5	13.3	5	2.7
Historical Developments over the last 2 years	May 2021	22.3	May 2023	27.5	5.2	2	2.6
Historical Developments over the last year	May 2022	24.6	May 2023	27.5	2.9	1	2.9
Required developments to 2030	May 2023	27.5	Jun 2030	56.9	29.4	7	4.2

Historical Renewables Installed (MW)	Aug 2013	Aug 2016	Jul 2018	May 2021	May 2022	May 2023
Large Scale Wind	MW 2,574	3,708	5,114	8,815	10,055	10,300
Large Scale Solar	MW -	232	960	5,203	5,901	8,425
Large Scale Storage / Hydro	MW 7,569	7,988	8,121	8,253	8,612	8,745
<b>Installed Large Scale Renewables</b>	<b>MW 10,143</b>	<b>11,927</b>	<b>14,195</b>	<b>22,271</b>	<b>24,567</b>	<b>27,471</b>

Primary Source	AEMO NEM Generation (Aug-2013)	AEMO NEM Generation (Aug-2016)	AEMO NEM Generation (Jul-2018)	AEMO NEM Generation (May 2021)	AEMO NEM Generation (May 2022)	NEM Generation Information - May 2023
Secondary Source	State of the Energy Market 2013		State of the Energy Market 2018			

Renewable Generation Required	Large Scale Solar	Large Scale Wind	Large Scale Storage / Hydro	Total	Total Capacity (Existing, May-23)	% Renewables
FY30 Forecast (AEMO 2022 ISP)	MW 12,204	31,523	13,142	56,870	62,909	43.7%
Current (May-23, AEMO NEM Generation)	MW 8,425	10,300	8,745	27,471		
<b>Additional Renewables by 2030</b>	<b>MW 3,779</b>	<b>21,223</b>	<b>4,397</b>	<b>29,399</b>		
Years to FY30 (Jun-30)	Years 7	7	7	7		
<b>Additional Renewables p.a. to 2030</b>	<b>MW p.a. 540</b>	<b>3,032</b>	<b>628</b>	<b>4,200</b>		

Source: Brookfield, using various information from AEMO and the State of the Energy Market Reports

745 Achieving the very significant increase in renewables generation required to meet Australia's targets will require a dramatic increase in private sector investment in renewables and in transitioning companies like Origin Energy Markets business.

746 In the face of such challenges, the Hon Dr Jim Chalmers, has recognised the importance of co-investment.<sup>379</sup>

Co-investment is a powerful tool at our disposal. The Clean Energy Finance Corporation has been a great success, partnering with investors to direct capital where it can have the greatest impact, not by subsidising returns but by helping structure investment vehicles in a rapidly emerging economic sector. We will employ this co-investment model in more areas of the economy, with programs already underway in the industry, housing and electricity sectors.

747 Collaboration is just as important as co-investment. The private sector is key and central to sustainable growth, and there's a genuine appetite among so many forward-looking businesspeople and investors for something more aligned with their values, and our national goals.

<sup>379</sup> Federal Treasurer the Hon Dr Jim Chalmers, *Capitalism after the Crises* (February 2023), <<https://www.themonthly.com.au/issue/2023/february/jim-chalmers/capitalism-after-crises#mtr>>.

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### 6.5.4 Global context

748 Australia's transition takes place in the context of the *global* transition to net zero. Globally, the availability of, and access to, the resources needed to achieve the transition are constrained. With 194 countries having committed to the Paris Agreement,<sup>380</sup> there is fierce competition to secure the necessary investment, skills and raw materials. It is reported that global energy investment increased by over 8% in 2022 to reach a total of US\$2.4 trillion.<sup>381</sup>

749 Last year, the United States of America introduced the *Inflation Reduction Act (IRA)*, a US\$369 billion taxpayer-funded incentive scheme aimed at turbocharging America's investment in renewable energy, electrification and the development of clean industries such as green hydrogen.<sup>382</sup>

750 The Clean Energy Council's chief executive, Kane Thornton, has noted that the IRA is a 'game changer', creating 'enormous incentives for... green hydrogen and renewable energy to be built in the USA' resulting in a critical skills and resources drain in Australia.<sup>383</sup> Thornton went on to say:

Australia has a prime opportunity to become a clean energy superpower, but the brightest minds and the biggest wallets are now looking to the US for their best opportunity.<sup>384</sup>

[Australia is] going to need to take some strong measures to try and match to some degree what's on offer in the United States because if we don't, we're just going to see that investment and that renewable technology head offshore.<sup>385</sup>

### 6.6 The adverse consequences of inadequate investment in Australia's energy transition

751 The consequences of inadequate investment in Australia's energy transition are significant and include price volatility, price uncertainty, system unreliability, and system instability. Each is addressed below.

- (a) **Energy price volatility due to ageing coal-fired plants:** by 2030, 55% of Australia's coal-fired power stations will be over 40 years old and nearing the end of their technical lives.<sup>386</sup> It will be extremely costly to run, maintain or extend the life of these power plants, even for a short period, given the substantial costs associated with maintaining and refurbishing them (ie, repairs, testing, inspections, upgrades etc).<sup>387</sup> If replacement renewable generation and associated transmission infrastructure is not ready when the coal-fired power stations close, electricity prices are likely to be higher. This is because generation from gas-fired and remaining coal fired generation (which is more expensive) will need to be dispatched, with supply more likely to be impacted by thermal plant outages<sup>388</sup> or physical gas shortages.<sup>389</sup>

<sup>380</sup> United Nations Climate Change, *The Paris Agreement*, <<https://unfccc.int/process-and-meetings/the-paris-agreement>>.

<sup>381</sup> World Economic Forum, *These charts show record renewable energy investment in 2022*, 7 July 2022

<<https://www.weforum.org/agenda/2022/07/global-renewable-energy-investment-iew/>>.

<sup>382</sup> ABC News, *Australia urged to boost clean energy spending over claims 'mammoth' US green subsidies bill a threat* (13 February 2023), <<https://www.abc.net.au/news/2023-02-13/australia-urged-to-respond-to-mammoth-us-green-subsidies/101942366>>.

<sup>383</sup> ABC News, *Australia urged to boost clean energy spending over claims 'mammoth' US green subsidies bill a threat* (13 February 2023), <<https://www.abc.net.au/news/2023-02-13/australia-urged-to-respond-to-mammoth-us-green-subsidies/101942366>>.

<sup>384</sup> Clean Energy Council, *Biden's Clean Energy Arms Race puts Australian Economy on the Back Foot* (14 February 2023), <<https://www.cleanenergycouncil.org.au/news/bidens-clean-energy-arms-race-puts-australian-economy-on-the-back-foot>>.

<sup>385</sup> ABC News, *Australia urged to boost clean energy spending over claims 'mammoth' US green subsidies bill a threat* (13 February 2023), <<https://www.abc.net.au/news/2023-02-13/australia-urged-to-respond-to-mammoth-us-green-subsidies/101942366>>.

<sup>386</sup> Climate Council, *End of the Line: Coal in Australia*, page 10 <[https://www.climatecouncil.org.au/wp-content/uploads/2018/07/CC\\_MVSA0148-Report-End-of-the-Line-Coal\\_V3-FA\\_Low-Res\\_Single-Pages.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2018/07/CC_MVSA0148-Report-End-of-the-Line-Coal_V3-FA_Low-Res_Single-Pages.pdf)>.

<sup>387</sup> Climate Council, *End of the Line: Coal in Australia*, page 10 <[https://www.climatecouncil.org.au/wp-content/uploads/2018/07/CC\\_MVSA0148-Report-End-of-the-Line-Coal\\_V3-FA\\_Low-Res\\_Single-Pages.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2018/07/CC_MVSA0148-Report-End-of-the-Line-Coal_V3-FA_Low-Res_Single-Pages.pdf)>.

<sup>388</sup> Climate Council, *End of the Line: Coal in Australia*, page 10 <[https://www.climatecouncil.org.au/wp-content/uploads/2018/07/CC\\_MVSA0148-Report-End-of-the-Line-Coal\\_V3-FA\\_Low-Res\\_Single-Pages.pdf](https://www.climatecouncil.org.au/wp-content/uploads/2018/07/CC_MVSA0148-Report-End-of-the-Line-Coal_V3-FA_Low-Res_Single-Pages.pdf)>.

<sup>389</sup> Energy Security Board, *Health of the National Electricity Market 2022*, page 21 <[https://www.datocms-assets.com/32572/1664344871-2022\\_health-of-the-nem.pdf](https://www.datocms-assets.com/32572/1664344871-2022_health-of-the-nem.pdf)> (*ESB Health of the NEM Report 2022*) (Annexure 17).



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- (b) **Threats to system reliability:** the transfer to renewables is also creating challenges to the ability of the power system to consistently meet customer demand.<sup>390</sup> This is likely to lead to AEMO intervening in the NEM as it did in 2022, particularly if system security is at risk.<sup>391</sup> The need for electricity to be supplied when renewables are not generating due to suboptimal weather conditions, has created a need for substantial firming capacity for example in the form of gas, pumped hydro, and grid scale batteries.<sup>392</sup> According to AEMO's recent electricity reliability forecast, system reliability risks are set to increase across NEM mainland regions at various stages between 2027-2032, given the limited existing pipeline of 'committed' generation projects.<sup>393</sup>
- (c) **Threats to system stability:** system stability refers to the power system's technical ability to withstand shocks and disturbances.<sup>394</sup> The risk of system outages increases as synchronous generators<sup>395</sup> that provide system inertia<sup>396</sup> (for example, coal and gas) are retired and replaced with inverter based renewable generation that does not provide inertia (wind and solar).<sup>397</sup> Again the solution involves significant and timely investment in renewables and firming as well as the development of new technology. In all cases, failing to simultaneously manage the speed and scale of replacing existing capacity in the NEM creates risk to system stability.<sup>398</sup>
- (d) **Price uncertainty for consumers:** over time, relying on renewables should reduce electricity prices<sup>399</sup> and the potential for global events (like the war in Ukraine) which impact on fossil fuel prices to impact electricity prices.<sup>400</sup> In the short term, however, the significant investment required in the transition, among other factors like recent surges in fuel costs, is likely to put upward pressure on electricity prices for consumers.<sup>401</sup> Timely and cost effective investment, including in respect of solutions for consumers to manage their energy use, is likely to reduce the potential short term price effects of the transition.<sup>402</sup> If price shocks are not properly mitigated by timely investment, the broad community support on which Australia's energy transition relies may be undermined.<sup>403</sup>

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<sup>390</sup> AEMO 2022 ISP, pages 48 and 51 (**Annexure 8**); ESB Health of the NEM Report, page 13 (**Annexure 17**).

<sup>391</sup> AEMO 2022 ISP, pages 7 and 8 (**Annexure 8**); ESB Health of the NEM Report 2022, page 14 (**Annexure 17**).

<sup>392</sup> AEMO 2022 ISP, page 51 (**Annexure 8**).

<sup>393</sup> AEMO 2023 Update to 2022 Electricity Statement of Opportunities report (2023) pages 11-12 <[https://aemo.com.au/-/media/files/electricity/nem/planning\\_and\\_forecasting/nem\\_esoo/2023/february-2023-update-to-the-2022-esoo.pdf?la=en&hash=1AED91846C35DE3DE0BFC071A2228EAD](https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2023/february-2023-update-to-the-2022-esoo.pdf?la=en&hash=1AED91846C35DE3DE0BFC071A2228EAD)> (**AEMO 2023 ESO Update Report**).

<sup>394</sup> State of the Energy Market 2022 – Report, page 53 (**Annexure 12**).

<sup>395</sup> Synchronous generators produce alternating current (**AC**) electricity. 'They have a heavy spinning rotor that provides synchronous inertia that slows down the rate of change of frequency. Hydro generators, thermal generators such as coal, gas and biomass, and solar thermal generators are synchronous. Synchronous generators help in voltage control by producing and absorbing reactive power and also provide high fault current to improve system strength.' See, Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future* (2017) page 41 <<https://www.energy.gov.au/sites/default/files/independent-review-future-nem-blueprint-for-the-future-2017.pdf>>.

<sup>396</sup> 'Physical inertia from synchronous machines plays an important role in slowing the rate of change of frequency when there is a mismatch between supply and demand, allowing time for frequency control mechanisms to respond.' See, Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future* (2017) page 51 <<https://www.energy.gov.au/sites/default/files/independent-review-future-nem-blueprint-for-the-future-2017.pdf>>.

<sup>397</sup> ESB Health of the NEM Report, page 13 (**Annexure 17**); Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future* (2017), pages 32 and 33 <<https://www.energy.gov.au/sites/default/files/independent-review-future-nem-blueprint-for-the-future-2017.pdf>>; AEMO 2022 ISP, page 58 (**Annexure 8**).

<sup>398</sup> Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/delivering-the-biggest-infrastructure-challenge-in-a-century/>> (**Annexure 9**); AEMO 2022 ISP, page 26 and 27 (**Annexure 8**).

<sup>399</sup> ESB Health of the NEM Report 2022, pages 6 and 8 (**Annexure 17**).

<sup>400</sup> ESB Health of the NEM Report 2022, page 7 (**Annexure 17**).

<sup>401</sup> ESB Health of the NEM Report 2022, pages 6 and 8 (**Annexure 17**).

<sup>402</sup> ESB Health of the NEM Report 2022, pages 6 and 9 (**Annexure 17**).

<sup>403</sup> Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy (**Annexure 9**); AEMO 2022 ISP, page 95 (**Annexure 8**).

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- 752 There is broad consensus among Australia's key energy regulators as to what Australia needs in order to mitigate these risks. The Energy Security Board has stated:<sup>404</sup>
- Our best strategy to manage the risk of the transition is to build replacement assets quickly, while still maintaining discipline over costs, in advance of thermal generation retirements. This will reduce our exposure to the shocks of international gas and coal price movements, reduce our reliance on ageing assets and allow consumers to benefit from strongly connected, geographically diverse renewable energy resources.
- 753 The need to 'drive down emissions while ensuring secure, affordable energy supplies' has also been acknowledged by the Hon Chris Bowen.<sup>405</sup>
- 754 AEMO has identified that immediate action is needed to progress actionable projects, lending support to mechanisms that facilitate earlier progression of projects, government financing support, fast-tracked licencing and environmental assessments, and streamlining regulatory frameworks governing critical transmission projects.<sup>406</sup> The importance of urgency is reflected in the AEMO's 2022 ISP more broadly,<sup>407</sup> and in specific State and Federal Government measures which support faster progression of projects (as discussed at section 6.4 above). Urgent progression of the investments needed for Australia's energy transition is even more critical given the current national concerns around the price and future of Australia's energy.<sup>408</sup>
- 755 While the current Government's investment and underwriting schemes are significant and will make an impact, it is clear that private capital has a key role to play in Australia's energy transition. This has been acknowledged by the Prime Minister:
- The new [2030] target reflects my Government's resolve to urgently step up the pace of action, and work alongside global partners and particularly with our Pacific family, to tackle the climate crisis and keep 1.5°C within reach.<sup>409</sup>
- 756 At an address to the Sydney Energy Forum,<sup>410</sup> the Prime Minister noted that in order to reach net zero emissions by 2050, investment in clean energy must more than triple globally, and that Australia will require a renewable energy supply around six times greater than its current annual solar and wind energy generation.<sup>411</sup> He went on to say:
- It is essential that the unprecedented levels of investment in clean energy technologies required over the coming decades unlocks more diverse and secure supply chains than we have today.<sup>412</sup>
- 757 The need for collaboration among government, industry and private capital has also been acknowledged by the Hon Chris Bowen, noting that efforts to drive down emissions would require the Government 'working in collaboration with states and territories, industry, community groups and the Australian people.'<sup>413</sup> This was echoed by EY in its recent report *Seizing Australia's energy superpower opportunities: Assessing the outlook for Australia in a net zero world* where it stated:

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<sup>404</sup> ESB Health of the NEM Report 2022, page 7 (**Annexure 17**).

<sup>405</sup> Prime Minister of Australia, Minister for Climate Change and Energy, *Stronger Action on Climate Change* (16 June 2022) <<https://www.pm.gov.au/media/stronger-action-climate-change>>.

<sup>406</sup> AEMO 2022 ISP, page 16 (**Annexure 8**).

<sup>407</sup> AEMO 2022 ISP, page 25 (**Annexure 8**).

<sup>408</sup> AEMO 2022 ISP, page 101 (**Annexure 8**).

<sup>409</sup> Prime Minister of Australia, Minister for Climate Change and Energy, *Stronger Action on Climate Change* (16 June 2022) <<https://www.pm.gov.au/media/stronger-action-climate-change>>.

<sup>410</sup> Prime Minister of Australia, Address to the Sydney Energy Forum (12 July 2022) <<https://www.pm.gov.au/media/address-sydney-energy-forum>>.

<sup>411</sup> Prime Minister of Australia, Address to the Sydney Energy Forum (12 July 2022) <<https://www.pm.gov.au/media/address-sydney-energy-forum>>.

<sup>412</sup> Prime Minister of Australia, Address to the Sydney Energy Forum (12 July 2022) <<https://www.pm.gov.au/media/address-sydney-energy-forum>>.

<sup>413</sup> Prime Minister of Australia, Minister for Climate Change and Energy, *Stronger Action on Climate Change* (16 June 2022) <<https://www.pm.gov.au/media/stronger-action-climate-change>>.

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To be blunt: the time for action is upon us. Delivering near-zero carbon electricity while maintaining energy system stability requires fastpaced and well-coordinated action by government, energy system managers, energy businesses and investors.<sup>414</sup>

### 6.7 Origin's energy transition

- 758 Origin has a central role to play in Australia's energy transition. Origin is one of the three largest energy retailers in eastern Australia and owns and operates Australia's largest coal-fired power station, the Eraring Power Station.
- 759 On 26 August 2022, Origin released its first Climate Transition Action Plan (**CTAP**), which outlines the company's strategy and ambition to become a leader in the energy transition.<sup>415</sup>
- 760 Origin has implemented both short and medium term targets intended to facilitate its longer term ambition of net zero by 2050 in respect of direct and indirect greenhouse gas emissions, referred to as 'Scope 1', 'Scope 2' and 'Scope 3' emissions.<sup>416</sup> In short, by 2023, Origin has targeted an 8 million tonne cumulative reduction in Scope 1 'equity emissions'<sup>417</sup> between FY2021-FY2023 relative to the FY2017 baseline. This 2023 target was initially introduced in 2020 and has since been bolstered following achievement of this initial target early.<sup>418</sup> Further, by 2030, Origin has targeted a 40% reduction in Scope 1, 2 and 3 equity emissions intensity and a 20 million tonne reduction in absolute Scope 1, 2 and 3 equity emissions relative to the FY2019 baseline.<sup>419</sup> Origin considers medium-term emissions intensity target and long-term net zero ambition to be consistent with the Paris Agreement.<sup>420</sup>

#### (a) Strategy to reach 2030 targets

- 761 Origin's broader strategies for reaching its 2030 targets are described in the CTAP as follows:
- (a) **Reducing emissions from its existing operations:**<sup>421</sup> this involves prioritising actions that enable direct emissions reductions rather than relying on carbon offsets. Critical to this strategy is the early retirement of Australia's largest and Origin's only coal-fired generator, the Eraring Power Station, as early as August 2025, potentially seven years ahead of previously planned closure in 2032. This would bring forward Origin's complete exit from coal-fired power generation. In the meantime, Origin has been exploring mechanisms to improve Eraring's performance, including an artificial intelligence based program to improve the plant's heat rate, which has avoided more than 340,000 tonnes of carbon dioxide emissions as at the date of the CTAP.

With respect to gas, Origin considers this will remain a key component for reliability of Australia's energy system for years to come. As the upstream operator of the APLNG joint venture, Origin will focus on reducing Scope 1 and 2 operating emissions, but expects that the scope of the APLNG's operations will expand in the coming years, leading to an increase in operating emissions. Origin has also acknowledged that the support of all other shareholders in APLNG is required to manage Scope 3 emissions in particular. Notwithstanding, Origin intends to improve the efficiency and flexibility of its

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<sup>414</sup> EY, *Seizing Australia's energy superpower opportunities: Assessing the outlook for Australia in a net zero world*, An EY Net Zero Centre report, 1 May 2023, slide 19 <[https://www.ey.com/en\\_au/sustainability/the-energy-superpower-opportunity](https://www.ey.com/en_au/sustainability/the-energy-superpower-opportunity)>.

<sup>415</sup> Origin Energy CTAP 2022 (**Annexure 15**).

<sup>416</sup> **Scope 1** emissions are greenhouse gas emissions released to the atmosphere as a direct result of Origin's activities, also known as direct emissions. **Scope 2** emissions are those emissions resulting from Origin's purchases of electricity to power its offices and sites. **Scope 3** emissions are indirect emissions than Scope 2 emissions relating to Origin's value chain, including wholesale purchases of electricity from the NEM that is sold to customers, and the use of its sold products like LNG and domestic gas. See Origin Energy CTAP 2022, page 12 (**Annexure 15**).

<sup>417</sup> Equity emissions are proportional emissions from equity investments. For example, Origin's equity interest share of Australia Pacific LNG (Origin Energy CTAP 2022, page 35 (**Annexure 15**)).

<sup>418</sup> Origin Energy CTAP 2022, page 13 (**Annexure 15**).

<sup>419</sup> Origin Energy CTAP 2022, page 4 (**Annexure 15**).

<sup>420</sup> Origin Energy CTAP 2022, page 11 (**Annexure 15**).

<sup>421</sup> Origin Energy CTAP 2022, page 16 (**Annexure 15**).

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existing gas fleet by using equipment and technological advances to reduce methane venting and flaring during shutdown and maintenance events, thereby reducing overall emissions.

Origin also noted that there has been no decision on whether to develop the Canning or Cooper Eromanga gas basins, although any decision would be consistent with its ambition of reaching net zero by 2050. Following publication of the CTAP, Origin has executed agreements to exit its interest in the Canning Basin and five permits in the Cooper-Eromanga Basin, with 12 permits in the Cooper-Eromanga Basin under strategic review (see paragraph 622). Also following the CTAP, Origin divested its interests in the Beetaloo Basin in the Northern Territory.<sup>422</sup>

- (b) **Growing its portfolio of renewables and cleaner energy:**<sup>423</sup> Origin aims to grow its renewables and storage capacity within its energy generation portfolio. Recent investments in renewable and storage opportunities include the well advanced Eraring Battery in New South Wales (700 MW), Carisbrook Solar Farm in Victoria (74 MW) and Yanco Solar Farm in New South Wales (60 MW) as well as the proposed Yarrabee Solar Farm in New South Wales (up to 900 MW), Morgan Solar Farm in South Australia (250-300 MW) and Dapper Solar Farm in New South Wales (250-300 MW). Origin is also investing in Australia's green hydrogen industry which is planning to commence green hydrogen supply from the mid-2020s. To advance this, Origin is exploring domestic and export market opportunities in Bell Bay, Tasmania and the Hunter Valley in New South Wales. In addition, Origin operates one of the largest VPPs in Australia with around 449 MW of assets connected.<sup>424</sup> Origin aims to grow the volume of energy managed by its virtual power plant to 2 GW.<sup>425</sup>
- (c) **Enabling customers to decarbonise:**<sup>426</sup> Origin aims to enable its customers' decarbonisation by growing Origin's portfolio of simple, affordable low carbon products and clean energy solutions, including rooftop solar and batteries, renewables and carbon-neutral energy, EV solutions and renewables PPAs. Customers will also continue to have options to choose renewable and cleaner energy products as part of their electricity plans, including via GreenPower, Green Gas, Green LPG, Origin Go Zero (electricity), Carbon Neutral Demand Response and Carbon Neutral Solar. In March 2021, Origin launched 360 EV, an umbrella brand for all its E-mobility solutions and in early 2022, it created the new Origin Zero business division to partner with business customers in respect of their sustainable energy goals, primarily assisting with decarbonisation solutions. This strategy will also involve growing Origin's portfolio of carbon credits.

**(b) Ambition to reach net zero by 2050**

762 Beyond 2030, Origin anticipates that the bulk of its emissions will be associated with gas-fired generation, its share in APLNG's gas production and sale, and LPG distribution.<sup>427</sup> Origin is committed to continuing decarbonisation through similar strategies implemented to achieve its 2030 targets, and noting in particular Origin's investments in green hydrogen and renewables and

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<sup>422</sup> <https://www.originenergy.com.au/about/investors-media/origin-to-divest-beetaloo-basin-interests-intends-to-exit-upstream-exploration-permits/> and <https://www.originenergy.com.au/about/investors-media/origin-completes-sale-of-beetaloo-interest/>

<sup>423</sup> Origin Energy CTAP 2022, page 17 (**Annexure 15**).

<sup>424</sup> Origin Energy, 2023 Half Year Report <[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>.

<sup>425</sup> Origin Energy CTAP 2022, page 18 (**Annexure 15**); Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/delivering-the-biggest-infrastructure-challenge-in-a-century/>> (**Annexure 9**).

<sup>426</sup> Origin Energy CTAP 2022, page 19 (**Annexure 15**).

<sup>427</sup> Origin Energy CTAP 2022, page 20 (**Annexure 15**).

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the potential retirement of its gas-fired power stations (and declining gas sales) as these assets approach the end of their useful lives.<sup>428</sup>

### (c) The challenges faced by Origin in achieving its decarbonisation ambitions

763 Origin's CTAP sets out various material risks to achieving its 2030 emissions targets and 2050 ambitions. These include:<sup>429</sup>

- (a) **difficulties accessing capital and carbon markets**, including access to sufficient or affordable capital, alternative funding sources, financial instruments and carbon offsets needed to implement its strategies;
- (b) **difficulties accessing critical skills and supplies** needed to accelerate renewable and cleaner energy in a cost effective, timely and ethical manner;
- (c) **technology development may not be timely or cost-effective** to support Origin's energy transition strategies, in particular, the development of green hydrogen at a commercially viable scale;
- (d) **delay and uncertainty in renewable projects relative to Origin's expectations**, which may lead to a slower energy transition;
- (e) **issues accessing infrastructure and land** needed to develop the transmission and distribution infrastructure on which some renewables and cleaner energy solutions rely;
- (f) **volatility within the energy market** - there may be periods of volatility as a result of the transition away from traditional carbon intensive energy sources, impacting prices, Origin's business and the security of energy supply; and

**delay to the closure of the Eraring power station** as a result of material changes to the decommissioning timeline.<sup>430</sup> Origin has also considered the potential that Eraring and other generation could be required to run at higher output levels in the near term to meet customer demand and provide reliability to the market, in turn making it difficult for Origin to meet its 2030 emissions targets.<sup>431</sup> Origin's CTAP notes that it will *'continue to assess the market over time, and this will help inform any final decisions on the timing for closure of all four units of Eraring.'*<sup>432</sup>

## 6.8 Brookfield's approach to and extensive experience in renewables

### (a) BGTF

764 BGTF focuses on investments which accelerate the global transition to a net zero global economy while delivering risk-adjusted returns. It is co-headed by Mark Carney (Brookfield Chair and Head of Transition Investing and UN Special Envoy for Climate Action and Finance) and Connor Teskey (Head of Brookfield's Renewable Power Group and CEO of BEP). As outlined in **Figure 85** below, the central purpose of BGTF is to invest in the transformation of carbon-intensive industries, and develop clean energy sources, drawing on Brookfield's experience and leadership in renewable power. The investment in Origin Energy Markets fits BGTF's purpose as it involves the acquisition of an energy platform which requires transition to renewable power sources.

<sup>428</sup> Origin Energy CTAP 2022, page 20 (**Annexure 15**).

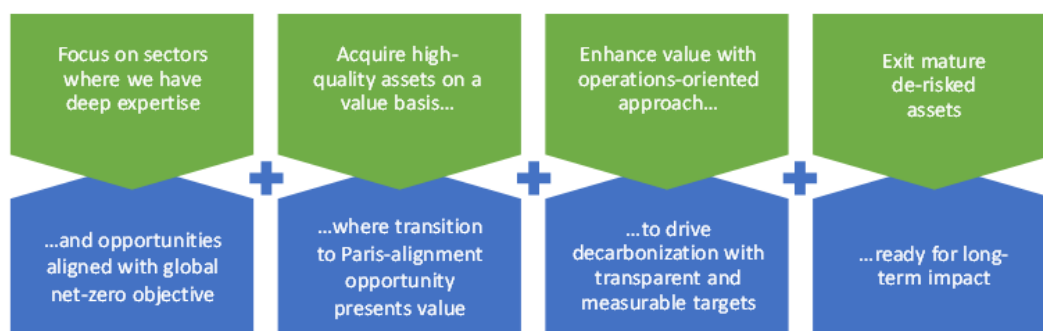
<sup>429</sup> Origin Energy CTAP 2022, page 21 (**Annexure 15**).

<sup>430</sup> Origin Energy CTAP 2022, page 21 (**Annexure 15**).

<sup>431</sup> Origin Energy CTAP 2022, page 13 (**Annexure 15**); Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/delivering-the-biggest-infrastructure-challenge-in-a-century/>> (**Annexure 9**).

<sup>432</sup> Origin Energy CTAP 2022, page 21 (**Annexure 15**).

Figure 85: BGTF's Investment Strategy



Source: Brookfield Global Transition Fund Disclosure Statement 2022, *Operating Principles for Impact Management*, pg 4

765 BGTF was established in 2021 and, at final close, raised US\$15 billion, the largest private fund raised to date in support of the global transition to a net zero economy. The purpose of the fund is to 'build on Brookfield's leadership in renewable power and deep operating capabilities to scale energy and invest capital to catalyse the transformation of carbon-intensive businesses to achieve Paris-alignment.'<sup>433</sup>

766 BGTF's impact objectives include:<sup>434</sup>

- (a) **Focus on high-quality assets that drive decarbonisation:** BGTF focuses on high-quality assets, with an emphasis on investments that present opportunities to accelerate decarbonisation and the transition to a net-zero global economy. Brookfield has been making sizeable investments in the development of clean energy generation, energy transition and decarbonisation assets for many decades, and BGTF draws on this expertise when sourcing and executing transactions.
- (b) **Investing where transitioning to net zero creates value:** Brookfield focuses on investments which provide total returns in the medium to long term. Brookfield has a track record of timing capital deployment and targeting transactions at attractive valuations, and draws on this experience along with its operational capabilities and expertise in clean energy and power markets.
- (c) **Driving decarbonisation with transparent and measurable metrics:** embedded in BGTF's investment strategy is the implementation of an Impact Measurement and Management (*IMM*) system which is used to manage and measure BGTF's impact contributions. This system provides a framework for integrating impact considerations into the screening, due diligence, planning and asset management phases of the investment process to help drive impact outcomes. Investors benefit from transparent reporting, with impact metrics measured, monitored and reported in line with investment objectives. The IMM system is aligned with recognised climate and impact management standards which allows investors to integrate results into their environmental, social and governance (*ESG*) reporting.
- (d) **Enhancing value with an operations oriented approach:** BGTF targets opportunities where it can draw on Brookfield's long-standing experience in energy transition and decarbonisation, enhancing returns while furthering BGTF's impact objectives.

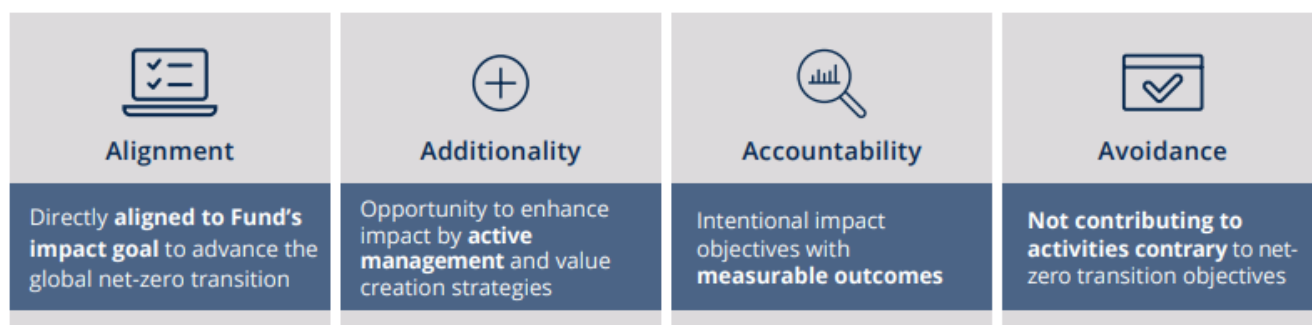
<sup>433</sup> Brookfield, *Brookfield announces initial US\$7 billion closing for Brookfield Global Transition Fund* (27 July 2021) <<https://www.globenewswire.com/news-release/2021/07/27/2269263/0/en/Brookfield-Announces-Initial-US-7-Billion-Closing-for-Brookfield-Global-Transition-Fund.html>>.

<sup>434</sup> Brookfield, *Private Placement Memorandum* (March 2021), Brookfield Global Transition Fund, pages 4-5 (**Annexure 21.1**); Brookfield, *Amended and Restated Private Placement Memorandum* (September 2021) (**Annexure 21.3**), Brookfield Global Transition Fund Disclosure Statement 2022 – Operating Principles for Impact Management (14 November 2022), pages 4 to 5 (**Annexure 20**).

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767 BGTF has developed criteria upon which it assesses every potential investment (**4A Criteria**). For BGTF to invest, it must be able to **align** the investment with the goals of the Paris Agreement. The investment (either through capital or operations) must also: (i) provide '**additionality**', that is, it must result in an outcome that would not occur but for the investment; (ii) there must be **accountability** in emissions reporting, enabling BGTF to track progress against the plan; and (iii) the investment must be able to **avoid** or mitigate other related ESG risks. These criteria are set out in BGTF's disclosure documents as shown at **Figure 86** below.

**Figure 86: The 4A Criteria**



Source: Brookfield Global Transition Fund Disclosure Statement 2022, *Operating Principles for Impact Management*, pg 5

768 Central to BGTF's 4A Criteria is 'additionality'. The requirement of 'additionality' means that BGTF will not make an investment where its capital does not meaningfully advance the impact outcomes over and above the status quo.<sup>435</sup> In practice, this means that BGTF will not pursue an investment unless it is going to have a greater contribution to that company's net zero goals than would have been achieved absent an investment from BGTF. A prerequisite for BGTF's investment in Origin Energy Markets is BGTF's ability to improve the speed and certainty of Origin Energy Market's transition to net zero and supports a conclusion that the public benefits of the Proposed Acquisition are transaction specific, as the requisite legal test requires.<sup>436</sup> Further information on BGTF's operating principles for impact management is annexed as **Annexure 20**.

769 It is clear from BGTF's investment strategy that BGTF's mandate is different to that of other investors. Many other investors tend to divest 'brown' interests and invest only in new 'green' projects, as a way of improving their emissions reporting results. In contrast, BGTF seeks to 'finance emissions' for a period of time in order to transition the asset or a business to a cleaner future (carrying the risk of a poor emissions credential while it does so). BGTF sees equal opportunity in pursuing new 'green' projects as it does in transforming a business' existing 'brown' assets.

770 At the closing of BGTF, Mark Carney noted that BGTF's aim is to 'partner with best-in-class institutions to commit the capital required to scale clean energy and catalyse companies onto Paris-aligned net-zero pathways.' Mr Carney noted that '[e]nabling the transition will require global reach, large-scale capital, and deep operating expertise in renewable energy and decarbonization', and that BGTF would draw on its leading expertise and capabilities to drive meaningful and measurable change.

771 To date, approximately US\$7.8 billion (excluding BGTF's investment in Origin Energy Markets) has been deployed or allocated from BGTF globally spanning a range of decarbonisation

<sup>435</sup> Brookfield, *Operating Principles for Impact Management – Brookfield Global Transition Fund Disclosure Statement 2022* (14 November 2022), page 6 <<https://bam.brookfield.com/sites/brookfield-ir/files/2022-11/bam-bgtf-opim-disclosure-statement-vf.pdf>> (**Annexure 20**).

<sup>436</sup> ACCC, *Merger Authorisation Guidelines* (October 2018) paragraphs 6.9, 8.2.

<<https://www.accc.gov.au/system/files/Merger%20Authorisation%20Guidelines%20-%20October%202018.pdf>>.

technologies with investments at significant scale. A full list of BGTF's investments is set out in its 2022 Annual Report contained at **Annexure 1.19**.

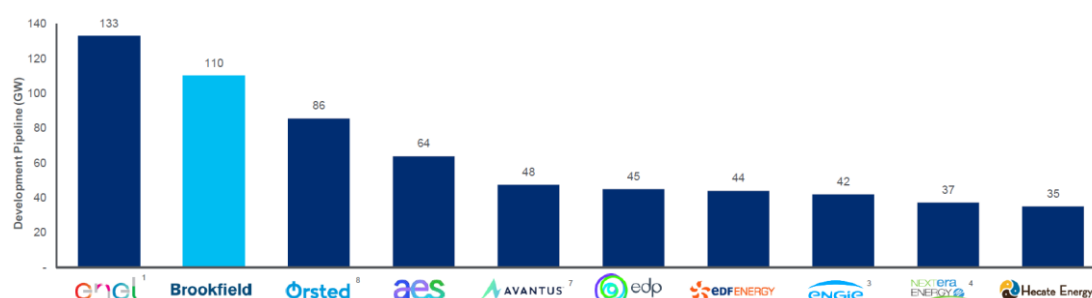
772 BGTF's investment in Origin Energy Markets is a continuation of this. To date, a transition of this scale – involving multiple aspects of the energy supply chain – has not been attempted. BGTF not only has the capital to buy a business with high emissions but brings a proven ability to build renewable generation and storage assets to replace retired assets at pace.

**(b) Brookfield**

773 The BGTF Consortium will draw on Brookfield's experience of over 100 years as a global owner and operator of assets across a range of sectors, including a diverse set of clean energy and decarbonisation assets.<sup>437</sup> Brookfield is one of the world's largest investors in renewable power and climate transition assets. It has ~25 GW of generating capacity<sup>438</sup> that provides ~70 TWh of power annually to customers globally, both in the form of onsite behind-the-meter solutions and large scale offsite solutions via corporate PPAs. It is also progressing ~10 GW development pipeline of renewable projects,<sup>439</sup> with a plan to bring online approximately 5 GW of renewable energy in 2023. **Annexure B** sets out examples of Brookfield's global renewables experience.

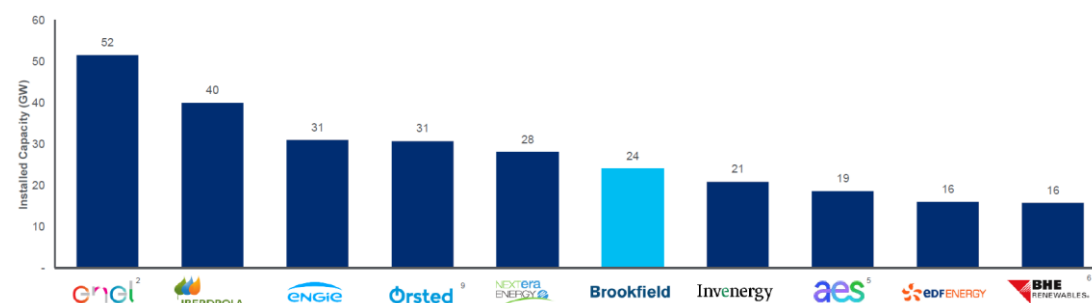
774 As seen in **Figure 87** and **Figure 88** below, Brookfield and its affiliates are an established Clean Energy 'super major' in the development of renewable generation and storage. Brookfield is among the leading renewable energy developers globally in terms of current generation capacity and development pipeline. Other clean energy 'super major' companies include Enel Green Power,<sup>440</sup> Iberdrola<sup>441</sup> and Orsted<sup>442</sup>.

**Figure 87: Top 10 global renewable developers by pipeline**



Source: Company filings, company websites, news articles (As at 31 December 2022)

**Figure 88: Top 10 global renewable developers by installed capacity**



Source: Company filings, company websites, news articles (As at 31 December 2022)

<sup>437</sup> Brookfield, *Who We Are* <<https://www.brookfield.com/about-us/who-we-are>>.

<sup>438</sup> Brookfield, *Renewable Power & Transition* <<https://www.brookfield.com/our-businesses/renewable-power-transition>>.

<sup>439</sup> Brookfield, *Brookfield Renewable – Corporate Profile* (November 2022), slide 3 <<https://bep.brookfield.com/sites/bep-brookfield-ir/files/2022-11/brookfield-renewable-corporate-profile-november-2022--vf.pdf>>.

<sup>440</sup> Enel Green Power, <<https://www.enelgreenpower.com/>>.

<sup>441</sup> Iberdrola, <<https://www.iberdrola.com/home>>.

<sup>442</sup> Orsted, <<https://orsted.com/en/about-us>>.



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- 775 Globally, Brookfield's investments are being driven by three key themes. These apply to all Brookfield funds and activities, and are referred to as 'The Three Ds':<sup>443</sup>
- (a) **Decarbonisation** – this investment theme recognises consumer preferences for electrification and lower energy consumption, and includes investments in electrification and energy efficiency, networks to support new-build renewables and assets to support alternative fuels. Investments in renewables are driven by this particular theme.
  - (b) **Deglobalisation** – this investment theme focuses on onshoring in respect of key industries, including energy security, supply chains, and semiconductors.
  - (c) **Digitalisation** – this investment recognises that data remains the world's fastest-growing commodity and there is substantial opportunity over the next five years to update data infrastructure globally.
- 776 The BGTF Consortium is also able to draw on the expertise of BEP, BGTF's cornerstone investor and Brookfield's flagship listed renewable power company. BEP operates one of the world's largest publicly traded, pure-play renewable power platforms, with a portfolio consisting of hydroelectric, wind, solar and distributed energy and sustainable solutions in North America, South America, Europe and Asia.<sup>444</sup>
- 777 BEP is a long standing owner, operator, developer and acquirer of renewable power and is increasingly focused on providing decarbonisation and energy transition as a service, helping businesses and governments globally to advance their sustainability goals. It has a leading presence across all major clean energy technologies globally, with more than 120,000 MW of operating and development capacity worldwide, including:<sup>445</sup>
- (a) 10,600 MW in hydro;
  - (b) 25,300 MW in wind;
  - (c) 55,000 MW in solar;
  - (d) 12,200 MW in distributed generation; and
  - (e) 17,300 MW in storage and other assets.
- 778 BEP's recent results demonstrate its recent track record in successfully deploying capital in the energy transition and renewable power sectors around the world. Specifically:
- (a) BEP has accelerated its capital deployment by doubling the amount deployed since 2019, putting it on track to realise its biggest year of deployment to date.<sup>446</sup>
  - (b) BEP's cash flows have grown by almost 10% per unit annually over the last decade, which has translated into strong total returns of around 17%.<sup>447</sup>
  - (c) BEP recorded its strongest year across almost every aspect of its business in 2022.<sup>448</sup>
- 779 Brookfield also has a strong track record of entering geographies and delivering large amounts of additional renewable capacity. A unique aspect of Brookfield's approach to renewable investment globally is its approach to decentralised operation at the regional or local level supported by centralised global support functions (across a number of areas including M&A, tax, finance, legal, operations, technical, regulatory and compliance, power marketing, etc.). Good examples include Brookfield's entry into Europe, China and India – see **Annexure B**.

<sup>443</sup> Brookfield, *Brookfield Investor Day presentation* (2022), slides 210-213 <<https://bn.brookfield.com/sites/brookfield-ir/files/2022-09/2022-ir-day-slides-sep12-22-updated-final%C2%A92022.pdf>> (**Annexure 22.3**).

<sup>444</sup> Brookfield, *Brookfield Renewable Corporation* <<https://bep.brookfield.com/bepc>>

<sup>445</sup> Brookfield, *Investor Day* (2022), slide 5 (**BEP Investor Day Presentation 2022**) (**Annexure 22.4**)

<sup>446</sup> BEP Investor Day Presentation 2022, slide 25 (**Annexure 22.4**)

<sup>447</sup> BEP Investor Day Presentation 2022, slide 8 and 9 (**Annexure 22.4**)

<sup>448</sup> BEP Investor Day Presentation 2022, slide 23 (**Annexure 22.4**)

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780 By drawing on Brookfield's broader global reputation, capabilities, well-established investment principles and integrated investment management focus, the BGTF Consortium is uniquely positioned to generate significant quantifiable decarbonisation results.

### 6.9 The Proposed Acquisition will add significant renewables development and storage capacity for Australia's energy transition

#### (a) Overview

781 Following completion of the Proposed Acquisition, the BGTF Consortium intends to pursue a 'green build-out' plan in Australia. This will involve building-out Origin Energy Markets internal generation to, on average, **Confidential to Brookfield: the significant majority** of its aggregate customer load requirements by 2033.

782 The 'green build-out' plan brings together complementary aspects of the Origin Energy Markets business and the BGTF Consortium to accelerate the build out of renewables for Australia.

783 While the BGTF Consortium has substantial capital to invest in renewables in Australia, it lacks the retail customer base to maximise the decarbonisation impact of its capital (ie, it would need to enter into a PPA before it could justify any significant investment into renewables in Australia). On the other hand, the Origin Energy Markets business has a large customer base comprising 4.5 million Australians, but is capital constrained in its ability to deliver on its decarbonisation ambitions in a timely manner.

784 With the Proposed Acquisition providing the required committed third party off-taker for BGTF (ie, Origin Energy Markets), the BGTF Consortium will be in a position to materially accelerate Origin Energy Markets' proposed build-out in Australia. By reason of the Proposed Acquisition, Origin Energy Markets will also have access to the required capital, procurement capabilities, and global expertise to effect the rollout.

785 Origin currently relies on a combination of owned generation, electricity supply contracts and NEM wholesale market purchases to meet consumer demand. The BGTF Consortium intends to shift away from this model, by rapidly developing new internal renewable generation and storage capacity to address Origin's wholesale electricity requirements.

786 BGTF undertook a 'bottom up' analysis of Origin Energy Markets electricity customer base based on the information provided by Origin during the due diligence process, broken down by NEM region and customer type. BGTF estimates that by 30 June 2033:

- (a) Origin Energy Markets customer load will be, in aggregate, approximately **Confidential to Brookfield: 33 - 36** TWh; and
- (b) Origin Energy Markets will require at least ~17 GW of owned and managed generation and storage in order to meet the **Confidential to Brookfield: 33 - 36** TWh customer load.<sup>449</sup>

787 Origin's CTAP sets a target for Origin to have 4 GW of renewable generation and storage capacity by 2030 (including both owned and contracted generation and storage). As discussed below, this implies Origin will develop up to 2,332 MW of **new** renewable generation and storage (both owned and contracted) between now and 2030. For the purposes of this application, the BGTF Consortium has assumed that Origin accelerates this rate and develops **new** generation and storage of 4 GW between now and 2033.

788 The BGTF Consortium's 'green build-out' plan for Origin Energy Markets goes far beyond this, providing for a build-out strategy of up to 14 GW (ie, 10 GW more than Origin is expected to achieve by 2033 absent the Proposed Acquisition). This means that the 'green build-out' plan will

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<sup>449</sup> Any gap in generation and storage will need to be bought either on the NEM or through PPAs or other hedges.

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result in Origin Energy Markets (under BGTF Consortium ownership) developing substantial additional renewable generation and storage capacity, compared to Origin's likely development path absent the Proposed Acquisition. Australia will therefore benefit from a more rapid and extensive decarbonisation than would have been the case absent the Proposed Acquisition. This is illustrated in **Figure 89** below.

**Figure 89: Origin's likely new generation and storage to 2033**

Scenario	Likely New Renewable Generation and Storage Capacity to 2033
Origin business as usual (Origin CTAP)	4 GW
Origin Energy Market's 'green build-out' plan (BGTF Consortium)	up to 14 GW
<b>Net change in Origin's renewables from BGTF Consortium acquisition</b>	10 GW

Source: BGTF Consortium

789 This will result in significant total renewable generation being built in Australia, equal to a 10 GW increment (less whatever capacity BGTF may be able to develop in the counterfactual by 2033 on a standalone basis).

790 The BGTF Consortium's 'green build-out' plan is expected to reduce absolute emissions produced by Origin Energy Markets by more than 70% by 2030. Further detail on these estimates is provided below.

791 The BGTF Consortium views Origin Energy Markets as critical to Australia's energy transition and energy security. It has, for this reason, valued Origin at \$18.7 billion. With such a significant initial capital outlay, the BGTF Consortium is committed to following through on its further investment. Brookfield proposes to invest a further \$20 to \$30 billion over the next decade to build-out Origin Energy Markets' renewables and storage business, and make Origin Energy Market's transition a successful one. This will benefit Australia and Australian consumers through an accelerated and more certain transition to net zero.

792 Origin Energy Markets is an ideal investment opportunity for the BGTF Consortium. It is currently a carbon intensive business. It has plans to close Australia's largest black coal-fired power station, Eraring, as early as August 2025 but making this plan a reality will require significant investment in renewable generation and firming capacity (batteries and pumped hydro). Origin is structurally short of electricity (ie, it generates significantly less electricity than it sells) even before the planned closure of Eraring. This creates an opportunity for the BGTF Consortium to invest in significantly more additional renewable generation than Origin is planning to do on a standalone basis to meet Origin's customer demand 'in house'.

793 These sentiments were echoed by Mark Carney, Chair of BAM Head of Transition Investing, following the signing of a binding agreement to acquire Origin Energy Markets:

As the energy transition gathers pace, what's needed is increasingly clear: faster deployment of large-scale renewables, the accelerated, responsible retirement of coal generation, and an interim, supportive role for gas as the dependable back-up fuel. Brookfield is determined that the new Origin Energy Markets will lead the way in all respects at this critical moment for the Australian economy.

794 Brookfield Asia Pacific CEO Stewart Upson went on to say:

The acquisition of Origin Energy presents Brookfield with a unique opportunity to invest at least \$20 billion and make a material difference to achieving Australia's net zero targets. We will build on the success of our global renewable power and transition business where we have a mandate to 'go

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where the emissions are' in putting billions of dollars behind an executable plan to reduce emissions at Origin. Brookfield has the capital, expertise, supply chain strength and global track record that's needed to transform Origin's generation fleet to greener sources and accelerate Australia's energy transition while ensuring network security and reliability.

### (b) Origin's current generation capacity

795 As discussed in more detail in paragraphs 374 to 0 above, Origin primarily sources electricity through (i) own generation (principally Eraring), (ii) swap contracts (typically financing instruments), and (ii) its short position (met via unhedged NEM spot market purchases).

796 As illustrated in **Figure 90** (which also so appears in chapter 3), Origin's only internal renewable generation is the Shoalhaven pumped hydro facility. It also has renewable PPAs representing approximately 19% of the nameplate capacity of its owned and contracted generation assets.

**Figure 90: Generation output (MW) of Origin's owned generation and directly contracted generation**

	Nameplate capacity (MW)	Type <sup>1</sup>	HY23			HY22			Change		
			Output (GWh)	Pool revenue (\$m)	(\$/MWh)	Output (GWh)	Pool revenue (\$m)	(\$/MWh)	Output (GWh)	Pool revenue (\$m)	(\$/MWh)
Eraring	2,922										
Units 1 - 4	2,880	Black Coal	5,345	1,109	207	5,699	468	82	(354)	640	125
Gas Turbine	42	OCGT	-	-	-	-	-	-	-	-	-
Darling Downs	644	CCGT	596	193	324	788	117	148	(192)	76	176
Osborne <sup>2</sup>	180	CCGT	229	78	341	312	24	78	(83)	54	263
Uranquinty	692	OCGT	40	18	448	134	29	213	(95)	(11)	235
Mortlake	584	OCGT	307	97	317	193	23	120	114	74	197
Mount Stuart	423	OCGT	3	4	1,467	45	19	431	(42)	(16)	1,036
Quarantine	235	OCGT	134	39	291	39	5	128	95	34	163
Ladbroke Grove	80	OCGT	34	12	363	29	4	133	6	9	230
Roma	80	OCGT	9	6	660	36	8	211	(27)	(1)	449
Shoalhaven	240	Pump/hydro	135	36	265	49	5	113	87	30	152
<b>Internal generation</b>	<b>6,080</b>		<b>6,832</b>	<b>1,592</b>	<b>233</b>	<b>7,323</b>	<b>702</b>	<b>96</b>	<b>(491)</b>	<b>890</b>	<b>137</b>
Pelican Point	240	CCGT	220			441			(220)		
Renewable PPAs	1,515 <sup>3</sup>	Solar / Wind	1,593			1,220			373		
<b>Owned and contracted generation</b>	<b>7,835</b>		<b>8,646</b>			<b>8,984</b>			<b>(338)</b>		

<sup>1</sup> OCGT stands for open cycle gas turbine; CCGT stands for combined cycle gas turbine.

<sup>2</sup> Origin has a 50 per cent interest in the 180 MW plant and contracts 100 per cent of the output.

<sup>3</sup> Nameplate capacity includes Stockyard Hill. Origin entitled to 50 per cent of its production output during the period of HY2023, then 100 per cent from January 2023.

Source: Origin Energy Half Year 2023 Report

797 The BGTF Consortium understands that:

- (a) Eraring represents the entirety of Origin's coal generation capacity and so Origin's coal-fired generation is reduced to nil once Eraring retires;
- (b) the gas fleet represents a suite of gas-fired generation capacity owned and controlled by Origin;
- (c) PPA gas reflects a dedicated offtake arrangement that Origin holds in relation to Pelican Point power station in South Australia;
- (d) PPA renewables reflect offtake agreements that Origin holds with renewable generators – these are typically run-of-plant, fixed price contracts for difference; and
- (e) solar feed in tariffs represent the estimated generation capacity of the distributed solar generation capacity (for example rooftop solar) of Origin retail customers.

### (c) Origin's current generation development plan

798 Origin's CTAP sets a target for Origin to have 4 GW of renewable generation and storage capacity by 2030 (including both owned and contracted generation and storage). Currently, Origin

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has 1,755 MW of renewable generation and storage, although this will decline to 1,668 MW<sup>450</sup> by 2030 (as renewable PPAs expire). To achieve the CTAP target, Origin would therefore need to develop 2,332 MW of new renewable generation and storage (both owned and contracted) between now and 2030.

799 The BGTF Consortium's 'green build-out' plan has a target date of 2033. To enable a like-for-like comparison, an estimate needs to be made of Origin's new renewable generation and storage by 2033. To enable this estimate to be made, the BGTF Consortium has assumed Origin would continue to develop new renewables and generation at approximately the same rate in the 2030 to 2033 period. The development of 2,332 MW in the seven year period between now and 2030 implies development per year of 333 MW. This implies that in the three years to 2033, Origin would build a further 999 MW, taking the total development of new renewable generation and storage between now and 2033 to 3,330 MW. For the purposes of this application, the BGTF Consortium has assumed that Origin accelerates this rate and develops new generation and storage of 4 GW between now and 2033.

**(d) The BGTF Consortium's 'Green Build-Out' Plan to 2033**

800 There are two central tenants to the BGTF Consortium's plans for the Origin Energy Markets business:

- (a) between \$20 – \$30 billion of proposed investment over the next decade; and
- (b) constructing up to 14 GW of new renewable generation and storage facilities in Australia.

801 This is expected to enable the retirement of one of Australia's largest coal-fired power generation plants, Eraring, and will be undertaken with the highest regard for network reliability and security.

802 The BGTF Consortium plans to develop Origin Energy Markets' owned and managed renewable generation capacity equal to approximately **Confidential to Brookfield: the significant majority** of its aggregate customer load requirements by 2033, as summarised in **Figure 91** below.

**Figure 91: Comparison of generation capacity between Origin status quo and BGTF's 'green build-out' plan**

Scenario	Target (confidential)
<b>Current Origin owned and managed large-scale generation as a proportion of customer load</b>	~50%
<b>'Green build-out' plan – capacity of owned and managed large-scale generation as a proportion of aggregate customer load</b>	<b>Confidential to Brookfield: the significant majority</b>

Source: BGTF Consortium

803 Brookfield estimates that by 30 June 2033, the Origin Energy Markets business will require at least ~17 GW of owned and managed generation and storage for an estimated **Confidential to Brookfield: 33 - 36** TWh aggregate customer load. This load, which is broadly comparable to Origin's current customer load, reflects a number of assumptions, including:

- (a) overall NEM load will grow in line with the AEMO Integrated System Plan (**ISP**) (noting the bulk of electrification growth – for example, displacing natural gas – is forecast to occur after 2030);

<sup>450</sup> This reflects a net change in position taking into account both the expiry of PPAs and the expansion of Origin's Shoalhaven pumped hydro storage scheme, which will add approximately 240 MW of new capacity.

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- (b) Origin will continue to compete in all segments of the electricity retail market and will maintain its current market share; and
- (c) as a large retailer to residential customers, the load Origin will need to service with capacity from its 'green build-out' plan will be reduced by continued uptake in rooftop solar and household batteries in Australia.

804 The BGTF Consortium has prepared a development model having regard to consumption patterns of Origin's customers showing the proposed build sequence and likely capital requirements for the new generation and storage projects. The target list has been designed as a 'proof of concept' rather than a final development plan (as there remains uncertainty as to whether or when particular projects could be developed).

805 In particular, the precise timing of individual projects may be impacted by events beyond the BGTF Consortium's control, including the speed of State plans for the development of renewable energy zones and the path of regulatory reforms such as transmission access reform.

806 In any event, the BGTF Consortium expects that Origin Energy Markets (under BGTF Consortium ownership) will likely meet this target via the development plan set out in **Figure 92** below:

**Figure 92: BGTF Consortium's proposed development plan**

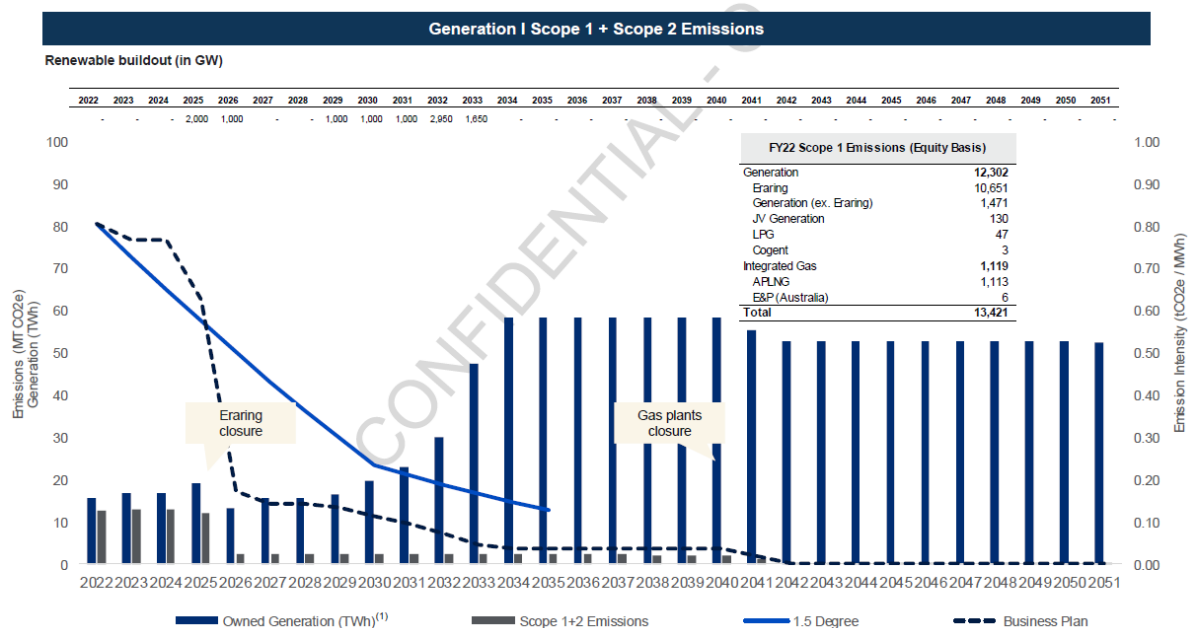
Generation source	MW
Coal – it is likely that Eraring will be retired well before 2033 (2032 is Eraring's end of technical life and August 2025 is the earliest possible closure date for Eraring).	<b>Confidential to Brookfield</b>
Gas – <b>Confidential to Brookfield</b>	- <b>Confidential to Brookfield</b>
PPA gas – <b>Confidential to Brookfield</b>	- <b>Confidential to Brookfield</b>
Renewable PPAs – <b>Confidential to Brookfield</b>	- <b>Confidential to Brookfield</b>
New utility scale wind – <b>Confidential to Brookfield</b>	+ <b>Confidential to Brookfield</b>
New utility scale solar – <b>Confidential to Brookfield</b>	+ <b>Confidential to Brookfield</b>
New utility scale storage – <b>Confidential to Brookfield</b>	+ <b>Confidential to Brookfield</b>

Source: Brookfield

807 **Annexure 22.8** sets out the BGTF Consortium's business plan in respect of the 14 GW rollout, taking into account Origin's existing pipeline and other potential pipeline projects.

808 As illustrated in **Figure 93** below, with up to 14 GW of additional renewable build-out and the decommissioning of Eraring, Origin Energy Markets business is expected to outperform the net zero 1.5°C goal.

Figure 93: Origin Generation: Scope 1 and Scope 2 Emissions



Source: Brookfield

**(e) Impact on Australia's renewable transition**

809 In summary, the Proposed Acquisition is expected to result in the Origin Energy Markets business building 10 GW more of large scale renewable generation and storage capacity than it would achieve in the absence of the Proposed Acquisition, either through direct investment or by entering into PPAs. The total increase in Australian renewable capacity as compared to the counterfactual is expected to be 10 GW (less whatever capacity Brookfield may be able to develop in the counterfactual by 2033 on a standalone basis which is highly uncertain and would clearly be significantly less than 10 GW).

810 Essentially, the Proposed Acquisition will see the BGTF Consortium transition Origin's Energy Markets business so that it is largely emissions free (other than necessary gas-fired firming capacity) thereby contributing significantly towards Australia's targets for renewable generation and emissions reduction. The Proposed Acquisition will not affect other companies efforts to transition, noting the challenges they face.

811 To put the 10 GW into context:

- (a) AEMO estimates that the NEM currently has ~27 GW of renewable energy capacity (includes large scale wind, solar, hydro and battery capacity).<sup>451</sup>
- (b) The AER has reported that:<sup>452</sup>
  - (i) in CY 21, around 2.6 GW of solar, wind and battery capacity entered the NEM;
  - (ii) in CY 22, around 2.5 GW of solar, wind and battery capacity entered the NEM;
- (c) Brookfield estimates that approximately 30 GW of large scale installed renewables needs to be built between now and 2030 to achieve the targets assumed in AEMO's ISP.

<sup>451</sup> AEMO, *NEM Generation Information – May 2023*, <<https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>>.

<sup>452</sup> AER, *Wholesale markets quarterly Q4 2022*, published February 2023 <<https://www.aer.gov.au/wholesale-markets/performance-reporting/wholesale-markets-quarterly-q4-2022>>.

**6.10 How the BGTF Consortium intends to deliver on the 'green build-out' plan and deliver significant public benefits for Australia**

812 The BGTF Consortium considers it is uniquely placed to deliver on its 'green build-out' plan for Origin Energy Markets for the following key reasons: (i) access to capital, (ii) capital structure, (iii) funding strategy, (iv) longer term horizons for investment, (v) renewables expertise, and (vi) centralised global procurement capabilities. Each is addressed in turn below.

**(a) Access to capital**

813 Access to capital for a listed company like Origin is subject to a number of constraints, particularly in the context of renewable development.

- (a) **First**, capital raising from shareholders may be dilutive for existing shareholders or not possible if the proposed investment is not attractive or immediately accretive to the company's earnings and therefore to existing shareholders.
- (b) **Second**, Origin's shareholders have an expectation of ongoing cash returns in the form of dividends and other forms of capital management such as buybacks, rather than investing all excess cashflow into new developments. As noted below, there have been specific examples of participants in the equity market indicating a preference for returns of cash to shareholders ahead of significant investment in renewable development utilising Origin's balance sheet.
- (c) **Third**, funding a project through debt may be possible but will be constrained by the business' capital structure, particularly for long-dated asset development which requires significant upfront capital. Investment at the scale Brookfield proposes will require a combination of equity funding, reduced cash distributions to shareholders or alternatively, partnering with third party capital providers.
- (d) **Finally**, co-investing with others is possible but will be less efficient than sole funding because of the need to achieve alignment with a capital partner especially when the approach to partnering is on a project-by-project basis, and can delay investment or increase risk.

814 Investors in public companies generally seek a mix of cash yield and capital growth in their investments. In Origin's case, it has a publicly stated dividend policy to return 30% - 50% of annual adjusted free cashflow in the form of dividends. Further, a \$250m buyback was undertaken by Origin in the first half of 2022 which was announced at the time of its revised strategy on 9 March 2022. Origin was unable to continue with the buyback following the initial approach from the Brookfield/EIG consortium in August 2022; however, there were ongoing questions from equity market participants as to whether the buyback could be reinstated following cessation of the buyback and before the proposed Scheme was publicly announced.

815 Comments from equity market analysts have highlighted this tension between, on the one hand, investment in new projects and, on the other hand, the desire to continue to see a strong capital management framework to return cash to shareholders. This acts as a constraint on Origin's ability to invest excess cashflow, utilise its existing balance sheet, or raise fresh equity to invest in new renewable projects at the speed and scale as a private capital investor such as Brookfield. By way of example:



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- (a) At the time of Origin bidding for CWP Renewables (in partnership with a capital provider, CDPQ) in 2022, a number of equity analysts expressed opinions and challenged management on the proposed scale of capital investment relative to shareholder returns. For example:

**Confidential to Brookfield and Origin.**<sup>453</sup>

**Confidential to Brookfield and Origin.**<sup>454</sup>

- (b) By contrast, following the acquisition of Tilt Renewables by private equity firm QIC in 2021, Tilt Chairman Bruce Harker emphasised how the takeover would represent good value for shareholders whilst ensuring the company's project development pipeline would be progressed by QIC, '*this compelling acquisition proposition is as a result of Tilt Renewable's constant focus on delivering long-term value for shareholders and the Board is pleased that, with these new owners, the transition to renewables in Australia and New Zealand will continue to accelerate*'; and
- (c) Similarly, when the previously ASX-listed Infigen Energy was acquired by Iberdrola, broker reports in 2020 noted that its '*development portfolio can be accelerated thus adding value*'.

816 While Origin does have the ability to partner with third party capital providers to support the investment in renewables, this will require complex partnering arrangements to be put in place and the ability to develop projects will still be subject to challenges of alignment between Origin and capital partners.

817 Further, even with third party capital providers, in order to obtain the benefits of managing a development portfolio, Origin will still need to retain an interest in these projects and be required to utilise its balance sheet for its share of development capital which may still be significant depending on the scale and speed of project development pursued. As such, even in this scenario, the tension between cash returns to shareholders and investment in capital intensive growth is likely to remain.

818 In contrast, the BGTF Consortium has ready access to capital to deploy as part of Australia's energy transition. As noted above, the BGTF Consortium's business plan for Origin Energy Markets contemplates between \$20 to \$30 billion of investment during the next decade to construct up to 14 GW of new large-scale renewable generation and storage facilities in Australia.<sup>455</sup>

**(b) Funding of acquisition and 'green build-out' plan**

819 The BGTF Consortium will utilise a capital structure for the Proposed Acquisition that will ensure both completion of the Proposed Acquisition and funding of the \$20 to \$30 billion for the 'green build-out' plan.

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<sup>453</sup> MST Marquee, *Origin Energy – Trading Places*, 31 October 2022.

<sup>454</sup> MST Marquee, Mark Samter, *Origin Energy – Trading Places*, 19 September 2022.

<sup>455</sup> Brookfield, *Project Eos: Origin Energy, Development Pipeline Summary April 2023 (Annexure 22.8)*

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820 The purchase price for the Proposed Acquisition will be funded by a combination of debt and equity, as shown in **Figure 94** below.

**Figure 94: Sources of funding for purchase price**

Sources	AUD (billion)	Uses	AUD (billion)
Equity at Completion	Confidential to Brookfield	Scheme Consideration & Closing Costs	Confidential to Brookfield
Debt Rollover at Completion	Confidential to Brookfield	Debt Rollover at Completion	Confidential to Brookfield
Asset Recycling	Confidential to Brookfield	New Wind Project Capex Confidential to Brookfield	Confidential to Brookfield
Equity Injections (new equity)	Confidential to Brookfield	New Storage Project Capex Confidential to Brookfield	Confidential to Brookfield
Cash from Distributions	Confidential to Brookfield	Origin Existing Development Pipeline Confidential to Brookfield	Confidential to Brookfield
Asset Level Debt	Confidential to Brookfield		
<b>Total</b>	<b>Confidential to Brookfield</b>		<b>Confidential to Brookfield</b>

Source: Brookfield

821 The 'green build-out' plan will require an investment of \$20 to \$30 billion investment in new generation and storage projects. The BGTF Consortium intends to fund this through a combination of reinvesting a proportion of cash that is available for distribution from the Origin Energy Market's business, third party debt, and capital recycling.

822 Brookfield estimates that the additional shareholder equity necessary to fund the green build-out plan is approximately \$8 billion (in 2023 dollars). The BGTF Consortium's analysis suggests that the business is self-funding and they will use the capital that is generated by Origin Energy Market's core business and proceeds from the partial sell down of assets. Where there are years that have lower cash flows and require the investors to contribute capital (eg, Confidential to Brookfield), the BGTF Consortium will do so.

823 The BGTF Consortium expects that the Origin Energy Markets business will generate substantial cashflow each year in the region of approximately Confidential to Brookfield. The BGTF Consortium intends to retain the majority of this cash within Origin Energy Markets rather than paying it out as dividends, as would currently occur with Origin as a publicly listed company. There will be a period between when the Proposed Acquisition completes and when the first equity investment in new renewables generation construction is required, allowing Origin Energy Markets to build up a reserve of capital from its cashflow.

824 Confidential to Brookfield. The structure where Origin Energy Markets is in effect the offtaker from each project, combined with Brookfield's renewables expertise, means that the process of raising third party debt is more streamlined.

825 Once a project has been constructed and de-risked, the BGTF Consortium intends to sell down an interest in the project to a third party. Many investors are unwilling or unable to take construction risk and so cannot invest in a renewables project during the construction stage. Those investors can, however, invest in renewables once construction is complete. Brookfield expects that when it sells down an interest, having completed the development and removed the

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- associated risks, it will be able to achieve a price premium above construction cost. The capital from the sale of that interest to a third party at a premium will then be recycled into further equity investment in further renewable projects.
- 826 In essence, the BGTF Consortium's focus on earning a return over a 10 year investment horizon and its ability to invest profits in renewable projects is one key to its ability to fund the 'green build-out' plan. Brookfield's renewables construction experience and willingness to take development and construction risk provides a further lever that will assist funding the 'green build-out' plan. Neither of these would be possible for Origin absent the Proposed Acquisition.
- 827 The BGTF Consortium intends that it would commit to the 'green build-out' pipeline on a project by project basis as each project reaches financial close, with the following key attributes.
- (a) **Approvals:** at financial close, the project would hold all requisite land access rights, connection rights and development approvals.
  - (b) **Offtake:** crucially, the project would not require a committed third party offtaker (for example via a renewable PPA). Instead, Origin Energy Markets would utilise the project as internal generation, for the purposes of meeting its electricity customer load.
  - (c) **Procurement:** acceptable equipment supply and construction contracts would have been entered into. As outlined below, these will not necessarily require a 'wrapped' EPC contract, allowing for a flexible approach to procurement.
  - (d) **Project finance:** lenders would have committed to lend the agreed debt to finance the project, on usual non-recourse, project finance terms. Importantly, because the BGTF Consortium will hold the project equity through the construction period and can offer lenders a portfolio of projects to lend to, the finance will be substantially de-risked in comparison with typical renewables projects. This will reduce both the cost and complexity of the financing.
  - (e) **Equity hurdles:** the project's forecast earnings would meet the BGTF Consortium's equity hurdles – Brookfield's modelling gives it a high degree of confidence that the hurdles can be met for the target projects.
- 828 Employing this funding strategy will allow the BGTF Consortium to de-risk and therefore accelerate Origin Energy Markets' new generation and storage projects in Australia. This is for the following reasons.
- 829 **First**, Origin Energy Markets under the BGTF Consortium's ownership will be a well-capitalised business, which will provide much more flexibility to fund development expenditure, allowing more development opportunities in Australia to be progressed in parallel.
- 830 This will also provide Origin Energy Markets with greater flexibility to explore alternative financing structures, including funding some development activities on balance sheet, either in whole or in part, if it makes sense to do so.
- 831 **Second**, by removing the need for a committed third party off-taker (with Origin Energy Markets existing customer base being the offtaker), the BGTF Consortium will significantly simplify the commercial requirements for each project, resulting in a material acceleration of the timeline to reach financial close. Given that project finance lenders only have recourse to the project to meet interest costs and repay the debt, they generally insist that the project has a committed 'revenue contract', typically in the form of a PPA with a creditworthy buyer.
- 832 As a result, it is very unusual for a project-financed renewable generation project to reach financial close without either a committed third party offtaker and, if it does, it would have very low gearing (that is, a comparatively small debt size). By moving to a self-contracted model under the

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- 'green build-out' plan, financing will be significantly more streamlined, in turn, accelerating renewable development in Australia.
- 833 In addition, by using its existing customer base as an in-built offtaker, Origin Energy Markets (under BGTF Consortium ownership) will be able to avoid the costs of negotiating offtake agreements with third parties. Namely, in circumstances where the assets under a renewable PPA are not yet developed, a natural tension arises when negotiating risk allocation as the developer and offtaker are principally focused on different objectives. Complex negotiations in relation to risk allocation, legal documentation, and O&M agreements, and contract management represent significant 'friction costs' for the energy transition. The BGTF Consortium's 'green build-out' plan, however, will avoid the potentially substantial costs, delays, and inefficiencies that come with Origin's current 'capital light' strategy (ie, entering into renewable PPAs with third party developers).
- 834 **Third**, the BGTF Consortium has a clear strategy for its development equity.
- 835 The capital required to implement the 'green build-out' plan will comprise a combination of shareholder equity, free cash generated by the Origin Energy Markets business and recycled capital (see below).
- 836 As outlined below, the BGTF Consortium's 'total return' approach to its investment means it does not need to pay the regular dividends that Origin's current shareholders expect. Instead, under the BGTF Consortium's ownership, Origin Energy Markets will have the flexibility to reduce distributions to pursue the longer term capital intensive renewable projects required for the 'green build-out' plan and Australia's energy transition.
- 837 As Origin Energy Markets completes and commissions new generation and storage projects, it is likely there will be opportunities to sell down the equity in those projects to other investors such as superannuation or pension funds, who are keen to invest in net zero opportunities but would prefer a substantially de-risked project. These sell-down transactions would allow Origin Energy Markets to recycle its capital, allowing it to invest in additional new renewables projects in Australia.
- 838 **Fourth**, the project will not always require a 'fully wrapped' Engineering, Procurement and Construction (**EPC**) contract and instead, will be able to rely on a suite of suppliers, managed by an expanded Origin Energy Markets construction management team where it makes sense to do so, allowing for oversight on delivery of projects from concept to commercialisation. This can typically help reduce the cost to construct new projects because it removes any risk premium the EPC contractor will charge on a 'bundled' fixed price contract.
- 839 This 'unbundled EPC' strategy, which is unusual for project-financed renewable generation projects, will allow each project to finalise its procurement and construction contracts much more quickly than a typical project. The BGTF Consortium is confident in this strategy because:
- (a) the BGTF Consortium will hold the project equity through the construction period, and therefore is able to manage and absorb a number of these risks;
  - (b) as outlined below, Origin Energy Markets will have access to the wider Brookfield global renewables procurement and construction management expertise; and
  - (a) the BGTF Consortium intends to increase significantly the Origin Energy Markets in-house development capability so that it can manage this pipeline of development work.
- 840 As noted above, this funding strategy will be critical to accelerating the development of renewables. However, it relies in large part on Origin Energy Markets (under BGTF Consortium ownership) being able to develop and manage its own projects and effectively 'contract with itself' in respect of the offtake to substantially de-risk projects for sale to third parties (in whole or in

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part). Unlike the BGTF Consortium, such third parties may be less able or willing to underwrite development risk.

### (c) Longer time horizon for investments

841 As a listed company Origin's shareholders expect a level and frequency of dividend, usually once or twice per year. As such, when public companies consider investment opportunities, they are somewhat limited to pursuing investments with shorter time horizons so that returns can be delivered to shareholders within the expected dividend windows. This significantly limits the ability to invest available cash flow in energy transition projects, which tend to have longer investment horizons of at least two to three years. As a result of these challenges, over the past few decades, there has been an observable trend of publicly listed capital intensive companies, like Origin, being taken private to facilitate longer term investing.

842 By contrast, BGTF, its co-underwriters and co-investors do not seek short term dividends but rather focus on total return and compounded value. Investors in BGTF do not expect regular dividends and commit their capital for a minimum period of 10 years, and possibly longer if extension options are exercised.<sup>456</sup> Investors in BGTF are effectively only concerned with a return at the end of the commitment period. As such, the BGTF Consortium is in a position where it can facilitate renewable energy projects in Australia with a longer investment horizon through access to substantial long-term capital, provided returns are generated over that timeframe.

843 As a private entity with a longer term investment cycle and ready access to capital, the BGTF Consortium can accelerate the build-out of renewables for Origin Energy Markets and Australia. This was acknowledged by the AFR in November 2022<sup>457</sup>, where they noted

The Origin bid marks the pivotal turning point in Australia's transition to net-zero. It opens the way for a \$20 billion investment in new generation by a financially strong international player with a 10-year investment horizon... Under private ownership Origin will have far greater strategic flexibility including being able to churn its annual dividend payments of \$500 million back into energy transition investments.

### (d) Renewables expertise

#### *Wind*

844 Grid-scale wind generation is particularly critical for renewable energy generation at times of the day when solar electricity is not being generated (for example, on cloudy days and at night). While it is possible to store solar electricity for 2-4 hours (and up to 6 hours with some technologies) using largely lithium ion based grid scale batteries, there remains a significant need for wind powered electricity to make electricity available when no solar electricity is being generated, and firming capacity (other than firming provided by fossil fuels like gas) has run out.

845 In 2017, Origin sold the Stockyard Hill Wind Farm, and there was a transfer of the Origin employees who had been involved in the technical and financial implementation of the project to the new owner of the wind farm. **Confidential to Brookfield: BGTF Consortium's views on Origin's wind capability.**

846 In addition to the expertise discussed in section 6.8, the BGTF Consortium will draw on experience from Brookfield's leading global wind portfolio to build out Origin Energy Markets' capabilities in wind and deliver grid-scale wind projects for Australia. Brookfield's wind portfolio comprises 5,900 MW in operational capacity and 18,900 MW under development across 105 facilities in North America, South America, Europe and Asia.

<sup>456</sup> Brookfield, Amended and Restated Private Placement Memorandum (November 2021), page 6 (**Annexure 21.4**).

<sup>457</sup> Australian Financial Review, *Origin bid pivotal to Australia's energy transition*, 10 November 2022

<<https://www.afr.com/chanticleer/origin-bid-pivotal-to-australia-s-energy-transition-20221110-p5bx8e>>.

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847 Examples of Brookfield's expertise in the development and operation of wind-powered energy projects can be seen **Annexure B** – Shepherd's Flat, Terraform, Polenergia, Scottish wind assets, amongst others.

### *Storage*

848 The Mortlake, Darling Downs and Eraring batteries are key to the decarbonisation of Origin Energy Markets. In this regard, the BGTF Consortium will be able to draw on Brookfield's extensive experience in developing and operating battery storage to complete both the Mortlake and Eraring batteries.

849 As set out in **Annexure B**, in 2022, Brookfield entered into an agreement with Cambridge Power, a battery energy storage developer, to support the build out of one of the largest battery energy storage systems (**BESS**) in the UK. BESS is a relatively new firming technology, with few players globally having material experience in this space. For context, Australia's first BESS battery was only installed in 2018 – the Ballarat Battery.

850 Brookfield's global distributed generation, storage and sustainable solutions portfolio comprises over 6 GW in operating capacity and a development portfolio of 32 GW of renewable power assets, 12 million metric tonnes per annum (**MMTPA**) of carbon, capture and storage, 19 materials recovery facilities that would result in 2 million tonnes of recycled materials, 4 million metric British thermal units of renewable natural gas production capacity annually, a solar manufacturing facility capable of producing 5,000 MW of panels annually, and 1 MMTPA green ammonia facility powered entirely by renewable energy .

851 In particular, by Q2 2023 Brookfield will have taken four utility-scale battery storage projects totalling 50 MW / 100 MWh AC co-located with existing Brookfield hydro facilities in the north east of the US to their commercial operating date (**COD**), being the point at which the projects become fully operational. The first of these projects reached COD in 2021. Brookfield also has plans to continue constructing battery storage projects globally, in particular in the US, UK and Canada and the NEM in Australia.

### **(e) Centralised global procurement capabilities**

852 The BGTF Consortium will draw on Brookfield's global centralised procurement capabilities and its strong, strategic relationships with Tier-1 wind, solar, hydro and storage suppliers to deliver on the development and operation of renewable development in a timely and cost-efficient manner. This is particularly beneficial for Australia where infrastructure projects tend to take longer and cost more than initially expected.<sup>458</sup> Such procurement capabilities operate above the portfolio company level to support Brookfield's local or region specific renewable projects and operations. Brookfield has developed these strong relationships with its renewable operating assets and ~126 GW global renewables pipeline. Origin, as a standalone business, is a smaller player in the global market with less access to procurement supply chains.

853 Brookfield benefits from procurement scale advantage. It does not negotiate inputs on a per company, per project, or even per region basis. Brookfield negotiates on behalf of all existing and pipeline projects within the Brookfield group (solar, wind, batteries, EPC, etc). Brookfield is not immune to supply chain disruptions, but its strong relationships with suppliers means it feels them less.

854 Brookfield's global relationships with key suppliers have delivered a range of benefits for its renewables projects including volume discounts, resilience, security of supply, access to

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<sup>458</sup> Frank Calabria, *Delivering the biggest infrastructure challenge in a century* (22 November 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/delivering-the-biggest-infrastructure-challenge-in-a-century/>> (**Annexure 9**); Frank Calabria, *Examining the impact of the energy transition on customers* (7 June 2022) Origin Energy <<https://www.originenergy.com.au/about/investors-media/examining-the-impact-of-the-energy-transition-on-customers/>> (**Annexure 16**).

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competitive, long-term O&M terms and growth origination, responsive after-market support post fulfilment of the supply contract, as well as improved quality control. Particularly in respect of price, **Confidential to Brookfield: benefits that Brookfield can achieve through its approach to global procurement**. By way of example, Brookfield secured procurement benefits for two renewable projects (one in India and one in Brazil) in 2021. Despite supply challenges at the time, Brookfield was able to obtain inputs on time and provide 100% on-time delivery.

**(f) Large-scale diversified construction capabilities**

855 The BGTF Consortium will draw on Brookfield's substantial large-scale construction capabilities across a diversified range of technologies in the renewables sector. Such capabilities are demonstrated by Brookfield's long standing track record of renewable development, and completed construction of around 4 GW in the last 12 months up to March 2023 as well as its plans to deliver more than 15 GW globally over the next three years (excluding the acquisition of Origin Energy Markets).

**(g) Confidential to Brookfield: An aspect of BGTF Consortium's plan to deliver the 'green build-out'**

856 **Confidential to Brookfield: Description of plan.**

857 In addition, given Brookfield's reputation as an established Clean Energy 'super major' in the development and operation of renewable generation and storage (as discussed at paragraph 774), there will be even greater opportunities to attract skilled personnel all around the world to Origin Energy Markets, including secondees from within the Brookfield network. This will be particularly critical given demand for skilled labour in large-scale renewable energy is forecast to double from approximately 12,500 in 2022 to 25,000 in 2027.<sup>459</sup>

858 Accordingly, under the Proposed Acquisition, the Origin Energy Markets business and Australia have much to gain. The BGTF Consortium brings to the Origin Energy Markets business a new renewable generation pipeline, a unique approach to funding, substantial long-term capital dedicated to renewables, long-standing global renewables expertise, including procurement and construction capabilities, and a plan to make renewables development more streamlined. Through these benefits, the BGTF Consortium is well placed to deliver the 'green build-out' plan, in turn, expediting Australia's decarbonisation.

**(h) Certainty of the BGTF Consortium's investment in the 'green build-out' plan**

859 There is a high degree of certainty that the BGTF Consortium will make the investment of \$20-\$30 billion by 2033 in materially decarbonising the Origin Energy Markets business.

860 **First**, the BGTF Investment Committee presentation and accompanying appendix (see **Annexures 1.14 and 1.15** to the submission) make it clear that the Origin Energy Markets business is an investment opportunity which is aligned with the BGTF mandate and will provide an opportunity for large scale decarbonisation, including *additionality* to develop and build out approximately 14 GW of renewable generation and storage capacity over the next 10 years. **Confidential to Brookfield: The intention** is to develop the 14 GW of renewables, 12GW of which Brookfield would source and secure post acquisition **Confidential to Brookfield**.

**Figure 95: BGTF's Investment Thesis Confidential to Brookfield**

**Confidential to Brookfield**

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Source: Excerpt from BGTF Investment Committee Presentation, March 2023 (slide 9)

### Figure 96: Key assumptions in BGTF valuation

#### Confidential to Brookfield

Source: Excerpt from BGTF Investment Committee Presentation, March 2023 (slide 14)

861 BGTF's Investment Committee documents provide a detailed build out plan for developing the renewable generation capability within the Origin Energy Markets business: Slide 76 details **Confidential to Brookfield: the forecasted spend, and technology and funding mix.**

### Figure 97: BGTF annual forecast spend in respect of 'green build-out' plan

#### Confidential to Brookfield

Source: Excerpt from BGTF Investment Committee Appendix, March 2023 (slide 76)

862 **Confidential to Brookfield: Description of how the build out plan has been used by Brookfield.** This proposed build out profile and the economics associated with this development have been approved by the Brookfield Investment Committee. BGTF's Investment Committee expects that these investments will be made through the course of the ownership of the Origin Energy Markets business. GIC's and Temasek's investment is being made on the same basis and, to the best of Brookfield's understanding, they relied on the same capex spend plan. All parties therefore expect the same investments to be made in the Origin Energy Markets business.

863 **Second**, the investment in the Origin Energy Markets business aligns with BGTF's Investment Mandate, as detailed in the BGTF Private Placement Memorandum (*PPM*) (see **Annexure 21.3**). BGTF has the dual objective of targeting both attractive financial returns and generating a measurable positive environmental impact, specifically executed by the 4A Impact Criteria **Confidential to Brookfield: BGTF has investment objectives, including targets in relation to the rate of return on its investments.** This is shown in the extract below.

### Figure 98: BGTF's dual objectives

#### Confidential to Brookfield

Source: Excerpt from BGTF Private Placement Memorandum, September 2021 (page 34)

864 Accordingly, the BGTF Investment Mandate requires investments to achieve a minimum equity IRR of **Confidential to Brookfield**% when looking at single, standalone renewables development opportunities. **Confidential to Brookfield: This targeted rate of return applies to investments made by BGTF at the individual investment level.**

### Figure 99: BGTF process for approving investment opportunities

#### Confidential to Brookfield

Source: Excerpt from BGTF Development Opportunities presentation (slide 5)

865 The plans for BGTF's investment in the Origin Energy Markets business indicate that the investment is consistent with the BGTF Investment Mandate, **Confidential to Brookfield: Meeting the targeted rate of return in respect of BGTF's investment in the Origin Energy Markets business relies on the green build-out being delivered as planned. BGTF's analysis shows that falling short of this plan will adversely affect its rate of return on the investment.**

866 The returns also contemplate a component from the sale of the Origin Energy Markets business at the end of the investment horizon, but the size of that component depends on the investment in the 'green build-out' – the greater the build-out, the higher the return. **Confidential to Brookfield:**



**Meeting the targeted rate of return in respect of BGTF's investment in the Origin Energy Markets business also relies on specific aspects of the 'green build-out' plan strategy occurring.**

867 In the context of considering the certainty that the 'green build-out' plan will be executed by BGTF, it is important to note a critical aspect of the nature of the BGTF fund itself. BGTF is a closed-end fund. It has an expected operating term of 12 years (with option for two on-year extensions), at which point BGTF will exit the investments the fund has made, including Origin Energy Markets, and return capital to investors. This incentivises Brookfield to execute the 'green build-out' plan for Origin Energy Markets in a timely manner so that BGTF can generate greater returns on exit having completed the material decarbonisation of Origin Energy Markets.

868 The investment also contemplates an element of asset recycling. **Confidential to Brookfield: Further description of those specific aspects of the 'green build-out' plan that must occur to meet the targeted rate of return.**

**Figure 100: Valuation: Returns Bridge, 'green build-out'**

**Confidential to Brookfield**

Source: BGTF Investment Committee Presentation, March 2023 (Slide 15)

**Figure 101: Valuation scenarios, 'green build-out'**

**Confidential to Brookfield**

Source: BGTF Investment Committee Presentation, March 2023 (Slide 98)

869 In addition, BGTF is heavily incentivised to make the investments to deliver returns above the hurdle rate of **Confidential to Brookfield**. This is primarily because BAM, as an asset manager, is directly financially incentivised to maximise returns, and further because maintaining a consistent investment track record is critical to Brookfield's success in fundraising for future funds.

870 BAM, as a manager, earns a 'carried interest' or 'carry' in the fund as an incentive, comprising **Confidential to Brookfield** of any profit over and above that which delivers the investors an **Confidential to Brookfield** internal rate of return (*equity IRR*). The balance of **Confidential to Brookfield** accrues to the investors in the fund. Accordingly, BAM, as manager, is directly financially incentivised to maximise returns of every business in the fund, even over and above the **Confidential to Brookfield** IRR BGTF mandate. The incentives are illustrated in **Figure 102** below. The incentives of individual executives within Brookfield are tied to this performance and specifically, the carry earned by each fund.

871 Brookfield as an asset manager trades heavily on its successful track record of investing. It has advertised to BGTF investors that it is targeting returns of at least **Confidential to Brookfield**. Failure to meet this hurdle would harm Brookfield's ability to raise money for future similar funds, not just limited to the renewables group. When asset management companies such as Brookfield market institutional investment funds, one of the key elements of such marketing is past performance. Brookfield needs to demonstrate a track record of consistent returns which meet or exceed each fund's targets.

**Figure 102: BGTF distributions**

**Confidential to Brookfield**

Source: Excerpt from BGTF 2022 Annual Report, page 23

872 **Fourth**, co-underwriters Temasek and GIC will also provide additional accountability to ensure the investments in the 'green build-out' plan are made. As co-underwriters with interests of 9.9% and 22.5% in the Origin Energy Markets business respectively, Temasek and GIC will obtain

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certain governance rights. As reflected in **Figure 103** below, a reserve matter requiring a 'supermajority approval' of at least **Confidential to Brookfield** will include the approval of the annual business plan and annual budget (including amendments), as well as any deviation by greater than 10% from the aggregate operating expenditure or aggregate capital expenditure budgeted in the applicable financial year.

873 In addition, as reflected in **Figure 104** below, Fundamental Matters require approval of Brookfield plus both GIC and Temasek. This includes changing HoldCo's constitutional documents (ie, removing the requirement for Brookfield plus one other Investor to approve the budget). Accordingly, GIC and Temasek will also hold Brookfield accountable to meeting and following the budget and business plan.

### **Figure 103: Reserved Matters: Origin Energy Markets business**

#### **Confidential to Brookfield**

Source: Governance Term Sheet, Annex A (see **Annexure 5.9** to the application)

### **Figure 104: Fundamental Matters: Origin Energy Markets business**

#### **Confidential to Brookfield**

Source: Governance Term Sheet, Annex A (see **Annexure 5.9** to the application)

## **6.11 Benefits to Australia arising from the 'green build-out' plan**

### **(a) Faster and more certain transition**

874 Origin faces a number of uncertainties in reaching its 2030 emissions targets and 2050 ambitions. These include (i) difficulties accessing capital, (ii) difficulties accessing critical skills and supplies, (iii) delay and uncertainty in renewable projects relative to Origin's expectations, and (iv) delay to the closure of Eraring.

875 The Proposed Acquisition addresses these risks. The BGTF Consortium has the necessary capital, longer-term investment horizon, unique funding strategy, access to a well-established global procurement network, and the necessary skills and experience to not only ensure Origin's planned rollout goes ahead, but provides for the development of an additional ~ 10 GW of renewables and storage capacity. This will make a material contribution to Australia's net zero emissions target.

### **(b) Downward pressure on consumer and business prices**

#### ***Electricity prices are a major consumer and business issue***

876 From around mid-2021, various events caused record high wholesale prices in the NEM, and ultimately, suspension in June 2022 of spot markets for the first time.<sup>460</sup> These events included domestic coal and gas supply challenges, power plant outages, and record high global energy prices, including as a result of the Ukraine war.<sup>461</sup> This followed what the AER described as a period of low prices in all regions of the NEM as a result of an abundance of cheap renewable generation and mild summer conditions.<sup>462</sup>

877 This impact on wholesale prices has flowed through to the energy prices paid by consumers and businesses. Notably, energy regulators have proposed substantial retail price increases from 1 July 2023 for customers on the electricity default market offer (**DMO**). The DMO regulatory framework confers annual price setting functions on energy regulators with respect to the DMO price. This is a price cap on what energy retailers can charge consumer and small business

<sup>460</sup> *State of the Energy Market 2022 – Report*, page 7 (**Annexure 12**).

<sup>461</sup> *State of the Energy Market 2022 – Report*, page 7 (**Annexure 12**).

<sup>462</sup> *State of the Energy Market 2022 – Report*, page 7 (**Annexure 12**).

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customers on the DMO, although it also acts as a 'reference price' for all other offers in the market.<sup>463</sup> When determining the DMO price each year, regulators must have regard to a range of factors, including wholesale electricity prices.

878 Accordingly, from 1 July 2023, consumers in New South Wales, South Australia and South East Queensland stand to face price increases of around 20% to 24% (representing increases of around 13-17% above forecast inflation).<sup>464</sup> Small business customers are expected to face increases of between 15% and 26%, depending on the region.<sup>465</sup> In all other parts of Queensland, consumers and small businesses will face an increase of around 29% and 26%, respectively.<sup>466</sup> In Victoria, pricing for consumers and small businesses will likely increase around 30%.<sup>467</sup>

879 Together with the current cost-of-living pressures, these energy price increases will have a serious impact on Australians, particularly low income earners. The CEO of the Australian Council of Social Service has stated:

In the midst of a cost-of-living crisis, today's announcement of another increase to electricity prices by the Australian Energy Regulator (AER) is a blow to people across Australia, most of all those on low-incomes, who experienced average 20% rises last year.

880 For the reasons discussed below, the acceleration of the construction of renewable generation will help address the foreshadowed significant increases in retail electricity prices.

### ***Additional renewables will lower wholesale electricity prices***

881 **Renewables are the cheapest form of electricity generation:** in most parts of the world, green energy is the cheapest energy option and costs have fallen substantially in the last decade.<sup>468</sup> On 11 July 2022, the CSIRO and AEMO's 'GenCost 2021-22' report confirmed that wind and solar are the cheapest sources of electricity generation and storage in Australia.<sup>469</sup> The cost of wind, solar and batteries are projected to fall even further.<sup>470</sup>

882 The average cost of newly commissioned renewable energy projects continues to fall year-on-year,<sup>471</sup> and in jurisdictions with abundant solar and wind resources, like Australia, there is evidence of projects undercutting even the marginal operating costs of coal and gas-fired power

<sup>463</sup> AER, *Default market offer prices 2023-24: Draft determination* (15 March 2023), page 7

<[https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023\\_1.pdf](https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023_1.pdf)>

<sup>464</sup> AER, *Default market offer prices 2023-24: Draft determination* (15 March 2023), page 5

<[https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023\\_1.pdf](https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023_1.pdf)>. )

<sup>465</sup> AER, *Default market offer prices 2023-24: Draft determination* (15 March 2023), page 5

<[https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023\\_1.pdf](https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023_1.pdf)>.

<sup>466</sup> Queensland Competition Authority, *Regulated retail electricity prices for regional Queensland in 2023-24: draft determination* (15 March 2023) <<https://www.qca.org.au/regulated-retail-electricity-prices-for-regional-queensland-in-2023-24-draft-determination/>>.

<sup>467</sup> Essential Services Commission, *2023-24 Victorian Default Offer – Draft Decision Factsheet* (15 March 2023)

<<https://www.esc.vic.gov.au/sites/default/files/documents/Victorian-Default-Offer-2023-24-Draft-Decision-fact-sheet-March-2023.pdf>>.

<sup>468</sup> United Nations, *Renewable energy – powering a safer future* (2021) <<https://www.un.org/en/climatechange/raising-ambition/renewable-energy>>.

<sup>469</sup> Minister for Industry and Science the Hon Ed Husic MP, *Renewables cheapest source of electricity* (11 July 2022)

<<https://www.minister.industry.gov.au/ministers/husic/media-releases/renewables-cheapest-source-electricity#:~:text=The%20report%20confirmed%20renewable%20energy,months%20due%20to%20inflationary%20pressures>>.

<sup>470</sup> The Hon Ed Husic MP, Minister for Industry and Science *Renewables cheapest source of electricity* (11 July 2022)

<<https://www.minister.industry.gov.au/ministers/husic/media-releases/renewables-cheapest-source-electricity#:~:text=The%20report%20confirmed%20renewable%20energy,months%20due%20to%20inflationary%20pressures>>.

<sup>471</sup> International Renewable Energy Agency, *Renewable Power Generation Costs in 2021* (2022) page 16 <[https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA\\_Power\\_Generation\\_Costs\\_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA_Power_Generation_Costs_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8)>.

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plants.<sup>472</sup> Wind and solar energy generators in particular typically have zero fuel costs and thus near-zero marginal costs.<sup>473</sup>

- 883 As explained by the International Renewable Energy Agency (*IRENA*) in its 'Renewable Power Generation Costs in 2021' report:<sup>474</sup>

[T]he world has witnessed a seismic shift in the competitiveness of renewable power generation options since 2010. The global weighted average levelized cost of electricity (LCOE) of newly commissioned utility-scale solar PV projects declined by 88% between 2010 and 2021, while onshore wind fell by 68%, Concentrating Solar Power (CSP) by 67% and offshore wind by 60%.

...

Almost two-thirds – or 163 gigawatts (GW) – of newly installed renewable power in 2021 had lower costs than the world's cheapest coal-fired options in the G20, confirming the critical role of cost-competitive renewables in addressing today's energy and climate crises.

- 884 By contrast, as coal-fired power plants reach the end of their technical lives, they become more costly to run as their maintenance requirements become more frequent and onerous and operators must decide whether to invest in refurbishment of the plant or retire it.<sup>475</sup> As the assets further age, the more costly they become to refurbish. Eventually, refurbishment exceeds the value of future cash flows from operating and the plant is retired.<sup>476</sup>

- 885 **Adding new renewables will displace more expensive generators thereby lowering wholesale electricity prices:** wholesale prices in the NEM are largely determined by the marginal costs of the last generator that is dispatched to meet demand. Generators bid the price at which they are willing to supply power in five minute intervals and AEMO ranks these bids lowest to highest. Generators are ordered to dispatch power up to the level of demand in order of cheapest to most expensive. For each five minute interval, the price of the last (marginal) generator required to meet demand sets the dispatch price paid to all dispatched generators.

- 886 The marginal costs of wind and solar are near-zero. Hydro also has zero fuel costs (although there is an opportunity cost – using water to generate electricity today means that there may be less water with which to generate electricity at a later date)<sup>477</sup>. The marginal costs of coal-fired generation are higher, principally because of the cost of coal. Further, coal-fired generators, face significant costs turning on and off so usually bid into the NEM on a must run basis. The marginal cost of gas-fired generation is higher again, although gas-fired generators can operate flexibly. In simple terms, this means that as more wind and solar generation capacity enters the system, those generators will always be dispatched first by AEMO to meet the necessary demand. Only in circumstances where there are not enough renewables to meet demand will more expensive coal and gas generators be dispatched. Accordingly, as wind and solar generation supply increases across the NEM, renewable energy will displace more expensive forms of electricity generation, like coal and gas, reducing the NEM price.

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<sup>472</sup> International Renewable Energy Agency, *Renewable Power Generation Costs in 2021* (2022) pages 30, 34

<[https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA\\_Power\\_Generation\\_Costs\\_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA_Power_Generation_Costs_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8)>.

<sup>473</sup> UCL Energy Institute *UK Industrial Electricity Prices: Competitiveness in a low carbon world* (February 2018), page 22 [https://www.ucl.ac.uk/bartlett/sustainable/sites/bartlett/files/uk\\_industrial\\_electricity\\_prices\\_-\\_competitiveness\\_in\\_a\\_low\\_carbon\\_world.pdf](https://www.ucl.ac.uk/bartlett/sustainable/sites/bartlett/files/uk_industrial_electricity_prices_-_competitiveness_in_a_low_carbon_world.pdf)

<sup>474</sup> IRENA, *Renewable Power Generation Costs in 2021* (2022), page 4 <[https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA\\_Power\\_Generation\\_Costs\\_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2022/Jul/IRENA_Power_Generation_Costs_2021.pdf?rev=34c22a4b244d434da0accde7de7c73d8)>.

<sup>475</sup> Grattan Institute, *Go for net zero – a practical plan for reliable, affordable, low-emissions electricity* (April 2021) p 23.

<sup>476</sup> Grattan Institute, *Go for net zero – a practical plan for reliable, affordable, low-emissions electricity* (April 2021) p 23.

<sup>477</sup> Hydro has an opportunity cost because a dam releases water through a generator to produce power and once that water is released, it cannot be used at a later point to generate power. In this way, hydro has the characteristics of stored power.

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- 887 Dylan McConnell explains how additional renewable generation places downward pressure on wholesale electricity prices:<sup>478</sup>
- ... Since renewable power generation has no fuel costs, the *short-run marginal* costs of renewable technologies such as solar PV and wind are negligible. Marginal costs are negative when the value of renewable certificates is taken into account. The low marginal price means that renewable energy is generally dispatched in preference to higher-marginal-cost generation like coal and gas, which must pay for fuel. Less conventional generation is required to meet demand – and to the extent thermal generation is required, a higher proportion can be drawn from sources with lower costs (for example, coal ahead of gas). This lowers the price for all power, since electricity markets operate as an auction within which the highest-cost generation supplied in each five-minute period sets the price for all.
- 888 Increasing the build out of renewable generation more quickly will therefore place downward pressure on wholesale electricity prices. This is the case under the current NEM pricing mechanism. Given renewables are the lowest cost form of generation, it is also likely to be true under any alternative pricing mechanism.
- 889 This was recently observed in Australia. The AEMO's Quarterly Energy Dynamics report for Q1 of 2023 showed that average renewable output (from grid-scale solar and wind) was the highest on record and the overall contribution of both coal and gas fell.<sup>479</sup> NEM wholesale spot prices averaged \$83 per megawatt hour (MWh) for the quarter, down from \$93 per MWh and \$216 per MWh in the previous December and September quarters.<sup>480</sup>
- 890 Most notably, grid-scale solar and wind units increased generation in the NEM, yielding record quarterly average output of 4,654 MW, which was 11% higher than Q1 2022.<sup>481</sup> Further, the report showed that reduced wholesale prices in the quarter were influenced by increases in the price-setting frequency of generation from renewable sources, with price-setting up by: 2% for hydro, 3% for wind and 3% for grid-scale solar.<sup>482</sup> The AER also noted '[t]here were a record number of negative prices for Q1 in the NEM driven by strong solar output'.<sup>483</sup> On the other hand, there was a decrease in the proportion of dispatch intervals where the price was set by generation from coal and gas, with price-setting down by: 8% for coal and 2% for gas.<sup>484</sup>
- 891 This follows from the AEMO's previous Quarterly Energy Dynamics report for Q4 of 2022, which also noted that wholesale prices in the quarter fell as a result of wind and grid-scale solar setting prices 17% of the time for the quarter (up 4% from Q4 2021); hydro at 34% of the time (up 1%); while coal and gas generation price-setting reduced from 45% to 39%.<sup>485</sup>
- 892 This has also been the case at various points in other jurisdictions around the world which adopt a similar 'merit order' bidding system for wholesale electricity. These jurisdictions include:<sup>486</sup>

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<sup>478</sup> Dylan McConnell, 'The Decarbonisation of Electricity' in Ross Garnaut, *The Superpower Transformation – Making Australia's Zero-Carbon Future* (2022), page 175.

<sup>479</sup> AEMO, *Lower energy prices and high renewable generation saw record-setting quarter closing out 2022* (25 January 2023) <https://aemo.com.au/newsroom/media-release/lower-energy-prices-and-high-renewable-generation-saw-record-setting-quarter-closing-out-2022>

<sup>480</sup> AEMO, *Renewables drive lower prices, record low emissions* (28 April 2023) <<https://aemo.com.au/newsroom/media-release/renewables-drive-lower-prices-record-low-emissions>>.

<sup>481</sup> AEMO, *Renewables drive lower prices, record low emissions* (28 April 2023) <<https://aemo.com.au/newsroom/media-release/renewables-drive-lower-prices-record-low-emissions>>.

<sup>482</sup> AEMO, *Quarterly Energy Dynamics Q1 2023* (April 2023) page 17 <<https://aemo.com.au/newsroom/media-release/renewables-drive-lower-prices-record-low-emissions>>.

<sup>483</sup> AER, *Wholesale statistics – Electricity Q1 2023* <<https://www.aer.gov.au/wholesale-markets/wholesale-statistics>>.

<sup>484</sup> AEMO, *Quarterly Energy Dynamics Q1 2023* (April 2023) page 17 <<https://aemo.com.au/newsroom/media-release/renewables-drive-lower-prices-record-low-emissions>>.

<sup>485</sup> AEMO, *Lower energy prices and high renewable generation saw record-setting quarter closing out 2022* (25 January 2023) <https://aemo.com.au/newsroom/media-release/lower-energy-prices-and-high-renewable-generation-saw-record-setting-quarter-closing-out-2022>

<sup>486</sup> UCL Energy Institute *UK Industrial Electricity Prices: Competitiveness in a low carbon world* (February 2018), page 22 <[https://www.ucl.ac.uk/bartlett/sustainable/sites/bartlett/files/uk\\_industrial\\_electricity\\_prices\\_-\\_competitiveness\\_in\\_a\\_low\\_carbon\\_world.pdf](https://www.ucl.ac.uk/bartlett/sustainable/sites/bartlett/files/uk_industrial_electricity_prices_-_competitiveness_in_a_low_carbon_world.pdf)>

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- (a) **UK**, where between 2004 and 2016, the rapid increase in wind and solar PV generation reduced wholesale electricity prices by around GBP 6 per MWh;
- (b) **Germany**, where rapid wind and solar PV penetration reduced wholesale electricity prices by 10 Euros per MWh in 2012 and by 14-16 Euros per MWh in 2016; and
- (c) **Italy**, where the penetration of wind and solar PV reduced average wholesale prices by around 16 Euros per MWh in 2013.

893 **The closure of coal-fired generation may increase prices temporarily:** low wholesale electricity prices may result in the closure of coal-fired generators, which can in turn cause a rise in wholesale prices if more expensive gas-fired generation has to be dispatched instead. This impact is temporary, provided new renewables continue to be built. As explained by Dylan McConnell.<sup>487</sup>

While it is true that renewable energy reduces wholesale prices and emissions in the long term, the short-term dynamics are more complex. As discussed, reduced prices and increased volumes [of renewables] are in part responsible for retirement of coal capacity. Sawtooth price movements can be expected: a downward trend from expansion of renewables supply, broken by an upward shift temporarily with each coal-generation closure. In the near term, the magnitude of each upward shift will be dictated by the marginal cost of fossil-fuel generation, which has proven to be volatile and expensive. In the longer term, the magnitude of the upward shift should decline over time as alternatives such as storage displace the role of fossil fuels.

894 The experience in South Australia demonstrates clearly how increasing renewables reduces wholesale electricity prices even following the withdrawal of coal-fired generation. Dylan McConnell states that:<sup>488</sup>

... In the regions with the highest penetrations of renewable energy, South Australia had negative prices 28 per cent of the time and Victoria 24 per cent of the time...

Historically, South Australian wholesale prices have been at the upper end of the regional price range. Factors contributing to higher prices included greater reliance on gas generation (more expensive than coal), poor-quality and high-cost coal, relatively weak interconnection and limited competition. Since the state's two brown coal generators closed in 2012 and 2016, renewable energy, including rooftop solar, has grown to contribute 66 per cent of the state's supply in 2021 and the reliance on gas has decreased. South Australia now enjoys the second-lowest wholesale prices in the mainland NEM.

895 **Renewables insulate Australian wholesale prices from global events:** accelerating the transition to renewable energy has the potential to insulate Australian energy prices from international markets, thereby making costs more predictable for Australian businesses and consumers. Following Russia's invasion of Ukraine in 2022, and the subsequent sanctions on Russian exports (including on its coal and gas exports), wholesale energy prices in Australia increased dramatically. This led the Federal Government to introduce a range of measures including a temporary cap on the price of gas, and the New South Wales and Queensland State Government's introducing a temporary cap on the price of coal.<sup>489</sup> Despite this, as noted above, retail energy prices in Australia are forecast to increase significantly as the industry seeks to recover the costs it incurred over the past year.<sup>490</sup>

<sup>487</sup> Ross Garnaut, *The Superpower Transformation – Making Australia's Zero-Carbon Future* (2022), pages 35 to 36.

<sup>488</sup> Dylan McConnell, 'The Decarbonisation of Electricity' in Ross Garnaut, *The Superpower Transformation – Making Australia's Zero-Carbon Future* (2022), pages 176 to 177.

<sup>489</sup> Prime Minister for Australia, *Energy Price Relief Plan* (9 December 2022) <<https://www.pm.gov.au/media/energy-price-relief-plan#:~:text=Reduce%20the%20impact%20of%20forecast,an%20estimated%20half%20percentage%20point>>.

<sup>490</sup> Australian Financial Review, *Electricity prices to jump at least 20pc in July: Origin boss* (8 March 2023)

<<https://www.afr.com/business-summit/electricity-prices-to-jump-at-least-20pc-in-july-origin-boss-20230308-p5cqtat>>.

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896 Electricity prices will continue to be vulnerable to fluctuations in international fuel prices as long as internationally tradable fuels contribute to a large proportion of Australia's supply.<sup>491</sup> Over time, however, as the development of firmed renewables expands, the cost of energy will be reduced and consumer electricity prices will be protected from global commodity shocks.<sup>492</sup> Facilitating Origin Energy Markets' transition to net zero will have the benefit of reducing the time during which Australia is vulnerable to such energy price fluctuations.

### **Conclusion: lower wholesale prices will lead to lower retail prices**

897 The Australian Energy Market Commission (**AEMC**) recognised that a reduction in wholesale electricity prices will result in at least a partial flow through to prices paid by consumers and small businesses.

898 As noted above, the DMO regulatory framework for energy regulators will facilitate the flow through of reduced wholesale prices to retail prices for consumers and businesses. In particular, the regulatory framework for determining the DMO price requires the relevant regulators to have regard to wholesale electricity costs, among other factors, when determining the DMO price each year.<sup>493</sup> As such, all other things being equal, wholesale prices have a direct impact on the DMO each year, and consequently, retail prices paid by consumers and businesses.

899 In AEMC's final report on Residential Electricity Price Trends in November 2021, it noted:<sup>494</sup>

On a national basis, residential electricity prices and bills are expected to decrease over the forecast period to 2023-24. Overall prices fall despite increasing in 2022-23. This trend is primarily driven by wholesale costs reducing in most of the states and territories in the first year before increasing in the second reporting year following the closure of Liddell power station in New South Wales (Figure 2.1) and Torrens Island A1 and A3 and Osborne in South Australia.

Prices fall over the whole reporting period as new capacity enters the system. This capacity comprises both renewable generation in the form of utility scale wind and solar and dispatchable power in the form of large scale batteries and gas-fired generation.

900 In summary, the Proposed Acquisition will accelerate the development of substantial renewable generation for Australia. This will put downward pressure on wholesale electricity prices, and consequently on prices for consumers and businesses more quickly than would occur absent the Proposed Acquisition.

### **(c) The development of new technologies**

901 Another challenge Origin flagged in respect of its decarbonisation journey is the time and cost associated with technology development, in particular green hydrogen at a commercially viable scale.

902 Under BGTF Consortium ownership, Origin Energy Markets will have greater opportunities to invest in new and proven technologies at a commercially viable scale. The BGTF Consortium will be able to draw on Brookfield's expansive market reach and involvement in a diverse range of projects focused on scaling new renewable technologies. It is beneficial to have a diverse range of renewable technologies in the portfolio given their intermittent nature. For this reason, Brookfield dedicates resources to tracking new renewable technologies. Once these technologies are proven and commercially viable, Brookfield has capital available to immediately invest. In particular, Brookfield is involved in projects where it invests alongside new technologies, like the

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<sup>491</sup> AEMO, *Integrated System Plan* (June 2022), page 3 <<https://aemo.com.au/-/media/files/major-publications/isp/2022/2022-documents/2022-integrated-system-plan-isp.pdf?la=en>>.

<sup>492</sup> AEMO, *Integrated System Plan* (June 2022), pages 3, 8 and 27 <<https://aemo.com.au/-/media/files/major-publications/isp/2022/2022-documents/2022-integrated-system-plan-isp.pdf?la=en>>.

<sup>493</sup> AER, *Default market offer prices 2023-24: Draft determination* (15 March 2023), page 9 <[https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023\\_1.pdf](https://www.aer.gov.au/system/files/AER%20-%20Draft%20determination%20-%20Default%20market%20offer%20prices%202023-24%20-%2015%20March%202023_1.pdf)>.

<sup>494</sup> AEMC, *Residential Electricity Price Trends 2021* (25 November 2021) [https://www.aemc.gov.au/sites/default/files/2021-11/2021\\_residential\\_electricity\\_price\\_trends\\_report.pdf](https://www.aemc.gov.au/sites/default/files/2021-11/2021_residential_electricity_price_trends_report.pdf).

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development of green power to power hydrogen electrolyzers (as opposed to investing in the hydrogen manufacturing process itself), as well as projects where it invests in new and emerging transition focused technologies, like carbon capture and storage where Brookfield is a critical scaling partner for the relevant businesses it invests in. By way of example, in the US last year, Brookfield invested in biofuels and three carbon capture businesses. These are not large scale projects, but Brookfield is providing the scaling capital to help them grow. Brookfield also has a global pipeline of close to 2 GW of early stage hydrogen. All necessary early stage approvals have been obtained so that, when the technology becomes commercially viable, Brookfield will be in a position to immediately introduce this technology into its portfolio.

903 Given Brookfield's global expertise, economies of scale, and investment in new technologies, Australia is likely to see earlier and more cost-efficient access to these technologies than it might absent the Proposed Acquisition. This is because Origin Energy Markets, with its significant customer base, provides a platform for those new technologies making it attractive (eg, economic) for Brookfield to invest in them in Australia.

### (d) Job creation

904 Research commissioned by the Clean Energy Council and undertaken by the UTS Institute for Sustainable Futures also shows that renewable energy will be a major source of jobs for Australians in the medium-term, especially in regional areas, across a diverse range of occupations.<sup>495</sup>

905 The Proposed Acquisition will result in the development of up to 14 GW of new renewables build-out in Australia. This will result in both direct and indirect job creation.

906 **Confidential to Brookfield.** There will also be indirect job creation through the BGTF Consortium partnering with third parties in respect of certain aspects of the projects, as well as in ancillary industries in the supply chain.

## 6.12 Other public benefits arising from the Proposed Acquisition

### (a) Development and funding of 'behind the meter' solutions to meet growing consumer demand and facilitate decarbonisation in Australia

907 There is a rapid uptake in household and commercial renewable generation and storage solutions, like rooftop solar, batteries, hot water systems, smart appliances, etc in Australia. These solutions are known as distributed energy resources (**DER**).<sup>496</sup> In Australia, a growing number of consumers already use or are interested in DER, demanding new and improved products and services to drive down their energy bills. When the energy from DER assets is aggregated and operating together through decentralised power grids (like VPPs), there are substantial benefits for energy security and reliability at the centralised grid level.<sup>497</sup> These solutions are critical to assisting Australia meet its emissions targets.

908 **Origin Zero:** Origin launched its Origin Zero business in late 2021, which partners with large businesses to achieve their sustainable energy goals through a range of energy and energy management services. Origin's approach to enabling customers to decarbonise is to provide customers with a growing portfolio of affordable and simple low-carbon products and cleaner energy solutions. These include rooftop solar and batteries, renewable and carbon-neutral energy, electric vehicle (**EV**) solutions, renewables PPAs, and load and demand management.

<sup>495</sup> University of Technology Sydney Institute for Sustainable Futures, *Renewable Energy Jobs in Australia: Stage One* (June 2020) pages 5, 32 <<https://www.uts.edu.au/sites/default/files/2020-06/Renewable-Jobs-Australia-ISF%20F.pdf>>.

<sup>496</sup> DER is the term used to describe consumer-owned devices that can generate or store electricity as individual units, and increasingly in future, may have the smarts to actively manage energy demand. This includes small-scale embedded generation such as residential and commercial rooftop PV systems (less than 100 kW), PV non-scheduled generation, distributed battery storage, Virtual Power Plants and Electric Vehicles.

<sup>497</sup> AEMO, *About the DER Program* <<https://aemo.com.au/initiatives/major-programs/nem-distributed-energy-resources-der-program/about-the-der-program>>.



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- 909 Origin's vision, through Origin Zero, is to change the products it sells its commercial and industrial customers to include structured products to assist in their decarbonisation. The Origin Zero team works with customers to develop a specific portfolio which will help them decarbonise. This can involve a range of different products including DER. As part of developing and offering those structured products to commercial and industrial customers, Origin itself needs to invest in additional renewable products, that it can package and sell to those customers
- 910 Brookfield offers decarbonisation solutions on a large scale, on time and within budget. Under the Proposed Acquisition, the BGTF Consortium intends to support Origin's existing plans for expanding its existing distributed energy platform to amplify its impact for residential and C&I customers, and meet growing consumer demand in this sector.
- 911 Origin is well positioned to expand its existing offering and provide a broader suite of offerings to meet growth in the sector, but it lacks the capital to do so while it is a publicly listed company. The BGTF Consortium expects to support the growth of the Origin Zero business (including Origin's existing business plan). Brookfield will draw on its global expertise in providing distributed generation solutions to large commercial and industrial customers across the US, China and Europe – including where it has developed aggressive decarbonisation strategies for large global C&I players including Amazon and **Confidential to Brookfield** – and provide the balance sheet support to provide customers with solutions to invest in equipment (eg, solar panels and batteries).
- 912 An expanded Origin Energy Markets renewables portfolio also gives its customers the ability to decarbonise their operations progressively. Origin Energy Markets book means that it can enter into a PPA now (for generation from a project that will come online imminently), and provide clean energy to a C&I customer for only a percentage of its requirements. As Origin Energy Markets 'green build-out' progresses, it can improve on this, by covering more of the customer's load with renewables and firming up existing asset (using peaking generation and building clean storage capacity).
- 913 **Origin Loop:** Origin operates one of the largest VPPs in Australia as part of its 'Loop' business, with around 449 MW of assets connected as part of its VPP offering.<sup>498</sup> One of the largest challenges with the transition to renewables is the variability of supply. This variability of supply did not exist in old thermal supplied power grids. With technology and a more connected world, VPPs are able to control, at a device level, demand as well as supply of distributed assets. This enables the integration of more renewables at both a grid and distribution level. This flexibility results in an avoided cost of building firming assets, more distribution assets and more transmission assets, than if this activity were not undertaken. The benefit of this is a lower cost, lower carbon (from avoided build / or peaker running) energy system.
- 914 The BGTF Consortium sees real opportunity to accelerate and realise the full potential of Origin's VPP and meet growing customer demand for distributed energy solutions. It plans to expand the amount of energy under management in Origin's VPP by: (i) accelerating the roll out of smart meters with Origin's multiple vendors to ensure more customers are capable of using this product; (ii) offering **Confidential to Brookfield**; and (iii) exploring **Confidential to Brookfield: innovative new energy products and services**, among other offerings, thereby increasing the load in the VPP. **Confidential to Brookfield** requires upfront capital which Origin does not have.
- 915 This type of investment will reduce the amount of grid scale renewables projects that will need to be built during the BGTF Consortium's ownership.

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<sup>498</sup> Origin, 2023 Half Year Report, <[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>.

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- 916 **Introducing 'energy as a service' and similar products:**<sup>499</sup> Energy as a service involves energy specialists attending customers' premises to assess opportunities for electrification and recommending decarbonisation solutions. Origin currently has ambitions to introduce a similar service to its customers through its VPP offering, but does not have the balance sheet capacity to finance distributed assets that could be added to the VPP at scale and, in order to obtain funding from outside investors, it would be required to scale the solution on balance sheet at a relatively higher cost of capital to demonstrate the viability of this asset class.
- 917 Under the Proposed Acquisition, the BGTF Consortium proposes to introduce an at scale energy as a service offering into Origin Energy Markets customer decarbonisation portfolio. **Confidential to Brookfield: The BGTF Consortium's specific plans.**
- 918 Following the Proposed Acquisition, the BGTF Consortium will draw on Brookfield's extensive experience in delivering these types of solutions to successfully expand the Origin Energy Markets 'Loop' offering and accelerate decarbonisation. Brookfield provides over 15 million customers with behind the meter solutions across residential infrastructure businesses in Canada, the US, Germany, the UK, France and Spain. A key example of Brookfield's experience in 'energy as a service' and related products is its North American-based Enercare business, North America's largest home and commercial services and energy solutions company. Enercare sells, rents, repairs and maintains a range of residential infrastructure and energy products, serving 1.9 million customers throughout Canada and the US.
- 919 Before Brookfield's ownership, Enercare was a publicly listed entity with three distinct businesses (Enercare, Metergy and Service Experts). Like Origin Energy Markets, Enercare was capital constrained given the public market's capital structure and dividend policy expectation. Post-acquisition, Brookfield made a number of significant changes to the businesses, including:
- (a) separating the consolidated group into three distinct businesses, establishing standalone management teams and capital structures for each of Enercare, Metergy and Service Experts;
  - (b) reducing Enercare's cost of capital via the implementation of securitisation financing in 2018 (allowing it to raise incremental debt with an enhanced credit rating, at lower rates than the prevailing cost of debt), a first for this type of business in Canada;
  - (c) introducing a long-term leasing model (10 to 15 years) in the US, leading to lower upfront costs and reduced recurring payments, mitigating the cost of adoption for households wanting to access energy efficient residential infrastructure; and
  - (d) expanding in-home repair and maintenance solutions.
- 920 As a direct result of Brookfield's investment in Enercare, since 2017, the business has:
- (a) expanded its presence to cover 75% of Canada (where it had previously been focussed on the Ontario market);
  - (b) expanded its product / service offering to include heating, ventilation and air conditioning, water treatment, rooftop solar, batteries, EV and generators (as opposed to predominantly hot water heaters);
  - (c) successfully increased rental adoption rates from 10% to ~50% in the US;
  - (d) increased its rental portfolio from 1.2 million to 1.6 million units (~30% over five years), in addition to 0.5 million protection plans; and
  - (e) added more than 100,000 new long-term contracts.

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<sup>499</sup> BGTF, Investment Committee Presentation (March 2023) slide 12 (Annexure 1.14).

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921 Origin Energy Markets will also benefit from Brookfield's extensive experience in providing green power and other energy solutions across diverse sectors and locations, including customers such as Amazon, JP Morgan, **Confidential to Brookfield: names of customers**.

922 Investment in DER is a key focus for Brookfield globally, including through BGTF. Please see **Annexure B** for examples of Brookfield's experience in this regard, including Solarity, Powen, Standard Solar and Pufeng.

923 Together with its in-depth understanding of power markets and ability to offer tailored and holistic energy solutions to meet customers' needs, Brookfield has positioned itself as a highly credible partner of choice for customers seeking to decarbonise their operations and become more sustainable.

### **(b) Developing local supply chains**

924 The BGTF Consortium has ambitions to support a local manufacturing industry that will contribute to manufacturing components and parts for renewables development in Australia, particularly solar, wind and batteries. Brookfield has worked with a consultant to perform an initial high-level feasibility analysis of potential opportunities to support and develop local manufacturing in Australia. The conclusions of this work suggest that:

- (a) towers and blades are the most attractive 'high-value' components for onshoring given their high transport costs and relatively simple manufacturing capability requirements; and
- (b) it is unlikely to be feasible for Australia to establish competitive cell manufacturing for lithium ion batteries, but there is an opportunity to onshore downstream activities including pack assembly and containerisation.

925 The BGTF Consortium will be able to draw on Brookfield's experience of successfully creating new assets classes in jurisdictions around the world. Such a strategy aligns with Brookfield's 'Deglobalisation' investment theme, as discussed at paragraph 775(b). **Annexure 22.6** sets out the BGTF Consortium's aspirations in respect of onshoring in Australia.

926 For example, in August 2022, Brookfield's infrastructure affiliate, BIP, entered into an agreement with Intel Corporation (Intel) to jointly fund Intel's under-construction semiconductor fabrication facility in Chandler, Arizona. As part of the co-investment program, Brookfield and Intel will jointly invest up to US\$30 billion in the manufacturing facility with Brookfield investing up to US\$15 billion for a 49% stake in Intel's manufacturing facility with the balance to be held by Intel.

### **(c) Facilitating the growth of Australia's renewable power industry**

927 The BGTF Consortium is not looking to develop the proposed up to 14 GW 'green build-out' plan for Origin Energy Markets by itself. It will partner with or outsource to various third parties at different stages of the supply chain to make its plans a reality. Brookfield uses this operating model in other jurisdictions, especially in Brazil – and anticipates it working well in Australia. Brookfield almost always outsources the initial phases of a project (permitting, approvals, etc) to a third party. It is beneficial to Brookfield and the third party for such aspects to be outsourced. These third parties have deep expertise in an aspect of the project, but do not have the requisite capital or expertise to see the project through. Brookfield facilitates the entry and development of participants like this.

## **6.13 Public detriments**

928 It is submitted that the Proposed Acquisition will not give rise to any public detriments, or that any likely public detriment would be *de minimis* and would be outweighed by the substantial public benefits arising from the Proposed Acquisition.

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### (a) Competition Effects

929 The ACCC has previously stated that it considers the most significant public detriments to arise are from the likely effects on competition arising from a Proposed Acquisition.<sup>500</sup> The ACCC has also said that:

the scope of relevant competitive benefits or detriments is not confined to the 'substantial lessening of competition' analysis which applies in the first test for authorisation in section 90(7)(a). A lessening of competition does not have to be 'substantial' to be a detriment to the public that is relevant to the ACCC's assessment of whether it is satisfied that the Proposed Transaction is likely to result in a net public benefit.

930 The competition effects of the Proposed Acquisition are comprehensively outlined in chapters 7 to 13 below. For the reasons discussed in those chapters, the Proposed Acquisition will not result in a lessening of competition, substantial or otherwise, in any relevant market.

931 The energy industry is, of course, subject to a very detailed regulatory regime. Furthermore, that regulatory regime is continually being amended and refined to address emerging issues. If, contrary to our submissions, the ACCC remained concerned that there could be a lessening of competition, the regulatory regime and the ability for that regime to be amended, mean that any impact on competition is likely to be both small and transitory. It is most unlikely that any effects on competition would have significant long-term harmful consequences for economic welfare or for Australian consumers.

### (b) Effects on employment

#### *Erating*

932 Origin has plans to close Australia's largest black coal-fired power station, Eraring. In respect of the effect on employment as a result of a potential retirement of Eraring, Origin publicly stated in 2022 that:<sup>501</sup>

There is no change to Eraring operations today. Eraring site staff, off site contractors and suppliers will continue to be required, as long as the service is still required by the power station.

Origin will consult with its Eraring workforce about the timing of any potential retirement, as well as providing a generous support package during any transition period. This will include re-skilling, career support and redeployment into new roles, where possible. Origin intends to engage with governments and the local community to determine the most appropriate transition planning for any eventual closure. This includes tailored transitional support for employees, continuing with current community commitments, sponsorship and donations out to 2032, and the establishment of a community fund.

933 The closure of Eraring is not dependent on the Proposed Acquisition. Origin had already announced its intended closure and any job losses arising from its closure would arise irrespective of whether the Proposed Acquisition proceeds or not.

934 The BGTF Consortium is committed to a 'just transition' and intends to adopt Origin's transition plans in respect of Eraring – including in respect of support packages around re-skilling, career support and redeployment into new roles, where possible.

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<sup>500</sup> ACCC, *Reasons for Determination: Application for merger authorisation lodged by Telstra and TPG in respect of the proposed Multi-Operator Core Network commercial arrangements and spectrum sharing*, Authorisation number: MA1000021, 21 December 2022 <[https://www.accc.gov.au/system/files/public-registers/documents/Reasons%20for%20determination%20-%202021.12.12%20-%20PR%20-%20MA1000021%20Telstra%20TPG\\_0.pdf](https://www.accc.gov.au/system/files/public-registers/documents/Reasons%20for%20determination%20-%202021.12.12%20-%20PR%20-%20MA1000021%20Telstra%20TPG_0.pdf)>, paragraph 10.175.

<sup>501</sup> Origin Energy, *Origin proposes to accelerate exit from coal-fired generation* (17 February 2022)

<<https://www.originenergy.com.au/about/investors-media/origin-proposes-to-accelerate-exit-from-coal-fired-generation/>>.

**Confidential to Brookfield**

935 **Confidential to Brookfield: Description of BGTF Consortium's plans for the Origin Energy Markets business.**

**Confidential to Brookfield**

936 **Confidential to Brookfield: Description of BGTF Consortium's plans for the Origin Energy Markets business. Confidential to Brookfield**

937 Any job losses arising from the Proposed Acquisition will, in any event, be more than offset by the jobs created both directly and indirectly by the Proposed Acquisition. As noted in paragraph 904 above, research commissioned by the Clean Energy Council and undertaken by the UTS Institute for Sustainable Futures shows that renewable energy will be a major source of jobs for Australians in the medium-term, especially in regional areas, across a diverse range of occupations.<sup>502</sup>

938 The Proposed Acquisition will result in the development of up to 14 GW of new renewables build-out in Australia. This large-scale infrastructure investment and development programme will result in both direct and indirect job creation in Australia. Given the greater levels of certainty of the development of the 14 GW of new renewables than compared with any counterfactual scenario, there is greater likelihood of the Proposed Acquisition being net positive in terms of job creation in Australia.

939 **Confidential to Brookfield.** There will also be indirect job creation through the BGTF Consortium partnering with third parties in respect of certain aspects of the projects, as well as in ancillary industries in the supply chain.

*Integrated Gas business*

940 EIG has recently established MidOcean Energy as a 'pure-play' LNG company with the goal of building a diversified, carbon competitive, international LNG portfolio. In Australia, this involves acquiring the Origin Integrated Gas Business and LNG assets from Tokyo Gas. To manage these interests, **Confidential to MidOcean Energy.**

**Origin's delisting**

942 Following the Proposed Acquisition, Origin will cease to be a public company and will be delisted from the Australian Stock Exchange. Its shares will consequently no longer be available for purchase by ordinary investors who wish to invest in Australia's green energy transition.

943 As described in paragraph 841 above, however, as a listed company, Origin is inherently constrained in its ability to raise substantial new equity and debt to fund a transformation program. The demands of listed company shareholders – notably the need to pay dividends and / or return capital and an aversion to dilutive capital raisings – can work well for a steady yield stock. However, they are challenging for a company in transformation, operating in an industry in a once-in-a-century transition, particularly where the scale of capital required is so significant and the required investment horizon is long term, and therefore mismatched with the expectations of retail and institutional investors.

944 The BGTF Consortium, on the other hand, has substantial capital to invest in renewables in Australia. Over and above an additional 10 GW renewables build-out, the Proposed Acquisition will: (i) facilitate further decarbonisation of Australia through the development and expansion of behind the meter solutions for consumers; (ii) further develop local supply chains for renewable

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<sup>502</sup> University of Technology Sydney Institute for Sustainable Futures, *Renewable Energy Jobs in Australia: Stage One* (June 2020) pages 5, 32 <<https://www.uts.edu.au/sites/default/files/2020-06/Renewable-Jobs-Australia-ISF%20F.pdf>>.

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development in Australia; (iii) facilitate the growth of Australia's renewable power industry; and (iv) facilitate the development of new renewable technologies.

945 The BGTF Consortium will therefore provide certainty and timeliness to Origin Energy Markets' transition to net zero. By implementing the 'green build-out' plan for Origin Energy Markets, the BGTF Consortium will deliver substantial public benefits that would not be realised if Origin were to remain under its present ownership structure.

946 In addition to Australians benefitting from Origin Energy Markets' renewables build-out post-Transaction, current shareholders in Origin will also benefit from Brookfield's and MidOcean Energy's offer to acquire all of the shares in Origin for \$8.912 per share.<sup>503</sup> This will provide a significant return to Origin investors, including the many Origin retail shareholders.

### 6.14 Conclusion

947 No material public detriments arise from the Proposed Acquisition. Any possible public detriments would be outweighed overwhelmingly by the substantial public benefits that arise from the Proposed Acquisition.

948 The Proposed Acquisition will deliver substantial public benefits by accelerating Origin Energy Markets' transition to net zero. Through the implementation of a 'green build-out' plan, the BGTF Consortium will accelerate the funding and development of up to 14 GW of renewable generation and storage capacity by 2033, an increase of 10 GW compared to an optimistic forecast of what Origin Energy Markets is likely to achieve absent the Proposed Acquisition. In order to do so, the BGTF Consortium intends to invest between \$20 and \$30 billion by 2033.

949 The Proposed Acquisition will deliver additional renewable generation and storage in the NEM compared to the counterfactual equal to approximately 10 GW (less whatever capacity Brookfield may have been able to develop by 2033 on a standalone basis, which is highly uncertain). In essence, the Proposed Acquisition will see the BGTF Consortium transition Origin's Energy Markets business so that it is largely emissions free (other than necessary gas-fired firming capacity) thereby contributing significantly towards Australia's targets for renewable generation and emissions reduction.

950 In addition, the BGTF Consortium intends to invest in:

- (a) a broader, more higher quality range of 'behind the meter' solutions;
- (b) local supply chains;
- (c) Australia's renewable power industry; and
- (d) new renewables technologies.

951 The BGTF Consortium will provide certainty and timeliness to Origin Energy Markets' development of the significant replacement capacity it needs to facilitate the timely closure of Eraring. Importantly, the BGTF Consortium will also help Australia reduce the risks of energy price volatility as coal reaches the end of its technical life, power outages and price shocks, delivering substantial public benefits. This will ultimately assist in the satisfaction of Australia's own Paris Agreement climate change commitments, and ultimately reduce energy costs, reduce reliance on foreign energy sources and improve reliability for consumers and businesses in Australia. For the reasons outlined in this section, these public benefits flow directly from the Proposed Acquisition and are therefore transaction specific. They clearly and demonstrably

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<sup>503</sup> The price offered is \$5.78 per share and US\$2.19 per share. Based on an assumed AUD / USD exchange rate of 0.70, this implies a total consideration of \$8.912 per share. The total consideration payable will be reduced by any dividends paid by Origin prior to implementation of the Scheme Acquisition. A 4.5 cents per month ticking fee, accruing on a daily basis, will be payable if implementation of the Scheme Acquisition is delayed beyond 30 November 2023.

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outweigh any possible detriments that could be said to arise from the Proposed Acquisition, which are examined in the remainder of this document.

## C. No substantial lessening of competition

### 7 Relevant market definition

#### 7.1 Electricity markets

952 In respect of electricity supply, it is submitted that the Proposed Acquisition involves consideration of:

- (a) a market for wholesale generation and supply of electricity within the NEM but with particular focus on the Victorian region of the NEM;
- (b) markets for the transmission and distribution of electricity defined by the geographic extent of existing networks, together with a separate national market for the supply of contestable transmission and distribution augmentation and connection services (including new transmission lines to serve REZs); and
- (c) state-based markets for retail electricity supply.

953 In respect of wholesale electricity supply, the Applicants note that ACCC's previous views that mergers in relation to electricity supply may require consideration of both a broader NEM-wide market as well as narrower region-specific markets. As discussed in the application for authorisation of AGL Energy Limited's acquisition of Macquarie Generation before the Australian Competition Tribunal (*AGL / Macquarie Generation*),<sup>504</sup> the analysis of a merger that involves wholesale electricity supply may require consideration of:

- (a) a NEM-wide market, when interconnections are not constrained and demand is not peaking in a region, and in which generators effectively compete in the NEM having regard to the behaviour of other NEM participants – including in other states; and
- (b) a region-specific or state-based market when demand in a region is peaking and interconnector flows are at capacity, thereby leading to price separation and limited competition between generators across state boundaries within the NEM.

954 The Applicant also notes the Tribunal in *AGL / Macquarie Generation* ultimately considered a NEM-wide geographic scope for wholesale electricity supply to be appropriate.

955 In this matter the key issue to be considered in relation to wholesale generation and supply of electricity arises from AusNet's ownership of the principal transmission network in Victoria. Given this, and adopting a purposive approach, the Applicants consider that there should be a particular focus on the Victorian region of the NEM. That is, the Proposed Acquisition is to be assessed having regard to the potential impact of AusNet's ownership of the Victorian transmission network on generators located within that state.

956 However, the Applicants do not consider there is a need to adopt a concluded view on whether a NEM-wide or Victorian market definition should be applied in relation to wholesale electricity supply, as in either case, there is no plausible basis on which a substantial lessening of competition would arise from the Proposed Acquisition.

957 In relation to electricity transmission, electricity is transmitted at high voltages from generators connected to the existing transmission network in a state to distribution networks and industrial customers connected to that transmission network. Relevant customers connected to that transmission network are not able to switch to using a transmission network in another state. The relevant geographic market for transmission service provided by an *existing network* is therefore defined by the geographic extent of that network.

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<sup>504</sup> Application for Authorisation of Acquisition of Macquarie Generation by AGL Energy Limited [2014] ACompT 1, [277] – [278].



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- 958 The position is different, however, in relation to new transmission lines, such as lines connecting a new generator to an existing network or a new transmission line serving a REZ, or in relation to augmentations, where the construction and ownership of these new transmission assets may be contestable, particularly in Victoria. For example, the procurer of contestable works in Victoria (AEMO or a generator) may obtain the contestable augmentation or connection services through a competitive tender from the New South Wales incumbent TNSP Transgrid, the SA incumbent TNSP Electranet, Australian Energy Operations (formerly TOA), or from any other party willing and able to construct new transmission assets (eg, APA). Suppliers of transmission augmentation works can and do compete across state boundaries within Australia. From a geographic perspective, the relevant market for these services is national in scope.
- 959 From a product perspective, it is submitted that the appropriate scope is the supply of electricity transmission construction and development, as these services are sufficiently specialised such that a procurer (AEMO or a generator) cannot easily substitute the services of another type of supplier (eg, a developer of other forms of infrastructure).
- 960 The same position applies in relation to distribution. Existing distribution networks each have sole responsibility for distribution of electricity within their respective geographic areas, and customers located within the area serviced by a particular distribution network cannot switch to obtain distribution from another network. The relevant market is therefore that of the supply of electricity distribution within the region limited to the geographic area of the distribution network. Again, to the extent extensions or new connections to distribution networks are contestable, the Applicants submit that there is a separate market, national in scope, for the supply of such augmentations and expansions.
- 961 In relation to the retail supply of electricity, the Applicants note the ACCC's previous approach of assessing competition dynamics by reference to state-based boundaries for retail supply to end users.<sup>505</sup>

### 7.2 Gas markets

- 962 The Applicants submit that the appropriate framework for assessing any potential competition impact in relation to gas supply involves:
- (a) a market for the wholesale supply of gas (which includes the activities of exploration, production and supply of natural gas) in eastern Australia (including Tasmania and the Northern Territory);<sup>506</sup>
  - (b) separate markets for the distribution of gas defined by the geographic scope of existing networks; and
  - (c) separate markets for the retail supply of gas within each state.
- 963 The Applicants submit that in relation to wholesale supply of natural gas, the appropriate geographic dimension is at least that of eastern Australia, comprising the states of Queensland, New South Wales, Victoria, South Australia and Tasmania plus the Northern Territory. That is due to the interconnected grid of pipelines across these states that can transport gas from production facilities to demand centres on an inter-state basis and the Northern Gas Pipeline allowing the flow of gas from the Northern Territory to Queensland.
- 964 In respect of the product dimension, the Applicants submit that it is unlikely that wholesale gas purchasers can easily and economically switch from natural gas supply to an alternative energy source. For example – purchasers of wholesale gas connected to transmission pipelines cannot

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<sup>505</sup> ACCC, *EnergyAustralia – proposed acquisition of Ecogen Energy* (21 December 2017) <<https://www.accc.gov.au/public-registers/mergers-registers/public-informal-merger-reviews/energyaustralia-proposed-acquisition-of-ecogen-energy>>.

<sup>506</sup> Consistent with the ACCC's views in *Royal Dutch Shell's proposed acquisition of BG Group*, Public Competition Assessment (11 March 2016) <<https://www.accc.gov.au/system/files/public-registers/documents/MER16%2B2186.pdf>>.

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easily switch to electricity for their energy needs, and other emerging gas substitutes (such as hydrogen) are yet to be used as conventional energy inputs to replace or augment gas use. It is therefore appropriate to define the market narrowly by reference to natural gas supply, and not by a broader product dimension that includes alternative energy sources.

965 However, it is not necessary for the ACCC to reach a concluded view on market definition in this respect as there is no prospect of a material lessening of competition in wholesale gas supply, whether assessed on the basis of a broad market in eastern Australia or by reference to narrower regional markets, or by considering the scope of the market only by reference to natural gas.

966 In respect of gas distribution, the Applicants consider that this market is appropriately defined by reference to the geographic area which is served by the relevant distribution network. Similar to electricity distribution, customers of gas distribution networks cannot substitute distribution through one distribution network for distribution through another. From a product perspective, for similar reasons to those set out above in relation to wholesale supply, the Applicants consider that this market is appropriately defined by reference to the distribution of natural gas, not including alternative energy sources.

967 The Applicants note the ACCC's previous practice of defining a separate markets for retail gas supply on a state-wide basis.<sup>507</sup>

### 7.3 Smart meters

968 In respect of the supply of meters the Applicants consider that there is separate product market for the supply of smart meters that includes the installation and maintenance of meters and data collection services. That market is at least NEM-wide.

969 From a product perspective, smart meters can in certain circumstances be interchangeable with traditional meters, as both will meet the basic needs of measuring the flow of energy. However, the mandated roll-out of smart meters in the NEM following introduction of the Power of Choice reforms (discussed in section 5.3 above) means that the supply of traditional meters is becoming less significant in the NEM.

970 Similarly, in relation to a potential distinction between electricity and other types of meters (eg, gas or water), the Applicants note that, in practice the adoption of smart meters for gas and water supply is very low in Australia. It is therefore of no practical significance to adopt a broad product market definition approach in relation to the supply of smart meters as opposed to a narrower approach that defines the market by reference to the supply of electricity smart meters. The Applicants submit that, since the Proposed Acquisition is not likely to result in a substantial lessening of competition irrespective of this product market distinction, it is not necessary for the ACCC to reach a concluded view in this regard.

971 The appropriate geographic frame of reference is at least NEM-wide, as smart meter suppliers provide smart meters and related services across the NEM, and customers (whether electricity retailers or commercial or industrial energy consumers) are able to acquire smart meters from suppliers located throughout Australia.

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<sup>507</sup> See example ACCC, *AGL Energy Limited – proposed acquisition of Australian Power and Gas Company Limited*, Public Competition Assessment (12 September 2013) <<https://www.accc.gov.au/public-registers/mergers-registers/public-informal-merger-reviews/agl-energy-limited-proposed-acquisition-of-australian-power-and-gas-company-limited>>.

## 8 No substantial lessening of competition in electricity generation markets through AusNet's Victorian transmission system

### 8.1 Introduction

972 Brookfield Infrastructure (via a separate Brookfield managed fund, BSIP) holds a 45.4% interest in AusNet with the remaining equity in AusNet being held by third party investors.

973 There is no horizontal overlap between AusNet and Origin in any relevant generation market. Although Origin is a generator in both Victoria and other mainland NEM states, AusNet is not an electricity generator anywhere.

974 Origin currently owns one gas-fired electricity generator in Victoria, Mortlake, which is connected to the AusNet transmission system. Mortlake produced only 0.6% of electricity generated in Victoria in 2021.<sup>508</sup> Nonetheless, given this vertical relationship we expect the ACCC will wish to consider whether vertical competition issues may arise, in particular, whether AusNet may have the ability and incentive to use its position as owner of the core Victorian transmission system so as to foreclose Origin's generator competitors.

975 This section of the Application:

- (a) briefly outlines the **analytical framework** adopted by the ACCC when examining a vertical merger involving a combination of firms operating at different stages of a single vertical supply chain;
- (b) explains why AusNet does not have the **ability** to foreclose Origin's generation rivals and thereby lessen competition in any relevant generation market;
- (c) explains why AusNet does not have the **incentive** to foreclose Origin's generation rivals and thereby lessen competition in any relevant generation market; and
- (d) discusses the consequences of the **different ownership** of Origin Energy Markets and AusNet (both because of the involvement of different Brookfield managed funds and because of the presence of different co-investors / co-underwriters).

976 For completeness, we note that Brookfield Renewable Power and Transition has a 50% interest (and has agreed to acquire the remaining 50% interest) in a Spanish solar farm developer, X-Elio, which has one solar farm operating in Australia and five active pipeline projects under consideration. X-Elio's pipeline projects are described at section 4.10. The completion of each of these projects is uncertain and none are expected to be operational until at least 2025. For this reason, they are not considered further in this section. Based on its completed projects, X-Elio's NEM market shares are negligible, however measured. The fact that Brookfield will have an interest in both Origin Energy Markets and X-Elio will therefore not give rise to horizontal merger issues in any electricity generation market.

977 Although Brookfield does not currently own any operating generation assets in Australia (other than through X-Elio) it is exploring opportunities to invest in new renewables generation. In early April it announced it had entered an agreement with Greenleaf Renewables to develop, build and take ownership of the 420 MW Moonlight Range Wind Farm in central Queensland. The Moonlight Range Wind Farm is in the development phase and is expected to be ready for construction in 2025, subject to the approvals being received. Moonlight Range and other opportunities Brookfield is exploring would become part of the Origin Energy Markets 'green build-out' if the Proposed Acquisition proceeds. Again, the early stage of both Moonlight Range and Brookfield's other opportunities means no horizontal competition issues should arise.

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<sup>508</sup> *State of the Energy Market 2022 – Report*, page 49 (**Annexure 12**). In 2021 to 2022, Origin's share of Victorian generation output increased to 1.9%. This reflects Mortlake, a gas-fired generator, being dispatched more often due to higher electricity prices.

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978 Similarly, GIC Infra, through an affiliate, has a minority interest (16.87%) in listed renewables company ACEN Corporation. ACEN has one solar farm operating in Australia and another in advanced development. ACEN's NEM market shares are very small, however measured. GIC Infra having an interest in both Origin Energy Markets and ACEN will not give rise to horizontal merger issues in any electricity generation market.

### 8.2 Analytical framework for vertical mergers

979 As discussed in section 8.5 below, AusNet and Origin Energy Markets will continue to operate independently as separate companies and be owned by separate Brookfield funds and by separate groups of co-investors. Given that different Brookfield funds will have an interest in both AusNet and Origin Energy Markets, however, we assume that the ACCC will use its framework for considering vertical mergers to assess the possibility of the Proposed Acquisition substantially lessening competition. The references below to 'vertical mergers' and an 'integrated firm' should be understood in the context of the Proposed Acquisition to refer to a transaction that results in separate Brookfield funds having an interest in both AusNet and Origin Energy Markets.

#### (a) Foreclosure

980 The ACCC's Merger Guidelines provide the following guidance on vertical mergers:

[5.22] ... the ACCC is only concerned with non-horizontal mergers where the merged firm has the ability and incentive to use its position in one market to anti-competitively foreclose rivals in another market in a way that lessens competition.

[5.23] In determining whether foreclosure is likely to increase the unilateral market power of the merged firm, the ACCC will consider the following three issues:

- (i) the merged firm's ability to foreclose
- (ii) any incentive the merged firm may have to foreclose
- (iii) the likely effect of any such foreclosure.

981 As noted in the quote above, the ACCC will consider:<sup>509</sup>

- (a) the integrated firm's **ability** to foreclose – an integrated firm will generally only be able to engage in foreclosure if it has sufficient market power at one or more functional levels within the supply chain. It is also dependent on the lack of viable supply alternatives due to capacity constraints by rival suppliers, high barriers to entry (economies of scale), the degree of concentration, exclusive arrangements and product differentiation between products and / or services. In this case the regulatory regime applying in the energy sector will be highly relevant to the question of ability to foreclose.
- (b) any **incentive** the integrated firm may have to foreclose – an integrated firm will only have an incentive to engage in foreclosure strategies if the benefits it receives from doing so outweigh potential losses.
- (c) the likely **effect** of any such foreclosure – the foreclosure strategy will raise concerns if it results in a substantial lessening of competition. Foreclosure may increase input and sales prices and raise barriers to entry and expansion in upstream and downstream markets and reduce existing entrants' ability and incentive to invest in cost reduction, research and development, and product improvements. The effects of foreclosure will be considered in light of the existence of competitors, switching costs to alternative inputs, the likelihood of potential entrants, the presence of countervailing buyer power and strategies employed by rivals to mitigate the effects of foreclosure.

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<sup>509</sup> ACCC, Merger Guidelines (November 2017), [5.23].

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982 The ACCC Merger Guidelines recognise that the particular anti-competitive foreclosure strategies that a vertically integrated merged firm might adopt will depend on the circumstances of each case, but some examples include relevantly:

- (a) charging a higher price for an important input into the production processes of downstream (non-integrated) rivals; and
- (b) limiting or denying access, by downstream (non-integrated) rivals to important inputs (thereby forcing them, for example, to use more expensive or inferior-quality alternatives).

### (b) Other possible concerns with vertical mergers

983 Although anti-competitive foreclosure is the principal possible concern with vertical mergers the ACCC Merger Guidelines also refer to the following additional possible concerns, amongst others:

- (a) **Barriers to entry.** 'A vertical merger may raise barriers to entry if, as a result of the merger, new entrants would have to enter at multiple stages of the vertical supply chain instead of just one. In some cases, the increase in unilateral market power accruing to the merged firm as a result of increased barriers to entry constitutes a substantial lessening of competition.'<sup>510</sup> The open access nature of the Victorian transmission system means this concern does not arise here, as new generation entrants do not have to construct an alternate transmission system. Entry remains at one stage of the vertical supply chain, namely generation.
- (b) **Access to commercially sensitive information:** An integrated merged firm may obtain competitively sensitive information related to the upstream or downstream activities of competitors, for example, costs or planned new connections of a competing generator, which places the competitor at disadvantage in the relevant market. This may distort the dynamics of competition.<sup>511</sup> As discussed below, TRFG contain rules specifically designed to prevent use of competitively sensitive information in a way that would affect competition in a contestable market.

## 8.3 AusNet has no ability to foreclose Origin's generation rivals

### (a) Introduction

984 AusNet does not have any ability to use its position as the owner of Victoria's principal electricity transmission network to foreclose Origin's generation rivals as a result of a combination of the following:

- (a) electricity transmission systems in the NEM are heavily regulated by the NEL and NER to ensure that they cannot misuse any market power they may otherwise have absent regulation. The transmission regulatory regime is continuing to evolve to reflect changes in the electricity market and to address emerging issues;
- (b) the regulatory regime includes TRFG made by the AER that transmission businesses must comply with. The purpose of the guidelines is to ensure that where there is vertical integration between a transmission business and a contestable business, the transmission business is operated in a way that does not adversely affect competition in the contestable market. The guidelines include requirements in relation to no cross subsidisation, no taking advantage of information and no discrimination. It is important to observe that the fact that the regulatory regime includes the TRFG means the regime contemplates that vertical integration may exist and establishes a regulatory tool to ensure that competition cannot be harmed as a result. The guidelines can be amended by the AER from time to time, as circumstances require;

<sup>510</sup> ACCC, Merger Guidelines (November 2017), 5.25.

<sup>511</sup> ACCC, Merger Guidelines (November 2017), 5.47.

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- (c) Unlike other states, in Victoria, TNSP functions are split between AusNet and AEMO, with AEMO responsible for many of the most competitively significant functions, including system planning, augmentation and the provision of network services to users. AusNet has no ability to foreclose in areas controlled or overseen by AEMO in Victoria; and
- (d) there is a high level of transparency over all relevant aspects of AusNet's operation of the transmission network. There is no possibility of subtle forms of discrimination 'flying below the radar'.

985 **Figure 105** below summarises why AusNet could not engage in a foreclosure strategy in any area of transmission network activity. A more detailed discussion of each area then follows.

**Figure 105: AusNet has no ability to engage in foreclosure in any area of transmission activity**

Area of activity	Ability
<b>Pricing: prescribed transmission services</b>	<p>Prescribed transmission services are the core services provided by TNSPs and comprise: (i) prescribed common transmission services; (ii) prescribed TUOS services; (iii) prescribed entry services; and (iv) prescribed exit services.</p> <p>The most important of these are common transmission and TUOS services. Charges for these services are set by AEMO (albeit comprising a substantial AusNet component) in accordance with a methodology approved by the AER. They are paid by distributors and directly connected industrial customers (not generators).</p> <p>Prescribed entry services are grandfathered services provided to generators who had a connection agreement in place on or before 9 February 2006. Charges for these services are levied by AusNet in accordance with a methodology approved by the AER.</p> <p>Prescribed exit services are grandfathered services provided to distributors and industrial customers (not generators) who had a connection agreement in place on or before 9 February 2006. Charges for these services are levied by AusNet in accordance with a methodology approved by the AER.</p> <p>The only prescribed transmission services charged by AusNet and paid by generators are prescribed entry services. AusNet's pricing of prescribed entry services is heavily regulated by the AER. In particular, AusNet must comply with a pricing methodology that is approved by the AER and that must satisfy requirements set out in the NER. This removes any ability for AusNet to discriminate in the pricing of prescribed entry services against non-Origin generators.</p>
<b>Pricing: negotiated transmission services</b>	<p>Negotiated transmission services include, most importantly, non-contestable services related to the connection of new generators. Such services are non-contestable where the capital cost is not expected to exceed \$10 million or the augmentation is not separable from the rest of the AusNet network (eg, a substation upgrade or line 'cut in'.)</p> <p>Any negotiation must be conducted in accordance with principles set out in the NER and negotiating service criteria set by the AER. These include requirements that:</p> <ul style="list-style-type: none"> <li>(a) price should be based on cost determined in accordance with an AER approved cost allocation methodology; and</li> <li>(b) the price must be the same for all generators unless there is a material difference in cost.</li> </ul> <p>AusNet must also prepare a negotiation framework that is approved by the AER which includes obligations in relation to the provision of information and obligations in relation to time periods. AEMO is centrally involved in these negotiations. Negotiations are ultimately subject to binding dispute resolution by a commercial arbitrator.</p>

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Area of activity	Ability
	In combination, the need to comply with detailed principles relating to price, the AER approved negotiating framework, the central role of AEMO in negotiations and the availability of commercial arbitration for any disputes, removes any ability for AusNet to discriminate in the pricing of negotiated transmission services.
<b>Pricing: contestable transmission services</b>	The pricing for contestable transmission services including connection is set through a market process which is usually a competitive tender conducted by AEMO. AusNet has no ability to discriminate in relation to the pricing of contestable transmission services.
<b>Connection and access</b>	<p>In Victoria, AEMO negotiates and contracts directly with generators seeking connection to the AusNet transmission network. Where connection requires augmentation of the AusNet transmission network, AEMO determines if the augmentation is contestable and, if it is, conducts a tender for that work (unless the generator wishes to assume responsibility for the augmentation). If the work is 'non-contestable' AusNet must negotiate to provide the service as a negotiated transmission service.</p> <p>To the extent AusNet is involved it participates in a negotiation process prescribed by the NER and overseen by AEMO. That process is subject to binding dispute resolution in accordance with Chapter 8 of the NER.</p> <p>As a consequence, AusNet has no ability to refuse or delay non-Origin generators from connecting to the AusNet transmission network.</p>
<b>Planning the transmission network (augmentation)</b>	In Victoria, AEMO is responsible for planning, authorising, contracting for, and directing, augmentation of AusNet's transmission network. As a result, AusNet has no ability to plan or augment the transmission network in a way that would foreclose non-Origin generators, whether by investing in augmentations that advantage an Origin generator, or by not investing in augmentations that would advantage a non-Origin generator.
<b>Access: ongoing quality of connection (renewal and maintenance; outages)</b>	<p>AusNet is responsible for the renewal and maintenance of the AusNet transmission system.</p> <p>AusNet does not have the ability to selectively renew or maintain sections of the transmission network to discriminate against non-Origin generators for several reasons.</p> <p><b>First</b>, AusNet has numerous legal obligations that it would be in breach of if it failed to maintain and renew any part of the transmission network adequately, including obligations under electricity safety laws, electricity system code, its licence and power system performance and quality of supply standards in schedule 5.1A of the NER.</p> <p><b>Second</b>, there is a high degree of transparency and regulatory oversight from both the AER and AEMO in relation to maintenance and renewal.</p> <p><b>Third</b>, failing to maintain so as to disadvantage non-Origin generators would expose AusNet to a high degree of risk from claims from generators, class actions from consumers, eg, arising from heightened bush fire risk, and to penalties under the AER's STPIS.</p> <p><b>Finally</b>, AusNet is required to comply with TRFG, which include a requirement not to discriminate in favour of affiliated entities such as Origin (including a specific obligation in relation to service quality).</p> <p>In relation to outages, planned outages, including their timing and duration, must be notified to and approved by AEMO. They cannot proceed without AEMO approval. Unplanned outages can only be taken in limited circumstances (eg, in response to an emergency) and must also be notified to AEMO. In all cases outages are published</p>

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Area of activity	Ability
	by AEMO. Any attempt to 'manufacture' unplanned or prolonged outages targeting non-Origin generators would be easily detected and generators can raise objections to a planned outage with Ausnet and AEMO who will require the issue to be resolved for the outage to proceed. As a result, AusNet has no ability to use maintenance outages to discriminate.
<b>Access: dispatch and curtailment</b>	AEMO runs the central dispatch process through which generators are instructed to supply electricity in response to offers they have made. AusNet has no role in this regard. As a result, AusNet has no ability to prevent non-Origin generators from being dispatched.
<b>Cross subsidisation</b>	The transmission pricing regulatory framework outlined above ensures that cross subsidisation is not possible. This is further reinforced by provisions of TRFG made by the AER, which require AusNet to: (i) be legally separated from other businesses providing contestable services; (ii) establish and maintain separate accounts for the regulated business; and (iii) establish and maintain the associated protocols to give effect to the TRFG.
<b>Information and discrimination</b>	<p>AusNet may obtain competitively sensitive information from non-Origin generators (eg, about connection enquiries). It has no ability, however, to provide that information to Origin or otherwise use it to benefit Origin. Both the NER and the TRFG require such information to be kept confidential and not used for any purpose except that for which it was provided.</p> <p>AusNet will also hold information about its own network that may be of advantage to generators (for example, information about planned outages). The TRFG contain provisions to the effect that if such information is provided to an affiliate, it must also be available to others. In any event much of this information is publicly available (eg, in the case of outages via AEMO's PASA system).</p> <p>The TRFG also provide that AusNet must not discriminate between a related electricity service provider (which would include Origin Energy Markets) and a competitor (or potential competitor) of a related electricity service provider in connection with the provision of prescribed transmission services by AusNet. The non-discrimination obligation includes specific requirements that AusNet:</p> <ul style="list-style-type: none"> <li>(a) in dealing or offering to deal with a related electricity service provider, treat the related electricity service provider as if it were not a related electricity service provider (that is, as if it had no connection or affiliation with the AusNet);</li> <li>(b) in like circumstances, deal or offer to deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions;</li> <li>(c) in like circumstances, provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider; and</li> <li>(d) subject to complying with laws, not disclose to a related electricity service provider information AusNet has obtained through its dealings with a competitor (or potential competitor) of the related electricity service provider where the disclosure would, or would be likely to, provide an advantage to the related electricity service provider.</li> </ul> <p>In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the TRFG. The AER also has a range of enforcement options to ensure compliance with the TRFG and to respond to and address potential non-compliance.</p>



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### (b) No ability to discriminate in relation to pricing

986 Charges **for using** a transmission network are paid by distributors and industrial customers directly connected to the transmission network, not by generators. The only charges payable by a generator to a transmission network owner are **connection** charges. Connection charges are either regulated by the AER, negotiated in accordance with a regulated negotiation framework that includes AER dispute resolution, or set through a contestable market process. As a result, there is no possibility of AusNet using the price charged for use of or connection to its transmission system as a means of discriminating against Origin's generation rivals.

987 There are three broad categories of transmission services for which charges are levied:

- (a) **prescribed transmission services:** prescribed transmission services are essentially the core services provided by TNSPs;
- (b) **negotiated transmission services:** these services include, most relevantly, non-contestable services related to connecting a new generator or generators to the transmission network at a connection point; and
- (c) **contestable transmission services:** these services are provided on a contestable basis and include augmentation, such as the construction of a new line connecting a new generator to the transmission network. Prices are set by the market through contestability rather than being subject to AER regulation.

#### **No ability to discriminate in relation to pricing for prescribed transmission services**

988 Of AusNet's revenue from transmission services, **Confidential to AusNet: the significant majority** is derived from prescribed transmission services. **Confidential to AusNet: less than 5%** is derived from negotiated transmission services, and **Confidential to AusNet: less than 15%** is derived from non-regulated, or contestable transmission services.

989 There are four categories of prescribed transmission services for which charges are levied:

- (a) prescribed common transmission services, which relate to services that provide equivalent benefits to all users without differentiation based on their location;
- (b) prescribed TUOS services, which relate to services that provide benefits to users depending on their location within the transmission system;
- (c) prescribed entry services (grandfathered entry connection services for generators who had a connection agreement in place on or before 9 February 2006); and
- (d) prescribed exit services (grandfathered exit connection services for customers who had a connection agreement in place on or before 9 February 2006).

990 The charges for prescribed common transmission services and TUOS services are calculated, set and levied by AEMO. These charges comprise costs charged by AusNet to AEMO (the amount of which is regulated by the AER) and AEMO's own costs. The charges for prescribed entry services and prescribed exit services are levied by AusNet. Of the four charges **only** charges for prescribed entry services are paid by generators. All other charges are paid by DNSPs and industrial customers directly connected to the transmission network. As a result, the only prescribed transmission service charge that could conceivably be used by AusNet to discriminate against non-Origin generators is the charge for prescribed entry services.

991 Entry services are services provided to serve a generator, or a group of generators, at the same connection point.<sup>512</sup> Prescribed entry services are a confined set of connection services that are subject to 'grandfathering' provisions in Chapter 11 of the NER. They are connection services provided by a TNSP to a Transmission Network User (**TNU**) (which includes a generator whose

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<sup>512</sup> AEMC, National Electricity Rules (at 20 January 2023) (NER), Chapter 10 - definition of 'entry service'.

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generating unit is connected to the transmission network) in respect of which various criteria are satisfied, including that the service is provided under a connection agreement that was first entered into before 9 February 2006 which has not been amended after 9 February 2006 at the request of the TNU for the purposes of altering the relevant service.<sup>513</sup>

992 AusNet's pricing of prescribed entry services is heavily regulated by the AER. As described in more detail in **Annexure A**:

- (a) the AER makes a five yearly transmission pricing determination in which sets the maximum allowable revenue (**MAR**) AusNet may earn;<sup>514</sup>
- (b) as part of the five yearly transmission determination, AusNet must propose and the AER must approve (or revise) a pricing methodology that allocates its allowed revenue to prescribed transmission services and to the connection points of network users. Because AusNet is only responsible for charging for prescribed entry services and prescribed exit services, AusNet's pricing methodology deals only with the pricing of those services. In Victoria the pricing of all other prescribed transmission services is the responsibility of AEMO, which has its own pricing methodology that is approved by the AER;
- (c) AusNet's pricing methodology must comply with detailed rules contained in Chapter 6A of the NER, including a requirement that:

The whole of the [annual service revenue requirement] for prescribed entry services is to be allocated to transmission network connection points in accordance with the attributable connection point cost share for prescribed entry services that are provided by the transmission network service provider at that connection point.<sup>515</sup>

- (d) The pricing methodology proposed by AusNet and approved by the AER must:
  - (i) give effect to and be consistent with pricing principles for prescribed transmission services (ie, the principles set out in rule 6A.23, including the allocation principles briefly described above); and
  - (ii) comply with the requirements of, and contain or be accompanied by such information as is required by, pricing methodology guidelines made by the AER;<sup>516</sup>
- (e) AusNet must comply with the pricing methodology approved by the AER in setting prices that may be charged for the provision of prescribed entry services.

993 In summary, all prescribed transmission charges are levied on distributors and industrial customers directly connected to the transmission network other than the grandfathered 'prescribed entry services' which are levied on generators. Although those charges are levied by AusNet, they are set in accordance with an AER approved pricing methodology (which in turn must comply with detailed rules in the NER). As a result, AusNet could not use the price of prescribed transmission services to discriminate against non-Origin generators.

994 There are only eight generator customers receiving prescribed entry services. By definition they are already connected to the transmission system and are participating in the NEM. These are:

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<sup>513</sup> NER, cl 11.6.11. The treatment of the assets providing these services, which were, prior to 16 November 2006, incorporated in the regulatory asset base, has been grandfathered following the transition to the new Chapter 6A regulatory environment, in which connection services are treated as negotiated services and, as a consequence, assets providing those services are not incorporated into the regulatory asset base. See further explanation of the amendment to the treatment of assets at AEMC, Rule Determination – National Electricity Amendment (Cost allocation for transmission services) Rule 2008 (29 January 2009) <<https://www.aemc.gov.au/sites/default/files/content/ade2a2e2-f66f-48a3-8432-d9058158d4cf/Rule-Determination.pdf>>.

<sup>514</sup> NER, cl 6A.3.1.

<sup>515</sup> NER, cl 6A.22.3; NER, cl 6A.22.4 also provides that the 'attributable connection point cost share' must substantially reflect the ratio of (1) the costs of the transmission system assets directly attributable to the provision of prescribed entry services at a transmission network connection point to (2) the total costs of all the transmission network service provider's transmission system assets directly attributable to the provision of prescribed entry services.'

<sup>516</sup> NER, cl 6A.24.1(c).

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- (a) AES Jeeralang (a gas-fired power station);
- (b) AES Yarra (gas-fired);
- (c) Laverton (gas-fired);
- (d) Loy Yang A (brown coal-fired);
- (e) Loy Yang B (brown-coal fired);
- (f) Southern Hydro (hydro);
- (g) Valley Power (gas-fired); and
- (h) Yallourn (brown coal-fired).

995 In addition, the Murraylink interconnector (connecting the Victorian and South Australian transmission networks), and the Basslink Interconnector (connecting the Victorian and Tasmanian transmission networks), are treated in the same way as the above generators for pricing purposes and therefore are also charged prescribed entry service fees.

996 Given the fact that each of these generators is already connected and some are coal-fired and likely to close in the near-medium term, even if price discrimination in charging for prescribed entry services was possible (which it is not), it is most unlikely to have an effect on competition in any relevant generation market.

### ***No ability to discriminate in relation to pricing for negotiated transmission services***

997 A negotiated transmission service is:

- (a) a shared transmission service that:
  - (i) exceeds the network performance requirements (whether as to quality or quantity) as that shared transmission service is required to meet under any jurisdictional electricity legislation; or
  - (ii) except to the extent that the network performance requirements which that shared transmission service is required to meet are prescribed under jurisdictional electricity legislation, exceeds or does not meet the network performance requirements (whether as to quality or quantity) as set out in Schedule 5.1A or 5.1 of the NER;
- (b) connection services that are provided to serve a transmission network user, or group of transmission network users, at a single transmission network connection point, other than connection services that are provided by one network service provider to another network service provider to connect their networks;
- (c) undertaking system strength connection works.<sup>517</sup>

998 AusNet provides negotiated transmission services entirely, or almost entirely, in the context of connecting a new generator to the transmission network. The services AusNet may provide could include connection services themselves (paragraph 997(b)) or upgrading the transmission network to a higher standard to accommodate the new generator (paragraph 997(a)(i)) with the latter being the most common.

999 AusNet negotiates the price for negotiated transmission services where those services are non-contestable. Non-contestable negotiated transmission services are services where the capital cost is not expected to exceed \$10 million or the augmentation is not separable from the rest of the AusNet network (eg, a substation upgrade or line 'cut in'). The pricing of contestable connection services is discussed below.

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<sup>517</sup> NER, Definitions.

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- 1000 The regulatory framework applying to the negotiation of negotiated transmission services means that AusNet is not able to discriminate in relation to the pricing for such services for the reasons discussed below. We note at outset that the regulatory regime relating to negotiated transmission services applying in Victoria is different to that applying in the rest of NEM. In particular, Chapter 6A in Version 109 of the NER continues to apply in Victoria with respect to negotiated transmission services.
- 1001 **First**, in negotiating the prices that are to be charged for negotiated transmission services, AusNet must apply '**negotiated transmission service criteria**' set by the AER as part of its five yearly transmission determination. Those negotiated transmission service criteria must in turn give effect to and be consistent with negotiated transmission service principles set out in clause 6A.9.1 of the NER (Version 109). The negotiated transmission service criteria must also be applied by any commercial arbitrator in resolving a dispute. The negotiated transmission service principles set out in the NER include a requirement that the price for a negotiated transmission service:
- (a) should be based on the costs incurred in providing that service, determined in accordance with the principles and policies set out in the cost allocation methodology for the relevant TNSP. The AER has approved AusNet's cost allocation methodology and any future amendment would require AER approval;<sup>518</sup>
  - (b) should be at least equal to the avoided cost of providing the negotiated connection service, but no more than the cost of providing it on a standalone basis;
  - (c) must be the same for all transmission network users, unless there is a material difference in the cost of providing the negotiated transmission service to different users;
  - (d) should be subject to adjustment over time to the extent that the assets used to provide that service are subsequently used to provide services to another person; and
  - (e) should be such as to enable the TNSP to recover the efficient costs of complying with all regulatory obligations or requirements associated with the provision of the negotiated transmission service.
- 1002 As noted above, these principles are then reflected in negotiating service criteria approved by the AER as part of its transmission determination.<sup>519</sup>
- 1003 **Second**, AusNet must also prepare a negotiating framework that sets out procedures for negotiating terms and conditions for access to the Victorian transmission network. This is reviewed and approved by the AER as part of the AER's five yearly pricing determinations.<sup>520</sup> The negotiating framework must include requirements that:
- (a) AusNet and the generator seeking access negotiate in good faith;
  - (b) AusNet provide all such commercial information reasonably required by the generator seeking access so as to facilitate effective negotiations;
  - (c) AusNet identify and inform the generator seeking access of the reasonable costs of providing the service, and to demonstrate that charges reflect costs;
  - (d) that the generator seeking access providing all such commercial information reasonable required for AusNet to engage in effective negotiation;

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<sup>518</sup> AEMC, *National Electricity Rules* (version 109) cl 6A.19.4. AER, AusNet Services (Transmission) - Cost allocation method 2019 <<https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/cost-allocation-method/ausnet-services-transmission-cost-allocation-method-2019>>.

<sup>519</sup> AEMC, *National Electricity Rules* (version 109) cl 6A.9.4. See also AER, Final Decision – AusNet Services Transmission Determination 2022 to 2027 Overview, page 37 (**Annexure 10**).

<sup>520</sup> AEMC, *National Electricity Rules* (version 109) cl 6A.9.5.

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- (e) there is a process for dispute resolution that complies with the dispute resolution requirements in the NER;
- (f) there is a reasonable period of time for commencing, progressing and finalising negotiations, with requirements for each party to use reasonable endeavours to adhere to these time periods in negotiations;
- (g) AusNet specify arrangements for the payment of AusNet's reasonable direct expenses incurred in processing the application by the generator; and
- (h) AusNet determine the potential impact of the provision of a negotiated transmission service on other network users.

AusNet's negotiating framework for the current regulatory period was approved by the AER as part of the transmission determination.

1004 **Third**, (and as discussed in more detail in (c) below) AEMO is centrally involved in negotiations for access to the Victorian transmission network.

1005 **Fourth**, negotiations are ultimately subject to a dispute resolution process under procedures in Version 109 of the NER.<sup>521</sup> In particular, the AER can appoint a commercial arbitrator who can resolve the dispute.<sup>522</sup>

1006 In combination, the need to comply with detailed principles relating to price (including the requirement that prices be based on costs incurred in providing the service determined in accordance with an AER approved cost allocation methodology), the AER approved negotiating framework (including provision of information), the central role of AEMO in negotiations and the availability of commercial arbitration for any disputes, removes any ability for AusNet to discriminate in the pricing of negotiated transmission services.

1007 For completeness, we note that by definition non-contestable negotiated transmission services have a capital cost of less than \$10 million or are not separable. The costs involved are not likely to be material relative to the costs of constructing a new electricity generation facility. As a result, even if there were an ability to discriminate in relation to price, it is most unlikely to have a material effect on competition in any generation market.

### ***No ability to discriminate in relation to pricing for contestable transmission services***

1008 Contestable transmission services are services, including services related to new connections, provided on a contestable basis (ie, where the cost would exceed \$10 million and the work is separable, eg, a new line connecting a generator to the transmission network). The price for contestable connection services will be set by the market through the competitive tender process that is used to select the party to construct the relevant connection assets (which may or may not be AusNet). The competitive tender may be conducted by AEMO or by the generator connecting to the transmission system – see below.

1009 We understand that tenders for contestable transmission services are very competitive. Tenders won in the last few years in Victoria by parties other than AusNet include tenders related to the connection of the following new generators.

- (a) Kiamal Terminal Station – Transgrid;
- (b) Berrybank Wind Farm – Transgrid;
- (c) Elaine Wind Farm – TOA; and
- (d) Ararat Wind Farm – TOA.

<sup>521</sup> Technically the dispute resolution procedures in Chapter 8 of the NER may also apply.

<sup>522</sup> AEMC, *National Electricity Rules* (version 109) cl 6A.30.

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1010 **Figure 106** below provides an overview of selected contestable projects within the Victorian transmission network in recent years.

**Figure 106: Selected contestable projects within the Victorian electricity transmission network awarded since 2012**

Name of Project	Description	Awarded To	When awarded
<b>Selected transmission network augmentations or maintenance projects</b>			
<b>Red Cliffs System Strength Remediation</b>	A project to provide long term system strength remediation to shortfalls to Red Cliffs, West Murray (Mallee) region through the installation of three synchronous condensers.	Not known.  The 2022 VAPR published by AEMO indicates that:  <i>Since the 2021 VAPR, AVP [AEMO Victorian Planning] has finalised the Invitation to Tender and has entered into system strength services contracts from three synchronous condenser in the West Murray area. The contract came into effect on 1 August 2022</i>	Awarded August 2022
<b>System Integrity Protection Scheme (SIPS)</b>	A project to increase pre-contingency important capabilities of the VNI by up to 250 MW between November to March each year, to reduce loading on critical lines.	Neoen (developed solution with Tesla)	Awarded 2018 – market led development
<b>Western Renewables Link (anticipated)</b>	220kV/500kV transmission line and terminal station with terminal station upgrades to increase thermal capacity in Victoria, primarily for renewable generation projects.	AusNet	Awarded December 2019
<b>Renewable Energy Zone Development Plan (RDP)</b>	A series of projects to relieve existing constraints on the Victorian declared shared transmission network and facilitate connection of new generators, as directed by the Victorian Government's REZ Development Plan.  RDP Stage 1 – Koorangie Energy Storage System involves providing system strengthening services by establishing the proposed Koorangie Energy Storage System utilising grid-forming inverters.  RDP Stage 2 – Ararat synchronous condenser involves providing system strengthening services in the Western Victoria REZ. This will occur by establishing the Ararat synchronous condenser.	RDP Stage 1 – Koorangie Energy Storage System – Edify Energy  RDP Stage 2 - Ararat synchronous condenser – Australian Energy Operations ( <b>AEO</b> ) (formerly Transmission Operations Australia)	Awarded:  Edify (September 2022)  AEO (October 2022)

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<b>Deer Park terminal station</b>	A project to develop a 220/66kv terminal station at Deer Park.	TransGrid Services (now trading as Lumea)	Awarded 2015/2016
<b><i>Selected contestable generator connection projects involving Mondo / AusNet</i></b>			
<b>Crowlands Wind Farm 220kV switching station</b>	220kV Terminal Station in relation to the Crowlands wind farm near Avoca in Victoria (noting, connection assets, including transformers developed, owned and operated by the Crowlands Wind Farm, as part of Generating System).	AusNet (trading as Mondo)	Awarded 2018
<b>Stockyard Hill Wind Farm 132kV/500kV terminal station plus 80km 132kV transmission line</b>	70km, 132kV transmission line and a 132kV / 500kV terminal station near Lismore, Victoria in relation the Stockyard Hill wind farm.	AusNet (trading as Mondo)	Awarded 2018
<b>Kiamal Solar Farm terminal station</b>	220kV Kiamal Terminal Station and connections assets for the Kiamal solar farm near Ouyen in Victoria.	TransGrid Services (trading as Lumea)	Awarded 2018
<b>Berrybank terminal station</b>	220KV terminal station and connection assets in relation to Berrybank Windfarm near Cressy in Victoria.	TransGrid Services (trading as Lumea)	Awarded 2018
<b>Dundonnell Wind Farm 220kV/500kV terminal station plus 30km 220kV transmission line</b>	38km transmission line and 500 / 220 kV substation in relation to the Dundonnell wind farm in Victoria	AusNet (trading as Mondo)	Awarded 2018
<b>Murra Warra Wind Farm 220kV/33kV terminal station</b>	220/33kV Terminal Station and connection assets in relation to the Murra Warra wind farm near Horsham.	AusNet (trading as Mondo)	Awarded 2018
<b>Moorabool Wind Farms 30km 132Kv transmission line</b>	30km, 132Kv overhead transmission line to for the Moorabool North and Moorabool South wind farms via the existing Elaine terminal station.	Transmission Operations Australia (trading as BEON)	Awarded 2017/2018
<b>Bulgana Wind Farm 220kV/33kV terminal station + 17km 33kv transmission line</b>	Development of a 17km transmission line and 220/33kV Terminal Station for the Bulgana wind farm near Stawell.	Ausnet (trading as Mondo)	Awarded 2017
<b>Salt Creek Wind Farm 55km 66kV transmission line</b>	55km, 66kV overhead power line that runs from the Salt Creek wind farm near Woorndoo to the Terang Terminal Station in Victorian.	AusNet (trading as Mondo)	Awarded 2016

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<b>Ararat terminal station</b>	Development of a terminal station to connect the Ararat wind farm to the Victorian transmission network.	Transmission Operations Australia (trading as BEON)	Awarded 2015
<b>Elaine terminal station</b>	132 KV transmission line and 220Kv terminal station at Elaine in relation to Mt Mercer wind farm in Victoria. k.	Transmission Operations Australia (trading as BEON)	Awarded 2012

Source: AEMO and AusNet

1011 In addition, the Applicants' understanding is that a new generator may obtain an exemption to construct, own and operate the connection asset itself as part of its generation system under the NER. Examples of this occurring include the Mortlake South Wind Farm and the Crowlands Wind Farm.

1012 As a result, there is no practical ability for AusNet to discriminate in the pricing of contestable transmission services.

**(c) No ability to discriminate in relation to connection and access**

1013 The Victorian transmission network is an open access system and new generators have a right to connect to that transmission network. AusNet has no right or ability to refuse to connect a non-Origin generator or to unreasonably delay connection for a non-Origin generator.

1014 The TNSP's functions in Victoria are split between AusNet and AEMO. AEMO is responsible for system planning, augmentation and the provision of shared transmission services to network users.

1015 In order for AEMO to perform this role, it negotiates directly with generators seeking connection to the transmission network and it is AEMO that ultimately enters into a use of system agreement with a new generator.<sup>523</sup>

(a) **Enquiry:** A party seeking connection (eg, a new generator) initiates the process by making an enquiry to AEMO. AEMO responds to such enquiries by setting out the requirements as to technical studies and access standards, land use and type of transmission service, proposed connection program and options, and with a preliminary system strength assessment. AEMO will notify the DTSO (ie, AusNet) of the enquiry and may assist prospective applicants with other information required for an application – this may include pre-feasibility discussions, eg, regarding the connection process, information required, and assisting to determine an appropriate location for a proposed connection. It is AEMO not AusNet that receives and responds to enquiries.

(b) **Application:** An application for connection to the Victorian transmission network is made to AEMO. The application is to be made (with supporting information) as prescribed by AEMO, who then assesses the application. AEMO will notify the applicant whether it agrees to the applicant's proposed performance standards and of the outcome of the system strength impact assessment, and whether the connection requires augmentation of the network, and, if so, whether those augmentations will be contestable. For

<sup>523</sup> For an overview of the Victorian transmission connection process and AEMO's involvement is provided on the AEMO website, see: <<https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/participate-in-the-market/network-connections/victorian-transmission-connections>>.



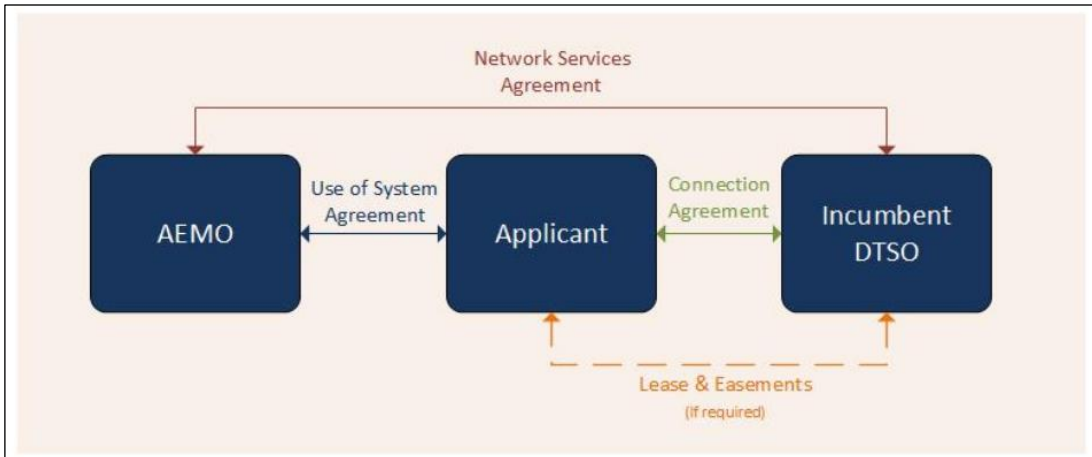
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contestable parts of any augmentation, AEMO will conduct a competitive tender for the augmentation work (unless the generator wishes to assume responsibility for such a competitive tender and appointing the party to construct).

- (c) **Contracting:** AEMO makes an offer to connect the applicant to the transmission network and enters into a suite of contracts with the applicant and the DTSO. Depending on whether works are required and, if so, whether they are contestable, additional contracts will be entered into between AEMO, the applicant, and the DTSO who will construct the relevant works.
- 1016 Where no network augmentation is required for a connection, AEMO will enter a Use of System Agreement (**UoSA**) directly with a generator, under which AEMO provides the connecting generator with ongoing shared network services (ie, transmission connection and access). At the same time, a Network Services Agreement between AEMO and the incumbent DTSO (AusNet) allows AEMO to provide shared network services to the connecting generator under the UoSA. Under the Network Services Agreement, the DTSO typically undertakes to AEMO that it will perform the network services to ensure that AEMO can perform its functions vis-à-vis the connecting generator, and to consult with AEMO in respect of any upgrades, replacement or modification of the relevant network infrastructure. The DTSO will also enter into a Connection Services Agreement – this agreement covers the construction of connection assets and the connection service to be provided to the generator.
- 1017 If network augmentation is required for a connection:
- (a) in accordance with Chapter 8 of the NER, AEMO is responsible for determining whether the relevant works are contestable or non-contestable. If AEMO determines works are contestable, it may also run the tender for and select the DTSO for these works, or the connecting generator may do so; and
- (b) if AEMO determines the connection will require contestable works, a Project Construction and Coordination Deed (**PCCD**) is then also entered into. The PCCD is an overarching agreement between AEMO, the generator, and the contestable and incumbent TNSPs (where they are different), that regulates the construction of the relevant infrastructure. As AEMO is a party to the PCCD, it has direct oversight of the process for construction and delivery of connection to a new generator and is able to intervene if AusNet as the relevant incumbent DTSO (and contestable DTSO, if applicable) fails to meet its obligations under the PCCD.
- 1018 If AEMO determines that augmentation is required, but that this will be non-contestable, the contractual structure will be as set out below in **Figure 107**. The contractual structure where augmentation is required for a contestable connection illustrated in **Figure 108**.

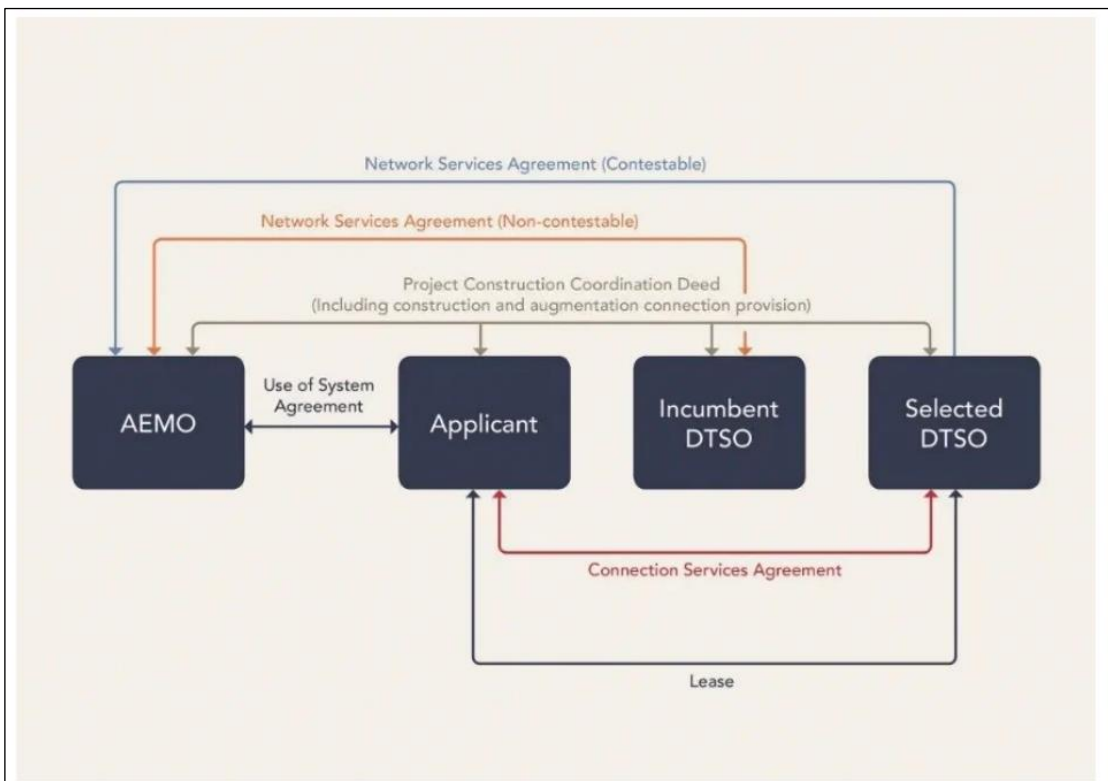
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**Figure 107: Contractual structure for Victorian transmission connection not requiring contestable augmentation (incumbent DTSO builds, own and operates the augmentation)**



Source: AEMO

**Figure 108: Contractual structure for Victorian transmission connection requiring contestable augmentation**



Source: AEMO

1019 As a result of the above, AEMO is directly involved in any new connection by a generator and in regulating ongoing access to the network. AusNet’s role in the connection process, if it is not the selected DTSO in respect of the contestable works, is limited to matters such as:

- (a) providing information in accordance with rule 5.3.2(f) of the NER, which requires AusNet to facilitate the processing of a connection enquiry or an application to connect. A failure to assist AEMO in making information available to a generator seeking connection can result in civil penalties for AusNet under the NER;

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- (b) contracting with AEMO under a Network Services Agreement to allow AEMO to provide shared transmission services to the connecting generator; and
  - (c) carrying out any works such as upgrades to the transmission network necessary to accommodate the new generator that are not contestable.
- 1020 In summary, it is AEMO rather than AusNet, who has the primary role with respect to generators seeking connection and access to the Victorian network. In the case of a contestable augmentation, for example, it is AEMO that usually prepares the PCCD based on a standard form PCCD. It is AEMO who 'drives' the connection process, with AusNet feeding in as required.
- 1021 Whilst in most cases, AusNet does play some role in the connection process, it does not have the ability to discriminate between connecting generators in the application, process because of AEMO's oversight or involvement. It is also required, under rule 5.2.3(d) of the NER, to cooperate with AEMO (as the Network Service Provider which processes connection enquiries or applications to connect) to allow applications to be processed expeditiously and in accordance with rule 5.3 of the NER – a failure to meet these obligations results in AusNet being liable for civil penalties under the NER.
- 1022 Furthermore, if AusNet is the selected DTSO in relation to a contestable works when negotiating the relevant Connection Services Agreement, AusNet must negotiate in good faith (rule 5.3.6(f)), and the agreement must also include performance standards in relation to the technical requirements which are set out in Schedules 5.1 and 5.2 regarding system standards and network performance. AusNet is expressly prohibited from imposing conditions on the connecting generator which are more onerous than those contemplated in Schedule 5.1 or 5.2, precluding it from using these technical requirements as a way of discriminating between generators when negotiating connection to the transmission network.
- 1023 **Finally**, the above processes and contractual arrangements are subject to a robust and effective dispute resolution framework mandated by the NER. The AER can appoint a commercial arbitrator to resolve any dispute in relation to negotiated connection services.<sup>524</sup>
- 1024 The combination of AEMO oversight of an NER mandated process, contestability, dispute resolution and the transparency of the process, removes any ability for AusNet to refuse or delay connections for non-Origin generators.
- (d) No ability to discriminate in relation to augmentation and investment**
- 1025 AEMO's unique regulatory role in Victoria removes any ability for AusNet to discriminate against non-Origin generators in relation to augmentation of the Victorian transmission network. AEMO is the body responsible for planning, procuring and directing augmentation of the network. As a result, AusNet cannot use its role as network owner to augment the network in a way that would foreclose non-Origin generators, whether by investing in augmentations that advantage an Origin generator or by not investing in augmentations that would advantage a non-Origin generator.
- 1026 Section 50F of the NEL prohibits AusNet (or any DTSO) from augmenting the declared shared network, or any part of it, unless:
- (a) AEMO authorises or directs AusNet to carry out the augmentation;
  - (b) AusNet has won a competitive tender conducted by AEMO to carry out the augmentation; or
  - (c) the augmentation is authorised by the NER.<sup>525</sup>

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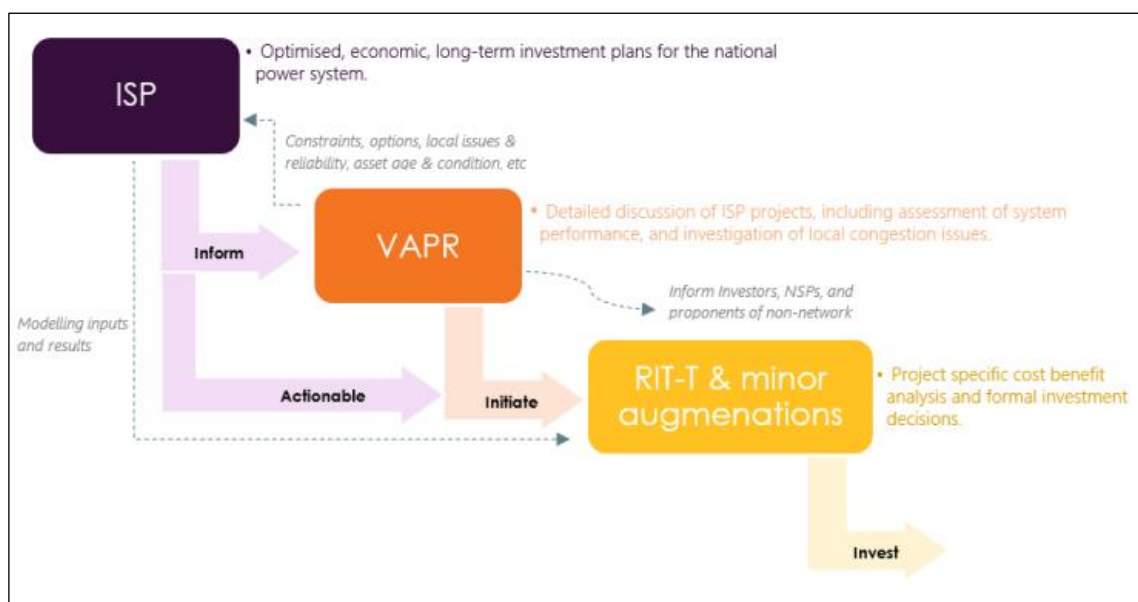
<sup>524</sup> AEMC, *National Electricity Rules* (version 109) cl 6A.30.

<sup>525</sup> NEL, ss50F(1)(a)(c).

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- 1027 An augmentation is defined in the NEL as work to enlarge the transmission system or increase its capacity to transmit electricity.
- 1028 The process for determining augmentations and other investments that are required for the Victorian network commences with AEMO's planning under the ISP and VAPR processes as set out in **Annexure A**. These include:
- (a) AEMO's overall planning function under the NEM-wide ISP process; and
  - (b) AEMO's unique additional planning role in Victoria, via the VAPR process.
- 1029 Under these process, AEMO considers the performance of the existing Victorian network in the context of emerging or changed conditions, its adequacy to meet reliability and security needs, any network limitations and potential solutions for those limitations, and investment (including network augmentations) required to enhance the network. It is therefore AEMO, via its statutory planning functions, that directs investment in and augmentation of the network, not AusNet.
- 1030 Once the ISP and VAPR processes identify the need for an augmentation, a Regulatory Investment Test-Transmission (**RIT-T**) process is undertaken. The RIT-T process is a public economic cost-benefit analysis that identifies the preferred option for network investment. It applies to network augmentation or to expenditure for replacement of existing assets. Clause 5.15A.1(c) of the NER provides that this 'preferred option' must be the option that maximises the present value of net economic benefit to all those who produce, consume and transport electricity.
- 1031 Under the unique regulatory framework in Victoria, the RIT-T process for augmentations is undertaken by AEMO. It is initiated once AEMO has identified network investment needs in the ISP and VAPR. The relationship between the RIT-T process and AEMO's work in relation to the ISP and VAPR is set out in **Figure 109** below.

**Figure 109: Relationship between the ISP, VAPR and RIT-T processes undertaken by AEMO**



Source: AEMO Victorian Annual Planning Report, October 2021

- 1032 The RIT-T process therefore involves AEMO undertaking a cost-benefit analysis of any potential investments that may be made (including which options provide the most competitive or efficient investments that may be made). The AEMO led RIT-T process identifies the preferred option for an augmentation.

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- 1033 AEMO's work in relation to the RIT-T process also determines **when** a particular investment in the network should be pursued. That timing is determined by reference to when discounted benefits exceed the discounted costs of a particular project. The optimal timing of an investment is reflected in the VAPR and in the RIT-T published by AEMO, which also sets out the timing of stages as well as planned outages (and the duration of those outages) to deliver investments in the network.<sup>526</sup>
- 1034 As described in more detail in **Annexure A**, AEMO directs the construction and delivery of any works required to implement an augmentation of or investment in the network. Section 50F(3) provides that 'subject to the rules, AEMO must conduct a competitive tender to determine who will carry out an augmentation to a declared shared network'. In particular, AEMO must conduct a competitive tendering process in accordance with Chapter 8 of the NER to select a DTSO to build, own and operate the relevant network augmentation if:
- (a) the cost of the project is reasonably expected to exceed \$10 million; and
  - (b) the project is considered to be a 'separable augmentation', meaning that it will provide a distinct and definable service to AEMO and will not materially adversely affect the services provided to AEMO by an incumbent service provider.
- 1035 The competitive tendering process determines the payments that the asset owner will receive from AEMO for the use of the asset.
- 1036 The competitive tendering process follows a typical public sector procurement model commencing with a call for expressions of interest followed by the issue of an invitation to tender, submission of formal proposals, evaluation of tenders, appointment of preferred supplier, contract negotiation and contract award. Depending on the size and nature of the project this process typically takes at least five months and generally commences after completion of the RIT-T process for the project.
- 1037 Contestability places competitive pressure on AusNet and other bidders for augmentation projects to develop transmission capacity in a timely and efficient manner. The party able to deliver the augmentation in the most cost effective and timely way will be appointed.
- 1038 AusNet is also required to do anything required by the NER to facilitate the planning, construction or operation of an augmentation and, at AEMO's request, must do anything else required by AEMO to facilitate the planning, construction or operation of an augmentation.<sup>527</sup> This includes obligations to assist AEMO, within a reasonable period specified by AEMO, with respect to the preparation of any tender documents for a contestable augmentation.<sup>528</sup> AusNet is expressly prohibited from engaging in conduct that has the effect of preventing or hindering the planning, construction or operation of an augmentation.<sup>529</sup>
- 1039 The fact that AEMO rather than AusNet is responsible for planning, procuring and directing augmentation of the network means that AusNet cannot augment the network, or fail to augment the network, in a way that would foreclose non-Origin generators.
- 1040 In addition, the Victorian Government also has powers to facilitate urgent investments in the Victorian transmission network. These powers include powers, after consulting with AEMO, to direct AusNet or other TNSPs to carry out a specified augmentation of the Victorian network,<sup>530</sup>

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<sup>526</sup> AEMO, *Letter to AER - AusNet Services – Transmission Determination 2022 to 2027 – Application of Service Target Performance Incentive Target Scheme (STPIS) to AEMO initiated augmentation* (5 October 2021) AER <<https://www.aer.gov.au/system/files/AEMO%20-%20Submission%20to%20AER%20on%20the%20Draft%20Decision%20and%20AusNet%20Services%20Transmission%202022-27%20Revised%20Proposal%20-%20October%202021.pdf>>.

<sup>527</sup> NEL, s50F(4).

<sup>528</sup> NER, cl 8.11.7(c).

<sup>529</sup> NEL, s50F(5).

<sup>530</sup> *National Electricity (Victoria) Act 2005* (Vic) s16Y.

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and to impose other requirements to expedite investment in the network (including to disapply or modify aspects of the existing electricity regulatory framework that may delay such investment).<sup>531</sup> The purpose of these powers is to fast-track necessary investments in the Victorian transmission network to ensure its reliability – and are a further measure that removes any ability of AusNet to frustrate or delay investment in a way that may hinder transmission capacity.

### (e) No ability to discriminate in relation to maintenance and renewal

1041 AusNet has no ability to discriminate in relation to maintenance and renewal on the Victorian transmission network so as to harm non-Origin generators or to favour Origin generation assets. In theory there are two ways AusNet could use maintenance and renewal to discriminate against non-Origin generators:

- (a) it could fail to adequately maintain and renew parts of the transmission network serving non-Origin generators, or selectively maintain and renew parts of the network serving Origin generators; or
- (b) it could take unnecessary or prolonged maintenance outages on lines that serve non-Origin generators.

1042 In relation to the first theory of harm, there are several reasons why AusNet could not fail to adequately maintain and renew parts of the Victorian transmission network serving non-Origin generators.

1043 **First**, any attempt to damage non-Origin generators by failing to maintain and renew the transmission lines that serve them would place AusNet in breach of electricity safety laws, its licence, NER requirements and its agreements with generators.

1044 The Electricity Safety Act in Victoria requires AusNet to:

design, construct, operate, maintain and decommission its supply network to minimise as far as practicable:

- (a) the hazards and risks to the safety of any person arising from the supply network;
- (b) the hazards and risks of damage to the property of any person arising from the supply network; and
- (c) the bushfire danger arising from the supply network.<sup>532</sup>

1045 The Electricity Safety Act requires AusNet to submit an electricity safety management scheme (**ESMS**) to ESV. ESV may require AusNet to obtain an independent validation of the scheme, or any part of it, and may also require the validation to assess the design, construction, operation, maintenance and decommissioning of the supply network or any part of it. ESV must accept an ESMS if it is satisfied that it is appropriate and complies with the Electricity Safety Act and regulations relating to such schemes. AusNet is required to comply with its ESMS.

1046 Pursuant to the Electricity Safety Act, AusNet is subject to regular audits by ESV of its safety and maintenance management including compliance with bushfire mitigation plans, the code of practice for electric line clearance, the electric lines and municipal emergency plan and the ESMS. There are significant financial penalties if AusNet fails to comply with such an audit or is found through such an audit not to have complied with the relevant provisions of the Electricity Safety Act and relevant regulations made under this legislation.

1047 It would be inconceivable that responsible officers in AusNet would deliberately neglect any issue relating to renewal or maintenance of the transmission network that would put AusNet at risk of not meeting its obligations under the Electricity Safety Act.

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<sup>531</sup> NEVA, s16Y.

<sup>532</sup> *Electricity Safety Act 1998* (Vic), s98(c).

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- 1048 In addition, AusNet's transmission business is licensed by the ESC. The licence includes a requirement that AusNet maintain its technical capacity to undertake all transmission activities authorised by its licence and comply with various codes including the requirements under the Electricity Safety Act. The Victorian Electricity System Code requires AusNet to develop and implement plans for the acquisition, creation, replacement, maintenance, operation, refurbishment, repair, retirement and disposal of transmission network.<sup>533</sup> The ESC audits AusNet's compliance with this obligation.
- 1049 Under the NER, AusNet is required to arrange for the maintenance and operation of its network to minimise interruptions, ensure ongoing transmission to agreed capabilities, and to restore agreed capabilities of the network as soon as reasonably practicable following interruption at a connection point for a generator.<sup>534</sup>
- 1050 Schedule 5.1 of the NER also requires AusNet to meet specific maintenance obligations in connection agreements with generators, including requirements to maintain required facilities consistent with good electricity industry practice and pursuant to agreed performance standards (eg, to ensure ongoing services that meet agreed capabilities, and to minimise interruptions), and to follow agreed protocols to co-ordinate maintenance works with generators. Compliance with connection agreements is a requirement of the NER, and a failure to meet these obligations also exposes AusNet to claims of contractual breach by generators.
- 1051 **Second**, AusNet's maintenance and renewal activities are subject to a high degree of transparency and regulatory oversight.
- 1052 As part of its five yearly pricing proposal AusNet sets out a renewal and operating proposal, which would be subject to a public consultation and AER approval. Although AusNet retains discretion in relation to how it applies the capital expenditure allowance, in practice the renewal planning process (coupled with the need to meet defined standards, including in agreements with generators as discussed above), removes any ability to discriminate between generators by preferring projects that benefit Origin or deferring projects that benefit Origin's competitors.
- 1053 In relation to renewal, under clause 5.12.2 of the NER, AusNet has to prepare an Asset Renewal Plan that provides a list of its planned asset renewal projects, including asset retirements and de-ratings for the next 10-year period, as well as changes since the previous year and the various options considered. In practice, when preparing its Asset Renewal Plan, AusNet (as the network operator) works together with AEMO (as the body responsible for planning the Victorian transmission network) to jointly identify and plan for network renewal. This joint planning involves an assessment of required upgrades, replacements, refurbishments, or retirement of existing network assets by AusNet, and in particular, involves consultation between AusNet and AEMO as to the most economic maintenance options in the context of AEMO's planned augmentations. If AEMO identifies that a particular part of the network requires renewal to address, for example, congestion or security issues in transmission, then this will be addressed in AusNet's Asset Renewal Plan which is published alongside AEMO's VAPR.<sup>535</sup>
- 1054 AusNet's asset replacement decisions are governed by its asset management practices. In its most recent transmission determination the AER found that AusNet's practices, as set out in its

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<sup>533</sup> Office of the Regulator-General, Victoria, *Electricity System Code*, October 2000, cl 11.1(b).

<sup>534</sup> NER, Schs 5.1a and 5.1.

<sup>535</sup> In accordance with NER, cl 5.12.2. The AusNet Asset Renewal Plan for 2022 is available here: <[https://aemo.com.au/-/media/files/electricity/nem/planning\\_and\\_forecasting/vapr/2022/AusNet-services-asset-renewal-plan-2022.pdf?la=en](https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/vapr/2022/AusNet-services-asset-renewal-plan-2022.pdf?la=en)> (Annexure 23).

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asset renewal planning guide, were prudent and consistent with best industry practice.<sup>536</sup> This guide establishes a process that involves three broad steps:

- (a) identifying the assets at risk, whereby assets are assigned health index scores and failure rate curves. These metrics provide an indication of asset health, with candidates for replacement being first identified by ranking the assets with the highest condition scores (ie, assets in the worst condition);
- (b) determining asset unavailability, which is calculated by reference to the asset's failure rate and mean time to recovery; and
- (c) monetising the baseline risk associated with the asset's condition, whereby AusNet values:
  - (i) supply security risk ie, load at risk that would not be supplied in the event of an asset failure;
  - (ii) health and safety risk ie, hazards to the safety of individuals in the event of asset explosive failure or failure that involves fire;
  - (iii) financial risk cost, which is the cost of reactively replacing the failed asset;
  - (iv) environmental risk; and
  - (v) plant collateral damage risk.

1055 This risk-based approach inherently prioritises asset replacements that have both a high risk and high consequence of failure.

1056 Where there is an identified need for replacement of an existing asset, and that expenditure exceeds \$7 million, the RIT-T process is applied to determine the preferred option for the investment. The RIT-T for such replacement work is undertaken by AusNet pursuant to the process set out in the NER. This involves substantial public transparency and includes consultation with AEMO and market participants as to the preferred option, and is subject to the RIT-T dispute resolution process whereby interested parties, including AEMO, can lodge a dispute with the AER.

1057 In relation to maintenance, the AER similarly approves an operating expenditure allowance as part of its five yearly price determination. AusNet has some discretion in how it applies the operating expenditure allowance. However, the maintenance planning process, coupled with the need to meet defined standards, including in agreements with generators, removes any ability to discriminate between generators in relation to maintenance expenditure.

1058 AEMO also obtains and assesses information concerning maintenance of the Victorian transmission network on an ongoing (weekly) basis through the PASA program described in **Annexure A**.

1059 AEMO's role in this maintenance planning removes any ability for AusNet to fail to maintain certain assets within the network, as such a failure would raise AEMO concerns regarding the safety, reliability and performance of the Victorian network. It also removes AusNet's ability to carry out additional maintenance on assets that serve Origin generation assets – as maintenance is subject to AEMO's assessment. The publication of the VAPR and AusNet's Asset Renewal Plan also makes transmission maintenance programs highly transparent to third parties such as generators and distribution companies, who are able to raise concerns if they consider proposed maintenance (or failure to maintain assets) may adversely impact them or the network.

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<sup>536</sup> AusNet, *AMS 10-24 Asset Renewal Planning Guide 2023-27 Transmission Revenue Reset* <<https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Supporting%20Technical%20Document%20-%20AMS%2010-24%20Asset%20Renewal%20Planning%20Guide%20-%202029%20October%202020.pdf>> (**Annexure 24**).



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- 1060 **Third**, failing to adequately maintain a transmission line would involve very significant risks for AusNet. A breach of standards required to be met under connection agreements with generators would expose AusNet to claims for damages. It could also exacerbate bushfire and other risks and so expose AusNet to class action claims. This is particularly so if the cause of any failure in a transmission asset arises from AusNet failing to maintain an asset so as to benefit Origin's generation business and not acting in good faith.<sup>537</sup>
- 1061 As noted above, AusNet's compliance with electricity safety requirements is regularly audited by the ESV and a failure to comply may result in AusNet incurring significant financial and reputational penalties.
- 1062 Failure to maintain would also expose AusNet to penalties under the STPIS scheme which provides payments that are specifically linked to improving the capability of the transmission network and reducing the frequency and length of outages that impact network reliability. For example, AusNet is penalised financially under the service component of the STPIS if it causes unplanned outages that exceed parameters determined by the AER (eg, in relation to matters such as average outage duration). The market impact component also penalises AusNet for outages that affect wholesale market outcomes, such as the ability of generators to dispatch into the NEM at competitive prices, again based on parameters determined by the AER. These components of the STPIS scheme therefore provide additional measures proactively preventing (or removing incentives) for AusNet to carry out renewal or maintenance selectively or causing unnecessary outages that harm non-Origin generators, as doing so would affect their performance metrics in relation to the STPIS and penalise AusNet financially.
- 1063 Most fundamentally AusNet would not jeopardise its social licence to operate by deliberately failing to renew and maintain a section of the network so as to attempt to provide a financial benefit to Origin.
- 1064 **Finally**, and as discussed in more detail in below, AusNet is required to comply with transmission ring-fencing guidelines, which include a requirement not to discriminate in favour of affiliated entities such as Origin. This non-discrimination obligation includes a specific obligation:
- in like circumstances to provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider.
- 1065 In summary:
- (a) any ability to fail to renew or maintain a section of the transmission network so as to prejudice a non-Origin generator is removed by:
    - (i) obligations imposed on AusNet under electricity safety laws, its licence, the NER and contracts with generators;
    - (ii) the role of the ESV, ESC and the AER in enforcing compliance with these obligations including the conduct of regular audits;
    - (iii) the high degree of transparency and regulatory oversight of the AER and AEMO in relation to renewal and maintenance activities;
    - (iv) the very significant risks that AusNet would face if it failed to adequately renew or maintain the transmission network; and
    - (v) the non-discrimination obligations in the TRFG.

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<sup>537</sup> The NEL includes limitations of liability for network service providers for acts or omissions done in the performance of a function to maintain operation of electricity systems, or for failure to supply electricity, unless the relevant act or omission is done in bad faith or through negligence: see ss119 and 120 of the NEL.

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- (b) any ability to 'over' renew or maintain a section of the transmission network so as to prefer Origin generation is removed by:
- (i) the high degree of transparency and regulatory oversight of the AER and AEMO in relation to renewal and maintenance activities;
  - (ii) in the case of renewal the need for AusNet to conduct an RIT-T process; and
  - (iii) the non-discrimination obligations in the TRFG.
- 1066 In relation to the second possible theory of harm, AusNet could not take unnecessary or prolonged maintenance outages on select lines that serve non-Origin generators (eg, to ensure they are not able to be dispatched when NEM prices are high). Transmission maintenance works require AusNet to schedule outages with AEMO in advance of the work being carried out.
- 1067 Planned outages are required to be carried out in a manner that causes the least disruption to the security and performance of the network. The process for scheduling such planned outages is determined by AEMO as part of its system security functions under the NER and pursuant to its published Outage Assessment guidelines, and requires:
- (a) AusNet to provide AEMO with information concerning planned network outages, including their proposed timing and duration, in advance of such outages occurring. This information needs to enable AEMO to assess whether a planned outage can lead to a failure to meet relevant Reliability Standards. A specialist team within AEMO makes this assessment having regard to forecast demand and the security of the transmission network.<sup>538</sup> Planned outages are also re-assessed by AEMO in the week prior to the outage to determine whether they can proceed, depending on factors such as weather forecasts or changes in electricity generation patterns.<sup>539</sup>
  - (b) If AEMO assesses the proposed outage as acceptable, it will include it in the Network Outage Scheduler published on the AEMO website and which sets out planned outages for the forthcoming 13 months. This information is updated each half hour and is published on the AEMO website,<sup>540</sup> and is also disseminated to market participants via a live data feed known as the MMS data interchange (a software service provided by AEMO to facilitate live data exchange between it and NEM participants).<sup>541</sup> It also includes unplanned outages that are notified to AEMO (for example, in respect of damage or other unforeseen interruptions to transmission lines from extreme heat, lightning, bushfires or falling trees).
- 1068 Planned outages can therefore only proceed with AEMO's permission, and following a detailed outage assessment, and AEMO is able to withhold permission for an outage if it considers it would create unnecessary risk to the security or reliability of the network.
- 1069 AEMO's oversight of planned outages removes AusNet's ability to manipulate the timing, or duration, of maintenance works to discriminate against non-Origin generators. If AusNet were to seek an outage that creates unnecessary interruption or congestion to the network, this would either be excluded by AEMO, or need to be amended so as to minimise delays.
- 1070 Further, under AEMO's guidelines, AEMO requires that TNSPs submitting requests for planned outages include information confirming that potentially affected generator(s) are aware of any

<sup>538</sup> AEMO, *Network Outages* (2022) <<https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-events-and-reports/network-outages>>.

<sup>539</sup> AEMO, *Network Outages – Network Outage Assessment* (2022) s3 <<https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-events-and-reports/network-outages#:~:text=AEMO%20is%20only%20able%20to,for%20reasons%20of%20public%20safety>>.

<sup>540</sup> AEMO, *Network Outage Schedule* (2022) <<https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/network-data/network-outage-schedule>>.

<sup>541</sup> AEMO, *Network Outages* (2022) <<https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-events-and-reports/network-outages>>.

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outage which directly impacts on their connection to the network, and that the affected generator(s) have not raised any objection to the outage. In addition, if a contingency plan is required when submitting an outage, the planned outage submission by the TNSP must include information regarding arrangements between a generator and TNSP which accommodate the network outage. Any arrangements detailed in the Network Outage Scheduler that require a manual response from a generator will be confirmed with the generator by AEMO directly, and prior to AEMO giving permission for the outage to proceed.

- 1071 As a result, generators may raise objections to a planned outage notified to them by AusNet, as the relevant TNSP, through AEMO's outage scheduling process. The generator may do so by raising the objection with AusNet or more directly with AEMO, who will require the issue to be resolved for the outage to proceed (among other matters taken into consideration). In addition, as the Network Outage Scheduler makes planned outages and their duration publicly available, any impacted generators or other third parties could easily identify and raise concerns with such a hypothetical discrimination strategy with AEMO generally. AusNet is also required to inform generators with whom it has a connection agreement of outages that may affect that generator pursuant to contractual obligations in the connection agreement. The connection agreements include requirements that AusNet develop a coordinated outage plan with the relevant generator with the objective of coordinating outages, provide timely information concerning such outages and the length of time they are expected run for, and minimising any delays in restoring power supply. This provides a direct contractual right for generators to be provided information from AusNet regarding planned outages that may impact them.
- 1072 It would also not be possible for AusNet to pursue a strategy of using *unplanned* outages to interrupt transmission services for non-Origin generators. As set out above, unplanned outages are generally required in the event of unforeseen safety or weather events. They are required to be notified to AEMO immediately, and are publicly transparent in the Network Outage Scheduler.<sup>542</sup> Since unplanned outages create risk for the security and reliability of the network, any unnecessary, or unnecessarily long, interruptions caused by unplanned outages would be investigated by AEMO and would be highly visible to affected generators. It is implausible that AusNet would create such risks by causing unplanned outages to harm non-Origin generators.
- 1073 In summary, the regulatory regime, the role of the AER, the role of AEMO and the transparency of relevant processes mean that AusNet has no ability to discriminate in relation to maintenance and renewal of the Victorian transmission network so as to harm non-Origin generators or to favour Origin generation assets.

### **(f) No ability to discriminate in relation to generator dispatch and curtailment**

- 1074 AusNet will not be able to reduce third party generators' ability to sell into the NEM through AusNet's transmission network as it does not have any powers in connection with the dispatch of generators.
- 1075 AEMO (not AusNet) manages the NEM through a centrally coordinated dispatch process that pools generation from producers and delivers required quantities of electricity from the pool to wholesale consumers.<sup>543</sup> One of AEMO's responsibilities for power system security includes determining any potential constraint on the dispatch of generating units.<sup>544</sup> AEMO uses forecasting and monitoring tools to track electricity demand, generator bidding and network capability to determine which generators should be dispatched to produce electricity. It repeats

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<sup>542</sup> AEMO, *Outage Assessment* (19 October 2022) s4.3 <[https://aemo.com.au/-/media/files/electricity/nem/security\\_and\\_reliability/power\\_system\\_ops/procedures/so\\_op\\_3718-outage-assessment.pdf?la=en&hash=CB561525DFE62EDD6627EF137C13833C](https://aemo.com.au/-/media/files/electricity/nem/security_and_reliability/power_system_ops/procedures/so_op_3718-outage-assessment.pdf?la=en&hash=CB561525DFE62EDD6627EF137C13833C)>.

<sup>543</sup> AEMO, *Dispatch Information* <<https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/dispatch-information>>.

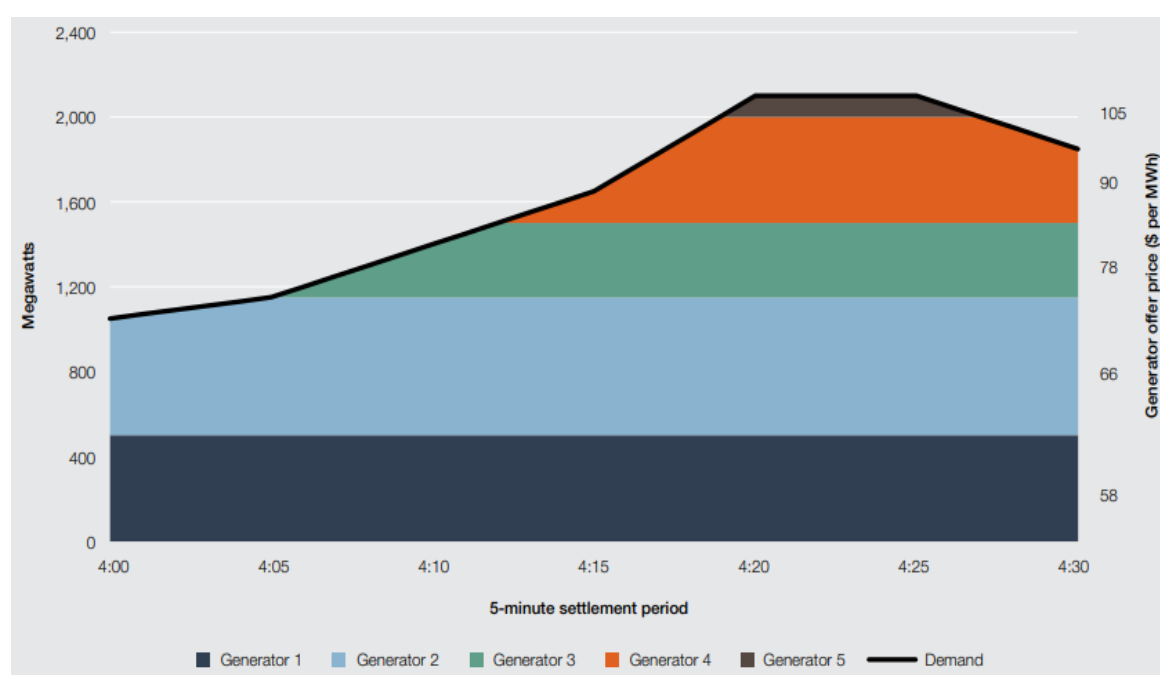
<sup>544</sup> NER, cl 4.3.1(j).

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this exercise every five minutes for every region. AEMO generally dispatches the cheapest generator bids first then progressively more expensive offers until enough electricity can be produced to meet demand through its NEM dispatch engine (**NEMDE**).<sup>545</sup>

- 1076 The example in **Figure 110** below drawn from the AER's State of the Energy Market 2022 Report illustrates how AEMO coordinates the dispatch of power across the NEM. In this example, five generators offer capacity in different price bands between 4pm and 4.30pm. At 4.15pm the demand for electricity is 1,650 MW. To meet this demand, Generators 1, 2 and 3 must be fully dispatched and Generator 4 is partly dispatched. The dispatch price is \$90 per MWh. By 4.20pm demand has risen to the point where a fifth generator is needed. This generator has a higher offer price of \$105 per MWh, which becomes the dispatch price for that five-minute interval. The price paid to all dispatched generators is the price in each five-minute dispatch interval.

**Figure 110: Setting the spot price**



Source: *State of the Energy Market 2022 – Report*, Chapter 2: National Electricity Market<sup>546</sup>

- 1077 The NEMDE ensures the central dispatch process maximises value of trade subject to the various constraints (ie, customer load shedding or a generating unit's physical maximum availability). For example, dispatching the lowest cost generator at times may overload the network or risk system security. To cater for these circumstances, AEMO has developed a constraint relaxation procedure in consultation with registered NEM participants.<sup>547</sup> This procedure will allow AEMO to establish a dispatch priority order that is the next best solution where the constraints would otherwise conflict.
- 1078 As explained in the process outlined above, AusNet does not have a role in determining the order of energy dispatch as this is a process that is managed by AEMO alone and in most circumstances, determined by a generator's offer price. To the extent that an out of pricing order dispatch decision is made, that decision is made by AEMO alone following a procedure that is

<sup>545</sup> *State of the Energy Market 2022 – Report*, Box 2.1 (**Annexure 12**).

<sup>546</sup> *State of the Energy Market 2022 – Report*, Chapter 2 (**Annexure 12**).

<sup>547</sup> AEMO Markets – Electricity Market Monitoring, *Constraint Relaxation Procedure* (17 November 2017) AEMO <[https://www.aemo.com.au/-/media/files/electricity/nem/security\\_and\\_reliability/congestion-information/2016/constraint-relaxation-procedure.pdf](https://www.aemo.com.au/-/media/files/electricity/nem/security_and_reliability/congestion-information/2016/constraint-relaxation-procedure.pdf)>.

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transparent to all registered NEM participants, including the generators. This highly regulated and transparent energy dispatch process means that AusNet will not have an ability to prioritise the dispatch of certain generators over others.

### (g) **No ability to cross subsidise or discriminate**

#### ***Purpose of transmission ring-fencing guidelines***

1079 The regulatory regime governing the NEM does not prohibit the common ownership of transmission and generation. Instead, the NEL and the NER provide for the AER to make TRFG, which are intended to ensure natural monopoly transmission owners are not able to leverage any market power in relation to transmission into contestable markets in which they participate. Clause 6A.21.1 of the NER requires all TNSPs to comply with the TRFG prepared by the AER.

1080 When the ACCC first made the TRFG in 2002, the ACCC observed that it had:

developed the guidelines to reinforce the effectiveness of the regulatory processes by limiting the ability of the TNSPs to extend their monopoly powers from the network business to the contestable parts of the industry.

1081 The TRFG do this in two ways:

- (a) they contain provisions designed to ensure that there is ***no cross subsidisation*** between a natural monopoly transmission business and a contestable business such as generation or retail; and
- (b) they contain provisions designed to ensure that there is ***no misuse of confidential information or other discrimination*** against a competing contestable business such as generation and retail.

1082 Importantly, the TRFG can be amended by the AER to reflect changes in industry structure, including changes arising from the growth of renewables and changes in ownership structure. The AER recently finalised a full review of the TRFG and issued Version 4 of the TRFG, which applies to TNSPs from 1 March 2023.

1083 By imposing ring-fencing obligations and giving the AER the power to impose additional ring-fencing requirements on TNSPs, the energy regulatory framework implicitly acknowledges that TNSPs and their affiliates may participate in generation (and retailing) and establishes a regime to address any risks of anticompetitive conduct.

1084 The TRFG provisions in relation to cross subsidisation, misuse of confidential information and other forms of discrimination are discussed in turn below.

#### ***Cross subsidisation***

1085 This section considers AusNet's ability to use its regulated revenue from transmission services to cross subsidise Origin's contestable electricity generation business.

1086 As outlined in paragraph 992(a) above, the AER regulates the maximum allowable revenue and prices for AusNet's prescribed transmission services. The price of non-contestable negotiated transmission services is agreed commercially based on a regulated framework. Prices are also subject to an AER dispute resolution process under the NEL. To the extent that a negotiated transmission service is contestable, the competitive procurement process will ensure AusNet cannot charge above market price for that service. This regulatory framework should ensure that cross subsidisation is not possible. This is reinforced, however, by the following provisions of the TRFG:

1087 **First**, the TRFG require legal separation between a transmission business and a contestable business such as generation.

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- (a) The TRFG require a TNSP to be a legal entity. A TNSP may provide transmission services but may not provide 'other services' (subject to limited exceptions, including an exception that would permit a TNSP to provide distribution services). The 'other services' a TNSP cannot provide would include, but are no longer limited to, generation and retail.<sup>548</sup>
- (b) The TRFG also require that a TNSP must not enter into any new or varied agreement which grants another legal entity the right to use any batteries which are owned, operated or controlled by the TNSP, unless it is for the sole purpose of providing that TNSP with network support services or a waiver is obtained.<sup>549</sup> This provides a greater oversight over TNSPs' deployment of battery technologies that can provide both transmission services and contestable generation services, enhancing market participants' ability to monitor and report any potential cross subsidisation.
- 1088 **Second**, the TRFG require a TNSP to establish and maintain appropriate internal accounting procedures to ensure that it can demonstrate the extent and nature of transactions between the TNSP and its affiliated entities. After the Proposed Acquisition occurs, Origin Energy Markets would be an affiliated entity of AusNet.<sup>550</sup>
- 1089 In addition, a TNSP must allocate or attribute costs to transmission services in a manner that is consistent with certain cost allocation principles and a cost allocation methodology that is approved by the AER.<sup>551</sup> This means that any costs associated with Origin's generation business providing contestable services cannot be allocated to the accounts of AusNet's regulated business and vice versa.
- 1090 The requirement for legal separation and the rules related to the preparation of accounts in conjunction with an AER approved cost allocation methodology and regulated pricing regime ensure that there can be no cross subsidisation of an affiliated contestable generation business by AusNet's regulated transmission business.
- Misuse of confidential information and other discrimination**
- 1091 This section considers whether AusNet could:
- (a) misuse confidential information it receives from non-affiliated generators as a TNSP (for example, by providing that information to Origin);
- (b) provide information about its own transmission networks (for example, planned outages or information about congestion) to Origin Energy Markets but not to other non-affiliated generators; or
- (c) otherwise discriminate against non-affiliated generators.
- 1092 The NER and the TRFG both contain provisions that ensure a transmission business cannot misuse commercially sensitive / confidential information obtained from non-affiliated generators connected to its transmission system to advantage an affiliated generator. They do so in the following ways.

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<sup>548</sup> AER, Electricity Transmission Ring-fencing Guideline – Explanatory Statement – Version 4 (March 2023) page vii (**TRFG Explanatory Statement**).

<sup>549</sup> AER, Electricity Transmission Ring-fencing Guidelines, Version 4 (March 2023) cl 3.1(c) (**TRFG**).

<sup>550</sup> TRFG, cl 3.2.2(c). The TRFG define 'affiliated entity' as a legal entity: a) which is a direct or indirect shareholder in the TNSP or otherwise has a direct or indirect legal or equitable interest in the TNSP; b) in which the TNSP is a direct or indirect shareholder or otherwise has a direct or indirect legal or equitable interest; or c) in which a legal entity referred to in paragraph (a) or (b) is a direct or indirect shareholder or otherwise has a direct or indirect legal or equitable interest. In addition, under the TRFG, a 'related electricity service provider' includes any affiliated entity of the TNSP. Under the Proposed Acquisition structure, Brookfield Corporation will have a direct or indirect legal or equitable interest in both AusNet and Origin and Origin will therefore be an affiliated entity and related electricity service provider of AusNet for the purposes of the TRFG. Accordingly, AusNet in its dealings with Origin will be subject to the TRFG.

<sup>551</sup> TRFG, cl 3.2.2.

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- (a) The NER requires that each Registered Participant (including a TNSP) must use all reasonable endeavours to keep confidential any confidential information that comes into its possession or control or of which it becomes aware.<sup>552</sup> Confidential information is defined broadly under the NER and would cover any information that is provided to a TNSP which is or has been provided under or in connection with the NER that is confidential or commercially sensitive. It also includes any information derived from such confidential information. It is a tier 1 civil penalty provision under the NEL if a TNSP fails to meet the following obligations:<sup>553</sup>
- (i) not disclose confidential information to any person except as permitted by the NEL;<sup>554</sup>
  - (ii) only use or reproduce confidential information for the purpose for which it was disclosed, or another purpose contemplated by the NEL; and<sup>555</sup>
  - (iii) not permit unauthorised persons to have access to confidential information.<sup>556</sup>
- (b) The TRFG also impose obligations in relation to the treatment of certain confidential information and requires TNSPs to:
- (i) keep information acquired in connection with the provision of prescribed transmission services confidential, where it is not already publicly available;<sup>557</sup> and
  - (ii) only use such information for the purpose for which it was acquired or generated.<sup>558</sup>

1093 In relation to the second theory of harm, the NER and TRFG contain provisions that ensure that a transmission business cannot provide its affiliated generator with first mover advantage by sharing information relating to its transmission business with an affiliated generator that is not shared with all generators. They do so in the following ways.

- (a) The TRFG include requirements for equal provision of information. The TRFG provide that where AusNet shares ring-fenced information with an affiliate that provides contestable electricity services, AusNet must provide access to that ring-fenced information to others on an equal basis.<sup>559</sup> AusNet therefore will not be able to share any information in a discriminatory way that may give Origin Energy Markets an unfair advantage over other market participants given that it is under an obligation to share any information it shares with Origin Energy Markets with competitors of Origin Energy Markets. The TRFG require a TNSP to establish an information-sharing protocol that sets out how and when it will make information shared with a related electricity service provider available to others,<sup>560</sup> and establish, maintain and keep an information register about information that has been shared.<sup>561</sup> The transitional provisions in relation to version 4 of the TRFG mean that AusNet must comply with these obligations as soon as reasonably practicable and in any event, by no later than 1 March 2024.

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<sup>552</sup> NER, cl 8.6.1.

<sup>553</sup> NEL, cl 6(1) and Sch 1. A breach of tier 1 civil penalty provisions attracts a maximum penalty of the greater of: (1) \$10 million; (2) three times the value of the benefit received; or (3) 10% of annual turnover in preceding 12 months, if court cannot determine benefit obtained from the breach.

<sup>554</sup> NER, cl 8.6.1(b)(1).

<sup>555</sup> NER, cl 8.6.1(b)(2).

<sup>556</sup> NER, cl 8.6.1(b)(3).

<sup>557</sup> TRFG Draft Version 4, cl 4.2.1(a).

<sup>558</sup> TRFG, cl 4.2.1(b).

<sup>559</sup> TRFG, cl 4.2.3.

<sup>560</sup> TRFG, cl 4.2.3(d).

<sup>561</sup> TRFG, cl 4.2.4.

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- (b) The TRFG impose obligations in relation to the separation of certain staff between a transmission business and other related businesses, including generation. The TRFG require AusNet to ensure that its Marketing Staff are not also working for an associate that takes part in a related business (such as Origin Energy Markets) and vice versa.<sup>562</sup>

It should also be borne in mind that key information about augmentation, renewal and maintenance and outages are in any event made public by AEMO and / or AusNet.

- 1094 The NER also requires that an officer of a TNSP participating in transmission services pricing must not be involved in or associated with competitive electricity trading activities of other Registered Participants.<sup>563</sup> It is a tier 1 civil penalty provision under the NEL if a TNSP fails to comply with this staff separation obligation.<sup>564</sup>
- 1095 In addition to the robust safeguards against misuse of commercially sensitive information set out above, the TRFG impose more general non-discrimination obligations on TNSPs.
- 1096 Version 4 of the TRFG provide that AusNet must not discriminate (either directly or indirectly) between a related electricity service provider (which would include Origin Energy Markets) and a competitor (or potential competitor) of a related electricity service provider in connection with the provision of prescribed transmission services by AusNet (whether to itself or to any other legal entity).
- 1097 The non-discrimination obligation includes specific requirements that AusNet:
- (a) in dealing or offering to deal with a related electricity service provider, treat the related electricity service provider as if it were not a related electricity service provider (that is, as if it had no connection or affiliation with the AusNet);
  - (b) in like circumstances, deal or offer to deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions;
  - (c) in like circumstances, provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider; and
  - (d) subject to complying with laws, not disclose to a related electricity service provider information AusNet has obtained through its dealings with a competitor (or potential competitor) of the related electricity service provider where the disclosure would, or would be likely to, provide an advantage to the related electricity service provider.<sup>565</sup>
- 1098 The requirements described above impose obligations that will ensure AusNet cannot discriminate in favour of Origin or against competing generators. Both the general non-discrimination obligation and the more specific obligations are relevant to the consideration, in particular, of whether AusNet has any ability to discriminate in relation to either pricing or the renewal or maintenance of the transmission network.
- Enforceability and penalties of transmission ring-fencing guidelines**
- 1099 Among other functions, the AER is responsible for monitoring, investigating and enforcing compliance with obligations under the NER, including clause 6A.21.1 of the NER which requires all TNSPs to comply with the TRFG prepared by the AER.

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<sup>562</sup> TRFG, cl 4.3.

<sup>563</sup> NER, cl 8.6.1(d).

<sup>564</sup> NEL, cl 6(1) and Sch 1.

<sup>565</sup> TRFG, cl 4.1(c).



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- 1100 In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the TRFG. They include:
- (a) **Binding reporting obligations:** version 4 of the TRFG now require AusNet to establish and maintain appropriate internal procedures to ensure it complies with the TRFG.<sup>566</sup> AusNet must prepare and submit to the AER an annual TRFG compliance report, which may be made publicly available by the AER, must identify the measures AusNet has taken to ensure compliance with the TRFG, any compliance breaches and the purpose of all transactions between AusNet and an affiliate.<sup>567</sup> In addition, the TRFG also requires AusNet to notify the AER in writing within 15 business days of becoming aware of a breach of its obligations under the TRFG, except in relation to this obligation itself and the production of the annual compliance report.<sup>568</sup>
  - (b) **Compliance audits:** The TRFG require that AusNet's annual TRFG compliance report must be independently verified for compliance with each provision of the TRFG by a qualified independent auditor.<sup>569</sup>
  - (c) **Compulsory notices:** The TRFG provides that the AER may, at any time, require a TNSP to provide a written response to a complaint or concern the AER raises with the TNSP about its compliance with the TRFG, including where the AER has previously required the TNSP to provide one or more written responses to the relevant complaint or concern.<sup>570</sup>
  - (d) **Information from consumers, regulated businesses and other stakeholders:** the AER receives information on potential compliance concerns from stakeholders (including consumers, energy businesses, energy ombudsman schemes, other market bodies, government agencies and consumer groups) in the form of calls, correspondence and meetings. The AER also has a number of regular networks through which compliance concerns are raised and referred, including its Customer Consultative Group.
  - (e) **Market data:** the AER receives data on activities in wholesale and retail energy markets and natural monopoly network sectors for a range of purposes under national energy laws. The AER can use information and data received or collected in the course of other aspects of the AER's work for compliance and enforcement purposes, including in relation to a TNSP's compliance with the TRFG.
  - (f) **Information requests and targeted reviews:** the AER can ask AusNet for information about their compliance – both in respect of identified matters and as part of wider reviews of compliance practices and processes in an emerging area of concern.
- 1101 The AER also has a range of enforcement options to ensure compliance with the TRFG and to respond to and address potential non-compliance. They include:
- (a) **Infringement Notices:** the AER can issue infringement notices where it considers that a breach of a civil penalty provision has been committed. Although the obligation to comply with the TRFG is not currently a civil penalty provision, the obligations in the NER in relation to confidential information described in paragraph 1092(a) above are civil penalty provisions. Payment of an infringement notice does not constitute an admission of a breach, but if a TNSP chooses to make payment then the AER cannot later bring proceedings in relation to that breach.

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<sup>566</sup> TRFG, cl 6.1.

<sup>567</sup> TRFG, cl 6.2.1.

<sup>568</sup> TRFG, cl 6.3.

<sup>569</sup> TRFG, cl 6.2.1.

<sup>570</sup> TRFG, cl 6.4.

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- (b) **Court Enforceable Undertakings:** the AER can accept a court enforceable undertaking from a TNSP for alleged breaches of the NER, including the TRFG.<sup>571</sup> The AER noted that enforceable undertakings can provide tailored solutions to address conduct that has given rise to the alleged breach.<sup>572</sup> For example, an enforceable undertaking might include commitments to undertake an audit to ensure that the business has identified the root cause of the breach and the risk of future breaches is mitigated or could contain commitments that relate to consumer redress. The AER is able to seek court orders including declarations of a breach or injunctions if a TNSP has not complied with a court enforceable undertaking.
- (c) **Civil Proceedings:** the AER can institute and conduct civil proceedings for alleged breaches of the NER, including the TRFG.<sup>573</sup> The AER may seek declarations in relation to the breaches as well as a range of orders, including to undertake an action to cease or remedy the breach, implement a compliance program, perform community service or release a public notice. The AER can also apply for an injunction to restrain the party from engaging in the conduct or require action to be taken. If the obligation that has been breached is a civil penalty provision as discussed above, the AER may seek orders for payment of civil penalties. The maximum penalty amounts will be indexed every three years to ensure their deterrent value is maintained. The NEL sets out the factors which the court must consider in determining the amount of the civil penalty to be paid.<sup>574</sup>

### 8.4 Brookfield LP has no incentive to cause AusNet to foreclose Origin's generation rivals

- 1102 Even if AusNet had the ability to foreclose, Brookfield LP has *no incentive* to seek to cause Brookfield Infrastructure to, in turn, seek to cause AusNet to foreclose Origin's generation rivals in a way that substantially lessens competition in any relevant generation market.
- 1103 Whether the Proposed Acquisition is likely to create incentives to foreclose or discriminate against Origin's electricity generation competitors in Victoria depends on the following factors:
- (a) whether Origin generates less or more electricity than its retail operation requires;
  - (b) to what extent (if at all) and how quickly higher wholesale prices will be passed through into retail prices (as well as the discount factor to apply to pass-through if and when it occurs); and
  - (c) financial hedging strategies and positions.

#### No incentives to cause AusNet to engage in occasional short-term acts of foreclosure

- 1104 Analysis of incentives to engage in foreclosure assuming no pass-through is likely most relevant to instances of occasional short-term acts of foreclosure. This is because assuming retail prices are set based on expectations about future prices, the price increases due to occasional short-term instances of foreclosure should not be passed through.
- 1105 Putting financial hedging to one side, whether the Brookfield LP will have incentives to cause AusNet to engage in occasional short-term acts of foreclosure will depend on whether Origin Energy Markets generates less or more electricity than its retail operation acquires.
- (a) If Origin Energy Markets generates a greater volume of electricity than its retail operation requires (structurally long in electricity), Brookfield LP may have incentives to cause AusNet to engage in occasional short-term acts of foreclosure that increase wholesale

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<sup>571</sup> NEL s 59A.

<sup>572</sup> AER, AER Compliance and enforcement policy (July 2021)

<<https://www.aer.gov.au/system/files/AER%20Compliance%20and%20Enforcement%20Policy%20July%202021.pdf>>.

<sup>573</sup> NEL s 59.

<sup>574</sup> NEL s 64.

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prices. This is because Origin Energy Markets' generation arm will earn an increase in wholesale price over more units than the number of units that its retail arm purchases.

- (b) If Origin Energy Markets generates less than its retail operation purchases (structurally short in electricity), Brookfield LP would not have incentives to cause AusNet to engage in occasional short-term acts of foreclosure that increase wholesale prices. This is because doing so will cost Origin Energy Markets' retail arm more than the benefits its generation arm will gain.
- 1106 Origin's Mortlake power station produced less than 1% of electricity generated in Victoria in 2021 (0.3 TWh out of 47 TWh, or 0.6%).<sup>575</sup> In contrast Origin has an electricity retail market share (measured in load) in Victoria of approximately 15.6%.<sup>576</sup> As a result, Origin is significantly structurally short electricity in Victoria (ie, it generates much less electricity than it sells). Origin has to cover this shortfall through a combination of acquiring electricity in the NEM and entering into hedge contracts, including with other generators.
- 1107 Origin is also structurally short electricity across the NEM, although not as significantly as in Victoria. Origin's share of generation output in the NEM in 2021 was approximately 9%, compared to a retail market share (by customer accounts) in the NEM of approximately 24%.<sup>577</sup> Around half of Origin's energy requirement, and around two-thirds of maximum peak customer demand, is covered by Origin's generation fleet. This short position may be exacerbated if the Eraring coal-fired power station in New South Wales closes, as early as 2025 (depending on the volume of new renewable capacity Origin is able to build in the next two to three years).
- 1108 Origin is of course investing in new renewable generation capacity, and this is expected to accelerate under BGTF ownership. Offsetting this, however, Origin's largest generation asset Eraring (2,880 MW) is expected to close in 2025 at the earliest. Furthermore, total demand for electricity is expected to rise significantly as part of Australia's transition to renewables meaning the volume Origin sells is also likely to rise. There is no basis therefore to think that Origin Energy Markets will become structurally long electricity in the foreseeable future. Brookfield's 'green build-out' plan seeks to have **Confidential to Brookfield: the significant majority** of Origin Energy Market's aggregate customer load requirements by 2033, meaning that Origin Energy Markets will continue to be structurally short electricity even once this strategy has been implemented.
- 1109 Given that Origin is a significant net purchaser of electricity in the NEM and of financial hedges, Brookfield LP does not have an incentive to cause AusNet to engage in occasional short-term acts of foreclosure Origin Energy Markets' generation rivals that increase wholesale prices.
- No incentives to cause AusNet to engage in longer-term acts of foreclosure**
- 1110 If foreclosure occurs over a longer term, there is a greater potential for any increase in wholesale electricity costs to be passed through to higher retail prices.
- 1111 With no financial hedging, whether Brookfield LP will have incentives to cause AusNet to engage in frequent or long-term acts of foreclosure depends on their *net* effects on the operations of Origin Energy Markets from the resulting higher wholesale prices. Higher wholesale prices due to acts of foreclosure may have the following effects on Origin Energy Markets in the long run:

<sup>575</sup> *State of the Energy Market 2022 – Report*, page 49. In 2021 to 2022, Origin's share of Victorian generation output increased to 1.9%. This reflects Mortlake, a gas-fired generator being dispatched more often due to the higher electricity prices.

<sup>576</sup> Calculated based on data from (i) AER retail energy market performance update for Quarter 2, 2022–23

<<https://www.aer.gov.au/retail-markets/performance-reporting/retail-energy-market-performance-update-for-quarter-2-2022%E2%80%9323>> for customers in Queensland, New South Wales, South Australia, Tasmania and the Australian Capital Territory and (ii) ESC Energy market dashboard, Q2, 2022-23 <<https://www.esc.vic.gov.au/electricity-and-gas/market-performance-and-reporting/victorian-energy-market-report/energy-market-dashboard>> for customers in Victoria.

<sup>577</sup> *State of the Energy Market 2022 – Report*, page 49; retail market share data based on *State of the Energy Market 2022 – Report*, Figure 6.17, final quarter of 2021. See underlying data: <<https://www.aer.gov.au/publications/state-of-the-energy-market-reports/state-of-the-energy-market-2022-data>>.

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- (a) higher generation profits (in periods when Origin Energy Markets generation is dispatched);
- (b) higher wholesale costs for the retail business (regardless of whether Origin Energy Markets generation is dispatched or not); and
- (c) higher retail revenues (only to the extent that the higher retail costs can be passed-through to retail prices).

1112 In theory, the condition for Origin Energy Markets to benefit overall from long-term acts of foreclosure by AusNet ultimately depend on the pass-through rate, the length of time until pass-through is realised and a discount factor to reflect the reduction in the value of passed through higher retail revenues due to delay before pass-through takes place. In short, while pass-through will reduce Origin Energy Markets' retail loss to a certain extent, given Origin is significantly structurally short, one would expect a very high pass-through rate would be required before Brookfield LP would have an incentive to cause AusNet to engage in acts of foreclosure

### **No incentives to cause AusNet to engage in acts of foreclosure despite financial hedging**

1113 Any potential for an electricity network operator to have incentives to engage in sabotage to exploit financial agreements is not transaction specific. In the absence of the Proposed Acquisition and assuming an electricity network owner has the ability (which they do not for the reasons set out in other parts of this application) to engage in acts of foreclosure, any such network owner (including those without generation or retail operations) can hold a long position in forward contracts and could in theory benefit from acts of foreclosure in the form of higher payoffs under those contracts.

1114 Even if regard is had to financial hedge related gains from acts of foreclosure, this does not mean that Brookfield LP has the incentive to cause AusNet to engage in acts of foreclosure. This is because:

- (a) First, hedge-related gains would need to outweigh the net losses arising from Origin Energy Markets' structurally short position.
- (b) Second, Brookfield LP would need to take into account that there are likely to be long-term consequences of acting on any immediate incentive to cause AusNet to engage in acts of foreclosure. Where foreclosure occurs in one period, it is likely to affect what counterparties of Origin Energy Markets believe about the likelihood of foreclosure in future periods and hence the future prices that Origin Energy Markets will have to pay for hedging its structurally short exposure to the NEM pool prices.
- (c) In particular, if Brookfield LP causes AusNet to engage in acts of foreclosure, counterparties are likely to develop or maintain expectations of foreclosure in future periods and Origin Energy Markets may then have to pay high prices for hedging its exposure for an unknown future period. This could be very costly to Origin Energy Markets' retail operation, as in each period higher prices would have to be paid for Origin Energy Markets' entire structurally short exposure.

### **Specific incentives in relation to connection**

1115 The likely strong pipeline of new utility-scale generation and storage projects in coming years means that, like all other TNSPs, the AusNet transmission network is likely to receive connection applications from an increasing number of new generation and storage projects. At the same time, there are parts of the AusNet network with limited line capacity. This raises a specific question about whether Brookfield may have a specific incentive to cause AusNet to provide Origin Energy Markets with earlier connection or better access for their new generation and storage projects than competitors.

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- 1116 In relation to incentives to provide earlier connection, it may be suggested that AusNet would have an incentive to slow down a competing new generation project where Origin Energy Markets (under BGTF ownership) is also seeking to develop a new generation project nearby. In considering this question, it should be borne in mind that once both generation projects are connected to a transmission line, if there is a constraint on that transmission line, it is AEMO, as market operator, who will make decisions about which generators are dispatched or scaled back. In practice, renewables on the same constrained transmission line are likely to be scaled back on a pro rata basis. There is no advantage in having been the first to connect once both projects are connected. The only advantage that could be achieved would be temporary only arising from the first project to connect enjoying a period of less transmission constraint up until the time the second generator is connected.
- 1117 In relation to obtaining better access, the quality of access is a function of a transmission line to which a generator is connected. Which transmission line to connect to is a function of the geographic location of a renewables project relative to transmission lines. The capacity of a transmission line is a given and decisions about upgrading that capacity are made by AEMO not AusNet. Accordingly, the concept of incentives to provide better access does not in practice arise.
- 1118 In considering this question, it should also be borne in mind that, as discussed above, in practice there is little that AusNet can do that will materially impact competing projects.
- (a) As outlined in **Annexure A**, AusNet is subject to mandatory open access laws and, importantly, Victorian connection applications are managed and supervised by AEMO. This means AusNet's ability to prevent or slow down competing new generation and storage projects is heavily curtailed and any attempts would be very visible to AEMO.
  - (b) The Victorian government has established VicGrid as a government entity responsible for longer term transmission development, in particular the development of renewable energy zones and transmission solutions for offshore wind.

### 8.5 Impact of different ownership of AusNet and Origin Energy Markets

- 1119 As discussed above, AusNet and Origin Energy Markets will remain separate companies with quite distinct owners. AusNet is owned by two Brookfield infrastructure affiliated entities (45.4%) and a group of independent superannuation funds (Australian Retirement Trust: 15%, Alberta Investment Management Corporation: 9.9%, Investment Management Corporation of Ontario: 9.9%, Health Care of Ontario Pension Plan: 9.9% and Canada's Public Sector Pension Investment Board: 9.9%). The Brookfield-controlled portion of Origin Energy Markets is expected post-syndication to be somewhere between **Confidential to Brookfield: 40 – 50%** and 67.6%. The majority of this will be comprised of investment by BGTF and BEP, with the balance being held by separate Brookfield-managed pool of syndicated co-investors. Outside this investor group, the balance of the Origin Energy Markets business is expected to be owned by Buckland Investment (22.5%), Temasek (9.9%), potentially Reliance (interest to be determined), and possible other foundation co-investors.<sup>578</sup> The continued separation and different ownership of AusNet and Origin Energy Markets means that in practice, there is very little scope for vertical cooperation. Four points illustrate this.
- 1120 **First**, the portfolio companies are managed day-to-day at the portfolio company level. The board of AusNet Services Pty Ltd (ie, the head operating company) and all of its subsidiaries comprises AusNet management and the Origin Energy Markets operating company boards will be structured in the same way.

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<sup>578</sup> GIC through Buckland Investment Pte. Ltd. will have no direct influence on the underlying investments with Brookfield retaining management of Brookfield LP.

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- 1121 The Chief Executive Officers of AusNet and Origin Energy Markets will make their own business decisions day-to-day pursuant to a delegated authority. As described in relation to AusNet at paragraph 501 above, the AusNet CEO has significant operational authority to take decisions on key business activities up to certain thresholds. Expenditure above these thresholds requires the approval of the AusNet Holdings board. This delegated authority is such that the AusNet CEO rarely seeks approval from AusNet Holdings for day to day activities and has the authority to make, or approve, decisions about most connections. In relation to connections, for example, the AusNet CEO and the management team would negotiate any connection related agreement with a new generator. If the capital cost of a contestable connection was above the CEO's delegated authority, the higher expenditure will require the approval of the AusNet Holdings board. The negotiation of the connection agreements themselves, however, would remain a matter for the AusNet CEO and the management team.
- 1122 The boards of both AusNet and Origin Energy Markets will perform their obligations in line with their fiduciary duties in accordance with the *Corporations Act 2001* (Cth), law and applicable constituent documents. The boards of AusNet Holdings and the Brookfield LP will include Brookfield representatives however, there will be no overlapping directors and the remaining seats on these boards will be held by representatives of Brookfield's co-underwriters.
- 1123 **Second**, in relation to AusNet, more than 50% of the equity is held by independent, non-Brookfield co-investors and the position in Origin Energy Markets is expected to be similar, with approximately half of the equity in Origin Energy Markets held by independent, non-Brookfield co-underwriters. As a result, these co-investors / co-underwriters (and the directors they nominate) will have a strong incentive to monitor closely any transaction between AusNet and Origin Energy Markets and to ensure there is no transfer of value between AusNet and Origin Energy Markets. These co-investors do not have any other special arrangements with Brookfield that will make them more likely to vote with Brookfield.
- 1124 It is rare that the AusNet Holdings board is asked to approve AusNet's day to day business decisions. In the event that an activity requires the approval of AusNet Holdings, the AusNet Shareholders Governance Agreement includes protocols which prevent an AusNet group entity from entering into a material<sup>579</sup> arrangement with Brookfield or any of its affiliates unless the arrangement is approved by a majority of the non-Brookfield investors. Post the Proposed Acquisition, the Origin Energy Markets group will become an affiliate of BSIP and as such, AusNet will not be able enter into material arrangements with Origin Energy Markets without approval from the non-Brookfield investors. The remaining AusNet Holdings shareholders comprise one Australian and five Canadian pension funds and will be required to act in the best interests of their members. These co-investors have no interest in Origin Energy Markets and for this reason, the non-Brookfield investors are not likely to agree to arrangements that preference Origin Energy Markets. It is expected that the Origin Energy Markets shareholders agreement will include a similar regime for approval of affiliate transactions.
- 1125 **Third**, each of Brookfield Infrastructure and Brookfield Renewable Power and Transition is a separate fund, the managers of which owe strict duties their respective investors.
- 1126 While affiliates of BAM will manage both funds, the management teams of AusNet and Origin Energy Markets will sit within different business units of BAM, have different leadership, investors and general partners. The general partner (through BAM or otherwise) of BSIP will make decisions which benefit AusNet without regard to what may be in the interests of investors in BGTF and vice versa. There is also practical separation between the business units. For instance, the Infrastructure and Renewable Power and Transition teams in Australia are located

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<sup>579</sup> AusNet Shareholders Governance Agreement (entered 9 February 2022) page 36 requires that certain agreements **Confidential to Brookfield: exceeding a threshold amount to be approved by non-interested investors (Annexure 11)**.

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on different floors of Brookfield's offices and have separate electronic drives. There are only a very small number of people who work across business units as part of shared service teams that sit across units (such as IT, HR, Treasury and compliance).

- 1127 In considering the above it is important to bear in mind that the Proposed Acquisition does not give rise to horizontal merger concerns. This is not a case where two competitors may both benefit from reduced competition and the sharing of confidential information. Rather competition concerns can only arise if AusNet has both the ability and incentive to foreclose Origin Energy Markets' generator competitors. This is made inherently less likely by the ownership structure described above. To illustrate:
- (a) some of the possible foreclosure strategies require action to be taken by employees of AusNet in 'hands on' roles. For example, any strategy of taking unnecessary or prolonged maintenance outages directed at Origin Energy Markets' generation competitors would have to be implemented by AusNet engineers and maintenance crews with no connection to Origin Energy Markets or its management, making it inherently unlikely even if the regulatory regime and role of AEMO permitted it;
  - (b) as discussed above, any foreclosure strategy that involved AusNet entering a favourable contract with a new Origin Energy Markets generator (eg, a connection related agreement) would require the approval of the non-Brookfield AusNet directors;
  - (c) many foreclosure strategies that might benefit Origin Energy Markets may harm AusNet, eg, failing to maintain or renew infrastructure in a way that harms Origin Energy Markets' generator competitors is likely to come at a cost and cause significant risk for AusNet. Neither the non-Brookfield directors nor the fiduciary duties of the Brookfield directors are likely to allow this to occur; and
  - (d) compliance with key aspects of the TRFG will occur as a matter of course as a result of the separate companies and management structures involved.
- 1128 **Fourth**, to provide the ACCC further comfort that AusNet and Origin Energy Markets will remain separate companies in practice following the Proposed Acquisition, Brookfield is prepared to provide an enforceable undertaking to the ACCC to ensure that while Brookfield controls simple majority decisions of the boards of AusNet Holdings and Origin Energy Markets:
- (a) To ensure there are separate boards of AusNet and Origin Energy Markets:
    - (i) Brookfield Manager will not appoint to an AusNet board, a person who is a director or secretary or employee of Origin Energy Markets; and
    - (ii) Brookfield LP will procure that no person is appointed to the Origin Energy Markets board who is a director or secretary or employee of AusNet.
  - (b) To ensure that AusNet and Origin Energy Markets have separate employees and ring-fencing of information, Brookfield Manager and Brookfield LP will procure that:
    - (i) no person will be employed by AusNet who is also employed by Origin Energy Markets, and vice versa;
    - (ii) AusNet will have a separate information technology system from Origin Energy Markets; and
    - (iii) an employee of Origin Energy Markets will not be able to access the information technology system of AusNet or information stored on that system, and vice versa.

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- (c) To ensure ring-fencing within Brookfield of individuals responsible for managing Brookfield's interests in AusNet and Origin Energy Markets, Brookfield Manager and Brookfield LP will procure that:
- (i) no person involved in the management of Brookfield's interest in AusNet on a day-to-day basis is also involved in the management of Brookfield LP's interest in Origin Energy Markets and *vice versa*. There will be an exception for senior management personnel with oversight roles and personnel primarily involved in administrative, accounting, legal, treasury and other ancillary service functions;
  - (ii) Individuals responsible for managing Brookfield's interests in Origin Energy Markets are not able to access competitively sensitive information of AusNet and *vice versa*; and
  - (iii) an effective information technology system and security measures will be established and maintained to safeguard competitively sensitive information.

1129 In summary the lack of any ability or incentive for AusNet to foreclose Origin Energy Markets' generation competitors is reinforced by the presence of separate ownership and management and the enforceable undertaking that Brookfield is prepared to offer.

### 8.6 X-Elio and ACEN Corporation

#### **Overview**

- 1130 BIF IV, a fund within the Brookfield Renewable Power and Transition business unit, has a 50% ownership interest in a global renewable energy developer and operator, X-Elio. X-Elio has one solar farm in Australia, Blue Grass SF, which is located in QLD. Blue Grass SF opened in November 2022. It has an installed capacity of 200 MW. X-Elio also has five active pipeline projects.
- 1131 GIC Infra, through an affiliate, has a 16.87% ownership interest in the listed Southeast Asian renewables platform, ACEN Corporation (formerly AC Energy). In Australia, ACEN is a renewable developer and operator. It has one solar farm (New England Solar) and one advanced development project in New South Wales.
- 1132 Origin is an electricity generator in both Queensland and other mainland NEM states. Origin's existing portfolio has a total owned registered generation capacity of 6,024 MW. Origin's generation portfolio is summarised in.
- 1133 Origin, X-Elio and ACEN overlap in relation to the supply of electricity to the NEM.
- 1134 The Proposed Acquisition will not have the effect or likely effect of substantially lessening competition in the electricity generation market because X-Elio and ACEN comprise only a very small proportion of generation within the NEM, in New South Wales and in Queensland, the only states in which the Parties' operating assets overlap. As such, the increment in Origin's share of generation as a result of the Proposed Acquisition would be negligible.

#### **Minimal market shares**

- 1135 AEMO and the AER provide regular data in relation to wholesale electricity supply in Australia that is illustrative in showing the position of X-Elio and ACEN in the context of the market overall.
- (a) in 2021 there was ~57 TWh of electricity generated in Queensland.<sup>580</sup> In 2021, Origin generated 1.9TWh of a total 57 TWh generated in Queensland (3.3%).<sup>581</sup> Had Blue Grass SF been operational during this period, X-Elio would have generated ~0.7% of the total electricity generated in Queensland.

<sup>580</sup> *State of the Energy Market 2022 – Report*, Figure 2.22 (Annexure 12).

<sup>581</sup> *State of the Energy Market 2022 – Report*, Figure 2.22 (Annexure 12).



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- (b) in 2021 there was ~62 TWh of electricity generation in New South Wales.<sup>582</sup> In 2021, Origin generated 14 TWh of a total 62 TWh generated in New South Wales (22%). New England Solar will have an estimated annual production of 1,800,000 MWh (1.8 TWh) equating to less than 3% of total electricity generation in the NEM based on the 2021 market size.
- 1136 In relation to generation capacity, X-Elio and ACEN's shares are also very small in the context of the current size of the NEM, NSW and QLD supply:
- (a) as at 1 January 2022, generation capacity in the NEM was approximately 70,513 MW.<sup>583</sup> As at that date, Origin's owned registered generation capacity was approximately 6,024 MW, 8.5% of total capacity in the NEM. New England Solar and Blue Grass SF were not in operation at that date but had they been their capacity would have represented approximately 1% (720 MW) and 0.3% (200 MW) of total capacity in the NEM respectively;
- (b) as at 1 January 2022, generation capacity in NSW was approximately 23,752 MW.<sup>584</sup> As at that date, Origin's owned registered generation capacity was ~3,826 MW, 16% of total capacity in the NEM. New England Solar was not in operation at that date but had it been, its capacity would have represented approximately 3% (720 MW) of total capacity in New South Wales; and
- (c) as at 1 January 2022, generation capacity in Queensland was ~19,424 MW.<sup>585</sup> As at that date, Origin's owned registered generation capacity was ~1,143 MW, 5.8% of total capacity in the NEM. Blue Grass SF was not in operation at that date but had it been, its 200 MW of capacity would have represented 1% of total capacity in Queensland.
- 1137 As noted above, X-Elio and ACEN's shares of both output and capacity in the NEM and in QLD and New South Wales respectively are very small and in connection with Origin will not raise competition issues.
- 1138 While both X-Elio and ACEN have plans to grow their generating capacities, both of their development pipelines remain small in the context of NEM's growth. AEMO has identified potential new generation and storage projects in the NEM totalling approximately 209 GW from 652 energy projects.<sup>586</sup> X-Elio and ACEN are responsible for just 18 of these pipeline projects. X-Elio is responsible for five active pipeline projects.<sup>587</sup> ACEN's pipeline of active projects is also small, being responsible for 13 active projects, of which only two are currently well-advanced<sup>588</sup> Further information about the X-Elio and ACEN's respective pipeline projects is set out in **Figure 34, Figure 35 and Figure 36** above.
- 1139 As outlined throughout this Application, the energy market, particularly the renewable energy sector, is growing rapidly in Australia, and X-Elio and ACEN's development pipelines are small in the context of that rapid growth. Their pipeline projects are also subject to change due to a range of factors. In addition, since GIC Infra has only a 16.87% ownership interest in ACEN and ACEN

<sup>582</sup> *State of the Energy Market 2022 – Report*, Figure 2.22 (**Annexure 12**).

<sup>583</sup> *State of the Energy Market 2022 – Report*, Figure 2.15 (**Annexure 12**).

<sup>584</sup> *State of the Energy Market 2022 – Report*, Figure 2.15 (**Annexure 12**).

<sup>585</sup> *State of the Energy Market 2022 – Report*, Figure 2.15 (**Annexure 12**).

<sup>586</sup> AEMO, *Generation Information*, Generator Information page, May 2023, <<https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>>.

<sup>587</sup> X-Elio's pipeline projects include (i) Willaville Solar Farm (NSW); (ii) Glen Royal Solar Farm (NSW); (iii) Sixteen Miles Solar Farm (Qld); (iv) Forest Glen (NSW); (v) Boulka Park Solar Farm (Victoria)

<sup>588</sup> ACEN's advanced pipeline projects include (i) New England Solar and Battery and (ii) Stubbo Solar. ACEN's other pipeline projects include: (i) Birriwa Solar (NSW), (ii) Valley of the Winds (NSW), (iii) Aquila Wind (NSW), (iv) Narragamba Solar (NSW), (v) Phoenix Pumped Hydro (NSW), (vi) Baroota Pumped Hydro (SA), (vii) Birdle Track Solar Project (SA), (viii) Robbins Island (TAS), (ix) Jim's Plain Wind (TAS), (x) North East Wind (TAS), and (xi) Axedale Solar (VIC).

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is listed on the Philippine Stock Exchange, GIC Infra would not be able to direct ACEN's strategy in a way that would lessen competition in a market in Australia.

- 1140 For completeness we note that Brookfield is exploring opportunities to invest in new renewables generation. In early April it announced it had entered an agreement with Greenleaf Renewables to develop, build and take ownership of the 420 MW Moonlight Range Wind Farm in central Queensland. The Moonlight Range Wind Farm is in the development phase and is expected to be ready for construction in 2025, subject to the approvals being received. Moonlight Range and other opportunities Brookfield is exploring would become part of the Origin Energy Markets 'green build-out' if the Proposed Acquisition proceeds. Again, the early stage of both Moonlight Range and Brookfield's other opportunities means no horizontal competition issues should arise.

## 9 No substantial lessening of competition in electricity retail markets

### 9.1 Introduction

- 1141 In addition to being a generator, Origin is also an electricity retailer in Victoria and in other NEM States. AusNet is not an electricity retailer. As a result, no horizontal competition issues arise in any electricity retail market.
- 1142 AusNet owns one of five Victorian electricity distribution networks. Origin is one of many retailers who utilises those networks to sell electricity to customers that are connected to those distribution networks. Given this vertical relationship we expect the ACCC will wish to consider whether vertical competition issues may arise, in particular, whether AusNet has the ability and incentive to use its position in the Victorian electricity distribution markets to anti-competitively foreclose Origin's retail rivals.
- 1143 AusNet does not have the ability or incentive to use its position as the owner of a Victorian electricity distribution network to foreclose Origin's retail rivals as a result of a combination of the following:
- (a) electricity distribution systems are very heavily regulated to ensure AusNet cannot misuse any market power it may otherwise have absent the regulation. The regulatory regime deals, amongst other things, with revenues and prices, access and connection, expansions, maintenance and operation. The distribution regulatory regimes are continuing to evolve to reflect changes in electricity markets and to address emerging issues;
  - (b) the electricity regulatory regime includes distribution ring-fencing guidelines made by the AER. Their purpose is to ensure where there is vertical integration between a distribution business and a contestable business, the distribution business is operated in a way that does not adversely affect competition in the contestable market;
  - (c) the fact that retail customers are geographically dispersed across a distribution network makes many theoretical foreclosure strategies impossible. It is difficult to imagine, for example, how selectively upgrading one part of a distribution network (say, a particular suburb) could competitively advantage an associated retailer; and
  - (d) there is a high level of transparency over relevant aspects of AusNet's operation of its distribution networks. There is no possibility of subtle forms of discrimination not being detected.
- 1144 **Figure 111** below summarises why AusNet would not have the ability or incentive to engage in a foreclosure strategy in any area of distribution network activities, followed by a more detailed discussion by area.

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**Figure 111: AusNet has no ability or incentive to engage in a foreclosure strategy in any area of distribution network activities**

Area of activity: Distribution	Ability
<b>Pricing: Direct Control Services (standard and alternative)</b>	<p>Direct Control Services are the core services provided by electricity distributors and include both use of system and connection. The pricing of Direct Control Services is subject to AER regulation. Every five years the AER makes a distribution pricing determination imposing controls over the prices of Direct Control Services and approving a tariff structure statement proposed by the distributor. The distributor must comply with the approved tariff structure statement in setting annual prices in an annual pricing proposal that must also be approved by the AER. This eliminates any possibility of AusNet charging an Origin retailer or its customers less than a non-Origin retailer or its customers. There is also no ability to discriminate in relation to tariff trials or individually calculated customers for the reasons discussed below.</p> <p>Connection services are a type of direct control service and so are subject to price regulation by the AER. The price for basic and standard connection services (ie, connection services that do not require significant augmentation) are set through an annual pricing process described above. Furthermore, AusNet must have a model standing offer for such services, which must be approved by the AER. In the case of negotiated connection services (eg, where an augmentation is required) there is no ability for AusNet to discriminate in relation to price for reasons discussed below.</p>
<b>Pricing: Negotiated distribution services</b>	<p>Negotiated distribution services are services the AER accepts can fall outside price regulation and are rare. AusNet will have no negotiated distribution services in the 2021 to 2026 regulatory period. Where there are such services the price for them must be negotiated in accordance with a regulated negotiation framework including binding dispute resolution by the AER.</p>
<b>Access: Energisation and connection</b>	<p>Where a customer only requires energisation, AusNet is required to use best endeavours to energise the customer's supply address within one business day, if the request is made by 3pm, or within two business days if the request is made after 3pm. The DRFG prohibits AusNet from discriminating between a related electricity service provider and a competitor of a related electricity service provider.</p> <p>In relation to new connections involving minimal or no augmentation AusNet is required to have a model standing offer to provide basic connection. The model standing offer must be approved by the AER and the offer to connect must be made within 10 business days. For other types of connections (negotiated service connections) AusNet must comply with a negotiating framework set out in the NER. Further any dispute may be resolved under the AER dispute resolution processes under the NEL and Chapter 5A of the NER.</p>
<b>Access: Planning the distribution network (augmentation)</b>	<p>Origin's retail customers are dispersed across the AusNet distribution network, and it would not be possible to undertake targeted augmentations that would benefit only Origin's retail customers.</p> <p>In any event, there is considerable transparency and regulatory oversight of planning and augmentation, for example, through the distribution annual planning review, the distribution determination process and the RIT-D process.</p> <p>AusNet also has incentives to maintain reliability of supply and quality of supply as a result of the incentive scheme that forms part of the AER's price determination. Under this scheme AusNet's revenue is increased (or decreased) based on changes in service performance.</p> <p>AusNet has an incentive to meet the minimum service levels set out in the Electricity Distribution Code of Practice in connection with reliability, otherwise it is required to make specified payments to retail customers.</p>

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Area of activity: Distribution	Ability
<b>Access: Quality of connection (renewal and maintenance, outages)</b>	<p>As per above for augmentation, AusNet does not have any ability to selectively maintain parts of its distribution network in a manner that would advantage Origin by providing a better quality of service to Origin's retail customers. This is because these customers are dispersed across the AusNet distribution network, and it would not be possible to undertake targeted maintenance activities (or fail to undertake maintenance activities) that would benefit only Origin's retail customers (or penalise only non-Origin retail customers). In addition, renewal and maintenance are subject to regulation and transparent processes.</p> <p>The above observation also applies to planned outages - it is not possible for AusNet to target an outage that would affect only non-Origin retail customers. In any event, as per transmission, there is considerable transparency around planned outages (published in AEMO's medium term projected assessment of system adequacy), such that any attempt to 'manufacture' outages targeting non-Origin retail customers would be easily detected. AusNet is required to provide AEMO with an outline of planned network outages some three years in advance and to update that information as frequently as changes occur.</p> <p>The reliability of supply and quality of supply components of the STPIS apply to AusNet in relation to its distribution network. Under these components, AusNet's revenue is increased (or decreased) based on changes in service performance.</p> <p>AusNet has an incentive to meet the minimum service levels set out in the Electricity Distribution Code of Practice in connection with supply restoration and reliability, otherwise it is required to make specified payments to retail customers. Failure to meet guaranteed service levels can easily be identified by customers and their retailers. Failure to make GSL payments or make those payments on time both attract civil penalties under the ESC Act.</p>
<b>Load shedding</b>	<p>In Victoria, AEMO works with government to determine the priority order of load shedding. Therefore, AusNet does not have the ability to target non-Origin retail customers in the event load shedding is required.</p>
<b>Cross subsidisation, information and discrimination</b>	<p>As an electricity distributor, AusNet is subject to the DRFG. Those rules:</p> <ul style="list-style-type: none"> <li>(a) require legal separation of the distribution business from the contestable businesses to ensure there is no cross subsidisation;</li> <li>(b) impose obligations in relation to confidential information and / or separation of staff; and</li> <li>(c) contain general non-discrimination obligations that prohibit AusNet from discriminating between a related electricity service provider and a competitor of a related electricity provider.</li> </ul> <p>In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the DRFG. The AER also has a range of enforcement options to ensure compliance with the DRFG and to respond to and address potential non-compliance.</p>

### 9.2 AusNet has no ability or incentive to discriminate in relation to pricing

1145 Electricity distribution in the NEM is achieved by DNSPs providing a variety of electricity distribution services through their respective distribution networks. Distribution services may be provided by a DNSP either as direct control, or negotiated services:

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- (a) **Direct Control Services:** These services comprise:
- (i) **standard control services** which are the everyday network services that a DNSP provides to all retail customers AusNet provides the following standard control services:<sup>589</sup>
    - (A) common distribution services, comprising use of the distribution network for the conveyance / flow of electricity, including services relating to network integrity;
    - (B) standard connection services, comprising a connection service other than a basic connection service. In the case of AusNet, the only standard connection service is an underground connection in specified circumstances; and
    - (C) negotiated connection services, comprising a connection service other than a basic connection service or a standard connection service.
  - (ii) **alternative control services** which include basic connection services, metering, public lighting and ancillary services. These services can be attributed to a particular customer and therefore the costs of providing the service are recovered from the relevant customer, rather than through network tariffs.

The prices of Direct Control Services are regulated by the AER through its five yearly distribution determinations.

- (b) **Negotiated distribution services:** The AER notes that these services require a less prescriptive regulatory approach because the relevant parties have sufficient market power to negotiate the provision of those services.<sup>590</sup> By way of example, in the 2016 to 2020 AusNet distribution access proposal, the only services classified by the AER as negotiated distribution services were new public lighting services (including greenfield sites), alteration and relocation of DNSP public lighting assets and the construction of a reserve feeder. AusNet has not included any negotiated services in its most recent 2021 to 2026 distribution access proposal to the AER and the economic regulation outlined below relating to negotiated distribution services will be inactive for the 2021 to 2026 regulatory control period.

1146 This section considers AusNet's ability to use the pricing of its electricity distribution services to foreclose non-affiliated retailers in the following ways:

- (a) setting prices for Direct Control Services to reduce the price paid by an affiliated retailer or increase the price paid by a non-affiliated retailer;
- (b) setting prices for negotiated distribution services to reduce the price paid by an affiliated retailer or increase the price paid by non-affiliated retailer;
- (c) using the specific regimes that apply to individually calculated customers (**ICCs**) and tariff trials, so tariffs are lower where an affiliated retailer is involved or higher where a non-affiliated retailer is involved; or
- (d) offering less favourable pricing terms for distribution connection services to customers of non-affiliated retailers. Although connection services are Direct Control Services, they are discussed separately given the additional specific rules that apply in relation to connection services.

<sup>589</sup> AER, *Final Decision – AusNet Services (distribution) 2016–20* (May 2016) <[https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20AusNet%20distribution%20determination%20-%20Overview%20-%20May%202016\\_0.pdf](https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20AusNet%20distribution%20determination%20-%20Overview%20-%20May%202016_0.pdf)>.

<sup>590</sup> AER, *Final Decision – AusNet Services (distribution) 2016–20* (May 2016) <[https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20AusNet%20distribution%20determination%20-%20Overview%20-%20May%202016\\_0.pdf](https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20AusNet%20distribution%20determination%20-%20Overview%20-%20May%202016_0.pdf)>.

**(a) Setting prices for Direct Control Services**

**Overview**

- 1147 The principal services provided by AusNet are Direct Control Services, which are subject to regulation by the AER. As with transmission the AER makes five yearly price determinations. However, the framework for distribution pricing differs from the framework for transmission pricing to reflect the fact that, unlike the costs of prescribed transmission services, the costs of distribution services are recovered through a variety of charges and tariffs which differ depending on the type of distribution service provided and the type of customer receiving the service. For this reason, instead of imposing a maximum allowable revenue, a distribution determination imposes controls over the prices of Direct Control Services. The AER has a range of control mechanisms to choose from in making a distribution determination, including a schedule of fixed prices, caps on prices of individual services, tariff basket prices, or a combination.<sup>591</sup>
- 1148 As part of the regulatory determination process, a DNSP is required to prepare a tariff structure statement (**TSS**), which includes the following elements:
- (a) the tariff classes into which retail customers for Direct Control Services will be divided;
  - (b) the policies and procedures the DNSP will apply for assigning retail customers to tariffs;
  - (c) the structures for each proposed tariff;
  - (d) the charging parameters for each proposed tariff; and
  - (e) the description of the approach the DNSP will take in setting each tariff.<sup>592</sup>
- 1149 The TSS is approved by the AER. DNSPs are then required to comply with their approved TSS when setting prices that they may charge for Direct Control Services.<sup>593</sup> The TSS must be accompanied by an indicative pricing schedule, which sets out, for each tariff, the indicative price levels determined in accordance with the TSS for each regulatory year. The assignment of retail customers to tariff classes must have regard to the principles set out in the NER.<sup>594</sup>
- 1150 DNSPs must also prepare annual pricing proposals for review and approval by the AER. The annual pricing proposal must comply with the TSS and set out the proposed tariff for each tariff class from the TSS.<sup>595</sup> Given the principles that the TSS and annual pricing proposal must comply with and the need to obtain AER approval, there is no ability to discriminate in charging for Direct Control Services.<sup>596</sup>
- 1151 In addition, distribution ring-fencing guidelines (discussed further below) require a DNSP not to discriminate between a related electricity service provider (which would include Origin Energy Markets) and a competitor, or potential competitor, of a related electricity service provider in connection with the provision of Direct Control Services. The non-discrimination obligation includes a requirement that a DNSP in like circumstances deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms.<sup>597</sup>

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<sup>591</sup> NER, cl 6.2.5.(b) Under AusNet's approved tariff structure statement between 2022 and 2026, standard control services tariffs are divided into the following six tariff classes based on customer types/usage profile: residential, small/medium/large industrial and commercial; high voltage and sub-transmission. Similarly, alternative control services tariffs are also divided into the following classes: public lighting, metering services, connection services, ancillary services (either fee-based or quoted).

<sup>592</sup> NER, cl 6.18.1A.

<sup>593</sup> NER, cl 6.18.1A(c).

<sup>594</sup> NER, cl 6.18.4(a).

<sup>595</sup> NER, cl 6.18.2(b)(7).

<sup>596</sup> NER, cl 6.18.2.

<sup>597</sup> DRFG, cl 4.1(c)(ii).

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### ***Additional observations on standard control services***

1152 The framework described above means that there is no ability for AusNet to discriminate in the pricing of standard control services. Tariffs are ultimately set in an AER approved annual pricing proposal, with no ability to charge different tariffs based on retailer.

### ***Additional observations on alternative control services***

1153 Currently AusNet provides the following services as alternative control services (noting this could change in future regulatory periods with AER approval):

- (a) ancillary network services (including basic connection services (discussed below in relation to connection);
- (b) metering services that relate to type 5 and type 6 meters; and
- (c) public lighting services.

1154 In its determination for the 2021 to 2026 regulatory period for AusNet:

- (a) in the case of ancillary network services, the AER has set fees for some services and has provided for other services to be provided on a quotation basis, with hourly labour rates set by the AER. Although the actual price for quote-based ancillary network services depends upon the time a job takes, it is implausible to think that AusNet would tell customers that work would take longer based on the identity of their retailer;
- (b) in the case of metering, the AER has set a five-year revenue cap, with actual metering charges to be approved during the annual pricing process; and
- (c) in the case of public lighting, the AER has approved specific prices (fee-based).

1155 In each case the AER's role in price setting removes any ability to price discriminate.

### **(b) Setting prices for negotiated distribution services**

1156 AusNet will not offer negotiated distribution services in the 2021 to 2026 regulatory control period. If in future, there are services offered by AusNet that are classified by the AER as negotiated distribution services AusNet would be required to negotiate in accordance with a negotiating framework approved by the AER as part of its five yearly distribution determination.

1157 In addition, the AER sets Negotiated Distribution Service Criteria (**NDSC**) that each DNSP must apply when negotiating terms and conditions of access for negotiated distribution services.<sup>598</sup> The AER also uses the NDSC to resolve any access disputes as required by clause 6.7.4(a) of the NER.

1158 The NDSC requires that the price for a negotiated distribution service must:

- (a) Reflect the costs that AusNet has incurred or incurs in providing that service, and must be determined in accordance with the principles and policies set out in the relevant cost allocation method.<sup>599</sup>
- (b) Be no more than the cost of providing the service on a standalone basis except in limited circumstances.<sup>600</sup>
- (c) Be the same for all distribution network users unless there is a material difference in the costs of providing the service to different users or classes of users.<sup>601</sup>

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<sup>598</sup> NER, cl 6.7.4.

<sup>599</sup> AER, AusNet Services Distribution Determination 2021 to 2026 (September 2020) <<https://www.aer.gov.au/system/files/AER%20-%20Draft%20decision%20-%20AusNet%20Services%20distribution%20determination%202021-26%20-%20Attachment%2017%20-%20Negotiated%20services%20framework%20and%20criteria%20-%20September%202020.pdf>> (**NDSC**). (**Annexure 25**)

<sup>600</sup> NDSC, Criteria 6. (**Annexure 25**).

<sup>601</sup> NDSC, Criteria 9. (**Annexure 25**).



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- (d) Be adjusted over time to the extent that the assets used to provide that service are subsequently used to provide services to another person, in which case such adjustment must reflect the extent to which the costs of that asset are being recovered through charges to that other person.<sup>602</sup>
- (e) Be such as to enable a DNSP to recover the efficient costs of complying with all regulatory obligations or requirements associated with the provision of the negotiated service.<sup>603</sup>
- 1159 The AER is the dispute resolution body for access disputes between access seekers and electricity distributors for negotiated distribution services, under Part 10 of the NEL. If a dispute arises where a customer is unable to reach agreement with AusNet on the pricing of the negotiated distributed services, the prospective user, user or service provider may request the AER to assist with the resolution of the dispute with the AER having the ability to make an access determination under section 128 of the NEL that will bind the parties.
- 1160 As a result of the requirement that AusNet comply with the negotiating framework and NDSC approved by the AER and the ability to refer disputes to the AER for binding dispute resolution, there is no ability for AusNet to discriminate against Origin's retail competitors in relation to the pricing of negotiated distribution services (should AusNet provide any such services after 2026).
- (c) Setting tariffs for individually calculated customer**
- 1161 Some DNSPs in their TSS include a class tariff for ICCs. ICCs are generally medium and large customers that have specific site load requirements such as mining, transport (rail) and pumping. ICC tariffs are generally confidential and are provided directly to the customers and / or the customer's retailer and are not published on a DNSPs' website. While AusNet does not currently have a tariff class for ICCs under its approved TSS, there may be a concern that AusNet could offer a more attractive ICC tariffs in the future for customers of an affiliated retailer at the expense of non-affiliated retailers.
- 1162 In this regard, it is worth noting that any revenue generated from ICC tariffs (like other Direct Control Services charges) are subject to the maximum revenue cap approved by the AER and must comply with pricing principles under the NER based on the cost of delivering the relevant services.
- 1163 While the ICC tariffs are generally confidential, all customers with a load profile requiring an ICC tariff are likely to be highly sophisticated market participants. By way of example, Ergon Energy has an ICC tariff class for customers which are coupled to the network at 132 kV, 110 kV, 66 kV or 33 kV, and with installed capacity above 10 MVA and in limited circumstances, with installed capacity below 10 MVA.
- 1164 ICC typically negotiate with a DNSP directly or can closely examine and compare pricing structure offered by their respective retailers including any charges for Direct Control Services. As a result, in practice, any attempts by AusNet to offer differentiated ICC tariffs for the same customer based on their choice of retailers is likely to be highly discoverable by both the end customer and their non-affiliated retailers. This level of transparency will discourage AusNet from engaging this foreclosure strategy to benefit its affiliated retailer. Furthermore, to the extent that an ICC cannot agree on the price of individually calculated tariff with a DNSP, it may request the AER to assist with the resolution of the dispute. The AER has the ability to make an access determination under section 128 of the NEL that will bind the parties. As a result, there is no scope for a DNSP to offer differentiated ICC tariff for the same customer based on their choice of retailer.

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<sup>602</sup> NDSC, Criteria 10. (**Annexure 25**).

<sup>603</sup> NDSC, Criteria 11. (**Annexure 25**).

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### (d) Setting tariff trials for an affiliated retailer

- 1165 The NER requires distributors to gradually make their tariffs more accurately reflect the costs of serving their customers. To support tariff reforms and achieve this objective, the NER allows for tariff trials.<sup>604</sup> A DNSP is able to introduce tariffs not covered by its approved TSS as long as it informs the AER, retailers and customers and does not recover more than 0.5% of its annual revenue requirement. DNSPs are allowed to run multiple trials as long as no more than 1% of revenue is recovered from all the tariff trials it is running each year.<sup>605</sup>
- 1166 The tariff trial process is regulated and highly transparent. Any trials that a DNSP wishes to run in the first year of the five year regulatory period must be detailed in their TSS. For trials in the second to fifth years of the regulatory period, the AER has to be notified four months before the start of the regulatory year in which the trial will occur.<sup>606</sup> The AER has created a notification template for distributors to submit potential tariff trials as part of their annual pricing proposals.<sup>607</sup> Tariff trial notifications submitted to the AER are published on the AER's website. In addition, the DRFG impose non-discrimination obligations which amongst others require a DNSP to, in like circumstances, deal or offer to deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions.<sup>608</sup> Accordingly, if AusNet were to offer an attractive tariff trial for an affiliated retailer, a competing retailer will be aware of this before the commencement of the tariff trial and has the ability to request AusNet to offer the same tariff trial to its customers. In these circumstances, there is no ability for AusNet to set exclusive tariff trials for an affiliated retailer at the expense of non-affiliated retailers.
- 1167 It should also be borne in mind that EnergyAustralia is the default retailer and has the largest number of customers in the AusNet distribution area. In order for a tariff trial to be successful, as many customers as possible must be involved. To date AusNet has conducted tariff trials with EnergyAustralia and not with Origin for this reason.
- 1168 It should also be borne in mind that a tariff trial is by definition temporary. If a trial is successful then a new tariff class would be introduced via the TSS and annual pricing proposal, which would be available to all retailers and their customers.

### (e) Offering less favourable pricing terms for distribution connection services

- 1169 This section discusses pricing for connections that are regulated under Chapter 5A of the NER 'electricity connection for retail customers' as applied in Victoria (see discussion in **Annexure A**). The pricing for connection of embedded generators that export greater than 5 MW and that must register with AEMO as market participants, which is regulated under Chapter 5 of the NER, is discussed in Chapter 10 below.
- 1170 The regulatory regime for connection charges under Chapter 5A comprises two overlapping regimes.
- (a) Connection services are covered by the AER distribution determinations made under Chapter 6 of the NER, typically as either 'standard control' or 'alternative control' services.
  - (b) Connection charges are also regulated under the DNSP's connection policy which is approved by the AER.

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<sup>604</sup> NER, cl 6.18.1C.

<sup>605</sup> As of August 2021, the individual and cumulative thresholds for tariff trials have been increased to 1% and 5% respectively. This increase is temporary and applies for the current and next regulatory periods.

<sup>606</sup> NER, cl 6.18.1C.

<sup>607</sup> AER, *Tariff trials* <<https://www.aer.gov.au/networks-pipelines/network-tariff-reform/tariff-trials>>.

<sup>608</sup> DRFG, cl 4.1(c)(ii).

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1171 A DNSP is required by Part DA of Chapter 6 of the NER to prepare a connection policy setting out when it may require a retail customer or a real estate developer to pay a connection charge. The connection policy must be consistent with:

- (a) connection charge principles set out in clause 5A.E.1 of the NER; and
- (b) connection charge guidelines made by the AER.<sup>609</sup>

A DNSP's connection policy is approved by the AER as part of its five yearly distribution determination.

1172 AusNet offers the following types of connection services, and each has a corresponding AER service classification. These are set out in **Figure 112** below.

**Figure 112: AusNet connection services**

NER connection service type	AER Service Classification
<p><b>Basic connection services:</b> a connection between a distribution system and a retail customer's premises (excluding a non-registered embedded generator's premises) in the following circumstances:</p> <ul style="list-style-type: none"> <li>(a) Either: (i) the retail customer is typical of a significant class of retail customers who have sought or are likely to seek the service; or (ii) the retail customer is, or proposes to become, a micro-embedded generator;</li> <li>(b) the provision of the service involves minimal or no augmentation of the distribution network; and</li> <li>(c) a model standing offer has been approved by the AER for providing that service as a basic connection service.</li> </ul>	<p>AER classification: Alternative control services</p> <p>AusNet offers two classes of basic connection service:</p> <ul style="list-style-type: none"> <li>(a) A basic connection service, where connection between the distribution system and the customer's premises requires minimal or no augmentation of the distribution network.</li> <li>(b) A basic micro embedded generation connection service, which is for the connection of micro embedded generators with a maximum capacity less than 5 kVA per phase, or more than 3.5 kVA if connected to a single-wire earth return (SWER) powerline.</li> </ul>
<p><b>Standard connection services:</b> a connection service other than a basic connection service for a particular class (or sub-class) of connection applicant and for which a model standing offer has been approved by the AER.</p>	<p>AER classification: Standard control services</p> <p>AusNet offers only one standard connection service, which is for underground connections in specified circumstances.</p>
<p><b>Negotiated connections:</b> where a connection service is: (i) neither a basic connection service nor a standard connection service; or (ii) a basic connection service or a standard connection service but the connection applicant elects to negotiate the terms and conditions on which the connection service is to be provided.</p>	<p>AER classification: Standard control services</p> <p>This covers all other connections.</p> <p>The AusNet connection policy notes that most negotiated connection services are classified as a standard control service, meaning that the connection charges are approved by the AER.</p> <p>The main exception is enhanced connection services – see below (for example with a higher Reliability Standard), which are classified as alternative control services.</p>
<p><b>Enhanced connection services (a specific type of negotiated connection service):</b> other or enhanced connection services provided at the request of a customer or third party that include those that are</p>	<p>AER classification: Alternative control services</p> <p>An example of such work is reserve feeder installation and maintenance (ie, when a customer requests continuity of electricity supply</p>

<sup>609</sup> NER, cl 6.7A.1(b)(1).

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NER connection service type	AER Service Classification
<p>provided:</p> <p>(a) With higher reliability standards, or lower reliability standards (where permissible) than those specified in the NER or any other applicable regulatory instruments.</p> <p>(b) At service levels or plant ratings in excess of those required by the regulatory framework to be provided by the DNSP.</p>	<p>should the feeder providing normal supply to their connection experience interruption).</p>
<p><b>Connection application and management services:</b> works initiated by a customer or retailer that are specific to the connection point.</p>	<p>AER classification: Alternative control services</p> <p>This covers work such as:</p> <p>(a) field based de-energisation and re-energisation;</p> <p>(b) overhead service line replacement, where a customer requests the existing overhead service to be replaced (eg, because of a point of attachment relocation);</p> <p>(c) protection and power quality assessment;</p> <p>(d) upgrade from overhead to underground service; and</p> <p>(e) rectification of illegal connections or damage to overhead or underground service cables.</p>

Source: AER<sup>610</sup>

- 1173 As evident from **Figure 112** above, all connection service types offered by AusNet during the current regulatory control period are Direct Control Services (ie, either standard control services or alternative control services) meaning they are subject to price regulation by the AER. Furthermore, the AER approved connection policy outlines in detail the pricing methodology that applies, including when determining capital contribution charges, metering costs, costs of minor variations, other incidental costs, and charges payable to account for any pioneer schemes.
- 1174 For most common connection categories such as 'ongoing connection or energisation' and 'new connection with minimal capital costs', a capital contribution is not required. The only charges for connection are connection service fees set out in the TSS approved by the AER.
- 1175 Basic connection services are regulated as alternative control services. AusNet's annual pricing proposal sets out the fees chargeable for different types of basic connection services. In addition, DNSPs are required to have a model standing offer to provide basic connection services, which must be approved by the AER. The model standing offer must include details of connection charges, which must be consistent with the annual pricing proposal and connection policy. The AER would clearly not permit an annual pricing proposal or model standing offer that allowed for price discrimination based on retailer. The combination of AER price regulation and AER approval of the model standing offer removes any ability for AusNet to discriminate against a non-Origin retailer with respect to pricing of basic connection services.

<sup>610</sup> AER, Electricity Distribution Services Classification Guideline, August 2022.

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- 1176 Standard connection services are regulated as standard control services with the price approved by the AER pursuant to the TSS and annual pricing proposal process. In addition, AusNet is required to have a model standing offer in relation to standard connection services, which must be approved by the AER. The model standing offer must include, amongst other things, details of connection charges, which must be consistent with the annual pricing proposal and connection policy. Again, the combination of AER price regulation and AER approval of the model standing offer removes any ability for AusNet to discriminate against a non-Origin retailer with respect to pricing of standard connection services.
- 1177 In relation to negotiated connection services, these services generally require augmentation, particularly in the case of enhanced connection services. There is no ability for AusNet to discriminate in relation to the capital costs of such augmentations, for a number of reasons.
- 1178 **First**, the Electricity Distribution Code published by the ESC states that augmentations required as part of a connection to the distribution network in Victoria are contestable services. The Electricity Distribution Code provides that:
- A distributor must call for tenders for any construction works if it proposes to augment its distribution network in connection with its provision of the following services:
- (a) a connection service requested by the connection applicant.<sup>611</sup>
- AusNet's connection guidelines further define the boundary between what is and is not contestable. The contestability of augmentations necessary for connections significantly removes any ability for AusNet to price discriminate.
- 1179 The BGTF Consortium understands that AusNet itself constructs very few connection augmentations. Usually they will be constructed by the developer concerned, which will then contribute the connection assets to AusNet free of charge for AusNet to operate and maintain.
- 1180 **Second**, under the AER's connection charge guidelines, capital contributions for standard and negotiated connections are subject to a cost revenue test set out in those guidelines. No capital contributions can be sought for basic connection services. The cost revenue test provides that:
- A distribution network service provider may seek a capital contribution for standard control connection services from a connection applicant if the incremental cost of the standard control connection service exceeds the estimated incremental revenue expected to be derived from the standard control connection services.<sup>612</sup>
- 1181 The objective nature of this test again significantly removes any ability for AusNet to price discriminate in relation to capital contributions.
- 1182 **Third**, negotiations for negotiated connection services must be carried out in accordance with the negotiating framework set out in Chapter 5A of the NER.<sup>613</sup> The negotiating framework includes the potential for dispute resolution pursuant to Part G of Chapter 5A, including dispute resolution by the AER.<sup>614</sup>
- 1183 **Finally**, the DRFG (discussed further below) require a DNSP not to discriminate between a related electricity service provider (which would include Origin) and a competitor, or potential competitor, of a related electricity service provider in connection with the provision of Direct Control Services, which would include each type of connection service, including negotiated connection services. The non-discrimination obligation includes a requirement that a DNSP in like

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<sup>611</sup> Essential Services Commission, *Electricity Distribution Code of Practice* Version 1, 1 October 2022, cl 5.2.1.

<sup>612</sup> AER, *Connection Charge Guidelines for Electricity Customers*, Draft Version 3, October 2022, cl 5.1.

<sup>613</sup> NER, cl 5.A.C.3.

<sup>614</sup> Negotiated connection services are *not* negotiated distribution services that are not currently offered by AusNet. The negotiation of negotiated connection services is carried out in accordance with the negotiating framework set out in clause 5A.C.3 of the NER, rather than the negotiation framework for negotiated distribution services approved by the AER as part of its five yearly distribution determination.

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circumstances deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms. In combination, these factors would remove any ability for AusNet to price discriminate in relation to negotiated connection services.

- 1184 The AER approved connection policy also outlines in detail the pricing methodology that applies when determining charges other than capital contributions, including metering costs; costs of minor variations; other incidental costs; and charges payable to account for any pioneer schemes. In Victoria, the ESC also has the power to regulate charges for connection to and use of any distribution system.<sup>615</sup>
- 1185 Given the regulatory regime set out above, AusNet has no ability to offer less favourable pricing terms for distribution connection services to customers of non-affiliated retailers.

### 9.3 AusNet has no ability or incentive to discriminate in relation to connection and access

- 1186 AusNet will not be able to discriminate against competitors of Origin's retail electricity business in relation to providing connection and access to AusNet's Victorian distribution networks (for example, by refusing or delaying connection and access). The pricing of connection is discussed in section 9.2 above.
- 1187 The requirements of the NER as well as specific Victorian regulations prevent AusNet and other DNSPs from discriminating in relation to connection and access to electricity distribution networks, whether by way of new connections to the network or variations to existing connections.
- 1188 When a customer's premises already have a pre-existing connection to the distribution network, AusNet is required to use its best endeavours to energise the premises within one business day of the request if the request is made by 3pm, or within two business days if the request is made after 3pm.<sup>616</sup> AusNet is also prohibited from discriminating between a related electricity service provider (eg, Origin's retail electricity business) and a competitor as part of the DRFG when providing such services, as set out in section 9.7 below.
- 1189 In relation to connection services, as set out in **Figure 112** above, distribution connections will differ depending on the nature of the customer seeking connection and the type of connection that is required – in each case, AusNet must comply with requirements aimed at ensuring access to the distribution network.

#### (a) Basic or standard connection services

- 1190 Basic and standard connections are connections that do not require substantial work to the distribution network, or where the AER has approved a model standing offer.<sup>617</sup> These are generally for residential or small business customers seeking a simple connection. It may also include basic micro embedded generation connections, for example residential or small commercial premises with rooftop solar or battery requirements, that do not require network augmentation. Basic or standard connections are typically initiated by the end customer's chosen retailer (although the customer may initiate the connection request directly with AusNet).
- 1191 For a basic or standard connection, AusNet must make an offer to connect the customer in accordance with a model standing offer approved by the AER. That offer is to be made within 10

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<sup>615</sup> *Electricity Industry Act 2000* (Vic) s12(1)(b).

<sup>616</sup> Essential Services Commission, *Electricity Distribution Code of Practice*, Version 1, 1 October 2022, cl 3.4.

<sup>617</sup> NER, r 5A.A.1 defines a basic connection service as a connection between a distribution system and a retail customer's premises where the customer is of significant class of retail customers who have sought or are likely to seek the service, or a micro embedded generator, the connection involves minimal augmentation of the distribution network, and a model standing offer has been approved by the AER for providing the connection service. A standard connection means a connection service (other than a basic connection service) for a particular class (or sub-class) of connection applicant and for which a model standing offer has been approved by the AER.

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business days of a completed application for connection, unless AusNet reasonably requires further information to make the offer, in which case AusNet must make the offer within 10 business days of the information being provided.<sup>618</sup>

1192 As AusNet is required to make connections for such customers irrespective of their chosen retailer, within the timeframes set out above, there is no ability for AusNet to seek to hinder non-Origin electricity retailers whose customers are seeking connection. The connection must be provided irrespective of the customer's chosen retailer, and pursuant to AER approved model standing offers. The fairly straightforward nature of such connection services also does not leave scope for differentiating between customers of one retailer versus another. Further, since retail electricity customers may switch their electricity retailer at any time, there is no way of ensuring that improved connection services would benefit Origin's retail electricity business, since customers can and often do switch away following an initial connection to another retailer for their ongoing electricity supply.

### **(b) Negotiated services connection**

1193 Negotiated service connections require some augmentation of the distribution network. They are generally initiated directly with the DNSP by large commercial or industrial customers who have bespoke requirements, or from real estate developers who are developing large residential (ie, multiple dwelling developments), commercial or industrial premises. A small number of negotiated service connections are initiated by smaller residential or small business customers whose requirements do not fall into the category of a basic or standard connection. AusNet does not have the ability to discriminate in favour of Origin's retail electricity business because in many cases, the connection application is made directly by the end customer without a retailer having been selected, in which case AusNet is not in a position to target potential discriminatory conduct since the identity of the retailer is unknown.

1194 As discussed above, as negotiated connections generally require augmentation of the distribution network, these services are contestable under the contestability framework. Except in cases where AusNet determines it is required to carry out parts of the connection process,<sup>619</sup> connection applicants may tender for third parties to undertake necessary connection works for a negotiated connection. Generally, third parties rather than AusNet will construct such augmentations.

1195 In any event, in negotiating a negotiated connection service, AusNet must comply with the negotiation framework set out in clause 5A.C.3 of the NER which (amongst other things) imposes obligations on a DNSP to:

- (a) negotiate in good faith;<sup>620</sup>
- (b) provide connection applicants with information the connection applicant reasonably requires in order to negotiate on an informed basis;<sup>621</sup>
- (c) consult with other users of the distribution network who may be adversely affected by the proposed new connection or connection alteration;<sup>622</sup>
- (d) take into account prescribed factors when assessing a connection application;<sup>623</sup>

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<sup>618</sup> NER, r5A.F.1.

<sup>619</sup> These are limited to parts of the connection process where AusNet is required to undertake the work for safety and operational reasons, such as auditing third party network system designs and connection assets. See AusNet Services, *Distribution Connection Policy* (July 2021) page 40 <<https://www.AusNetservices.com.au/-/media/project/AusNet/corporate-website/files/electricity/edpr-final-decision---connection-policy---AusNet-services---updated.pdf>>. AusNet's Distribution Connection Policy is prepared in accordance with rules set out in the NER and is reviewed and approved by the AER.

<sup>620</sup> NER, cl 5A.C.3(a)(1).

<sup>621</sup> NER, cl 5A.C.3(a)(3).

<sup>622</sup> NER, cl 5A.C.3(a)(4).

<sup>623</sup> NER, cl 5A.C.3(a)(5).

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- (e) make reasonable endeavours to make a connection offer that complies with the connection applicant's reasonable requirements;<sup>624</sup> and
  - (f) comply with its connection policy.<sup>625</sup>
- 1196 The NER also includes requirements on a DNSP to engage with a connection applicant within a set timeframe. This includes an obligation on a DNSP to:
- (a) request any additional information from connection applicants within 20 business days after it receives the relevant application;<sup>626</sup> and
  - (b) provide any information the connection applicant reasonably requires in order to negotiate on an informed basis as soon as practicable.<sup>627</sup>
- 1197 Any fee charged by AusNet in relation to the cost of negotiation must be a reasonable fee to cover expenses directly and reasonably incurred by the DNSP in assessing the applicant's application and making a connection offer.<sup>628</sup>
- 1198 In addition, the NER requires that AusNet must use best endeavours to make an offer within 65 business days after a full connection application for negotiated service connections is received and must comply with certain minimum standards set out in Schedule 5A.1 of the NER.<sup>629</sup>
- 1199 Even if the customer seeking a negotiated connection has selected a non-Origin retailer when making their application, AusNet is still required to provide connection in a non-discriminatory manner. First AusNet has no ability to discriminate in favour of Origin's retail electricity business due to the regulatory framework for negotiated distribution connection described above. In addition, specific non-discrimination obligations apply to AusNet in the DRFG that prevent DNSPs from discriminating in favour of affiliated retail electricity businesses, including in relation to connection services.
- 1200 As set out in **Annexure A**, AusNet must also comply with requirements in the Electricity Distribution Code and the *Essential Services Commission Act 2001* (Vic) (the **ESC Act**) in Victoria. As a result, a failure to provide access to the distribution network following a customer request can result in enforcement action by the ESC including civil penalties under the ESC Act,<sup>630</sup> or in the variation or revocation of AusNet's distribution licence. For example, the ESC may impose licensing conditions requiring AusNet to meet additional standards or requirements with respect to timely connections if it identifies that AusNet is delaying connections to its network.
- 1201 Should AusNet fail to provide connection and access, it may also be compelled to under the AER dispute resolution processes under the NEL and Chapter 5A of the NER. These enable the AER to determine disputes raised by customers regarding the connection requests. The Electricity Distribution Code also requires AusNet to handle customer complaints in accordance with Australian industry standards<sup>631</sup> and to inform any customer making a connection application that disputes regarding connection are resolved by the AER. These dispute resolution requirements further remove AusNet's ability to refuse or frustrate connection and access to its network.
- 1202 AusNet may enter a negotiated agreement with a large customer in respect of connection to its distribution network that varies the obligations imposed under the Electricity Distribution Code. However in those circumstances, there remains a requirement not to reduce AusNet's obligations (eg, as to pricing or access to the network) without providing benefits of equivalent value in some

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<sup>624</sup> NER, cl 5A.C.3(a)(6).

<sup>625</sup> NER, cl 5A.C.3(a)(7).

<sup>626</sup> NER, cl 5A.C.3(b)(1).

<sup>627</sup> NER, cl 5A.C.3(b)(2).

<sup>628</sup> NER, cl 5A.C.4.

<sup>629</sup> NER, r5A.F.4.

<sup>630</sup> AER, Connection Charge Guidelines for Electricity Customers, Draft Version 3 (October 2022) Schedule 1.

<sup>631</sup> Australian Standard ISO 10002:2018 (Quality management – Customer satisfaction – Guidelines for complaints handling in organisations); see Essential Services Commission, Electricity Distribution Code of Practice, Version 1, 1 October 2022, s18.



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other way to that large customer, and any such variation of the Electricity Distribution Code's requirements must be notified to the ESC.<sup>632</sup>

- 1203 Where premises are already connected, there is no ability for AusNet to prevent or delay a customer switching retailer. AusNet has no role in relation to such switching. All that is required is that the incoming retailer must notify the DNSP that a customer has switched retailer and commence payment of the network charges payable in respect of the customer.
- 1204 AusNet would also not have the incentive to discriminate against competing retailers in relation to access or connections to the AusNet distribution system. AusNet is incentivised to ensure timely connection services regardless of the electricity retailer involved in the connection under the Electricity Distribution Code. The Electricity Distribution Code provides for minimum guaranteed service levels (**GSLs**) to be met by DNSPs in Victoria in relation to the time taken to provide connections to their distribution network, restore electricity supply and ensure the reliability of supply (insofar as those matters are within their control).<sup>633</sup>
- 1205 In relation to access and connections, in general terms, GSLs cover:
- (a) **Appointments:** if AusNet is more than 15 minutes late to an appointment with a customer, AusNet will pay \$35.<sup>634</sup>
  - (b) **Connecting supply:** If AusNet did not connect a customer to the network when AusNet said it would, AusNet will pay \$80 per day (up to \$400).<sup>635</sup>
- 1206 AusNet will make payments relating to the GSL events set out above to a customer's electricity retailer within two retail billing cycles of the day the GSL event occurred.<sup>636</sup> It will appear as a credit on a customer's power bill. Failure to meet GSLs set out above can easily be identified by customers and their retailers. Failure to make GSL payments or make those payments on time both attract civil penalties under the ESC Act.<sup>637</sup>
- 1207 AusNet and other Victorian distributors are also subject to auditing and reporting obligations in relation to their services. The ESC regularly audits and investigates DNSPs against their compliance with service levels in relation to connection services and reliability of supply. DNSPs are also required to report their performance in relation to new distribution network connection services, including the timeliness and quality of such services, under service standards issued by the ESC in 2021.<sup>638</sup>

### 9.4 AusNet has no ability or incentive to discriminate in relation to augmentation and investment

- 1208 AusNet would not have the ability to discriminate against third party electricity retailers or favour a related retail electricity business in relation to augmentation or investment in its Victorian electricity distribution network. AusNet cannot target augmentation of its distribution network to favour Origin's retail electricity business, or in a way that harms non-Origin electricity retailers.
- 1209 **First**, customers of any one retailer are spread out over the distribution network and interspersed with customers of other retailers. As a consequence of EnergyAustralia being the default retailer for the AusNet distribution network, EnergyAustralia has a higher proportion of customers in the AusNet distribution area than in other areas. As a general matter however, customers of the

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<sup>632</sup> Electricity Distribution Code, cl 1.5.3.

<sup>633</sup> Electricity Distribution Code, cl 14.

<sup>634</sup> Electricity Distribution Code, cl 14.3.1.

<sup>635</sup> Electricity Distribution Code, cl 14.4.

<sup>636</sup> Electricity Distribution Code, cl 14.8.1-2.

<sup>637</sup> Electricity Distribution Code, sch 1.

<sup>638</sup> ESC, *Timely negotiated electricity connections – Final decision* (16 March 2021)

<<https://www.esc.vic.gov.au/sites/default/files/documents/FDP%20-%20Timely%20negotiated%20electricity%20connections%20final%20decision%2020210219.pdf>>.

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various retailers are spread through the AusNet distribution network. If AusNet were to attempt to selectively augment or invest in electricity distribution capabilities in a particular part of its distribution network, there is no way this could benefit Origin customers without also benefitting non-Origin customers (or vice versa). There is no possible means by which a DNSP could selectively invest in parts of its network so as to benefit only one particular electricity retailer whilst not benefitting competing downstream retailers connected to the same part of the network, particularly in view of the fact retail electricity customers can easily switch between retailers. Therefore, even if AusNet were to selectively invest in distribution capabilities in an attempt to assist Origin retail customers, there is no way to 'lock in' customers over the medium to long term to realise financial benefits from such a strategy.

- 1210 **Second**, even if it was possible to augment in a way that advantaged Origin, the regulatory oversight of the AER and AEMO would ensure this did not occur. Every five years the AER considers and approves AusNet's planned capital expenditure. Specifically, AusNet must submit its planned augmentations of and investment in its electricity distribution network, together with attributable capital expenditure that its revenue seeks to recoup for the period, to the AER as part of its proposal for access arrangements for the forthcoming five-year period. The AER will not approve or disapprove of particular projects or investments, however if the AER determines that the proposed expenditure, does not meet the expenditure criteria, it will decline to accept AusNet's proposed expenditure which removes any ability for AusNet to recoup revenue for a proposed augmentation or investment. In practice this means that AusNet must justify any augmentations or investments to the AER from an economic efficiency standpoint. If AusNet were to favour any part of its electricity distribution network so as to favour particular customers (ie, those that are customers of Origin's retail business) this would be scrutinised by the AER through the pricing determination process.
- 1211 Augmentation and investment planning in relation to Victorian distribution networks undergoes a publicly transparent process, conducted jointly with other distribution networks and with AEMO and AER oversight, as described in **Annexure A**. In particular:
- (a) AusNet must undertake joint planning with the other Victorian DNSPs Jemena, CitiPower, Powercor, and United Energy, as well as AEMO and AusNet's transmission network business, as part of the DAPR process. A DAPR that sets out details regarding network capacity and system limitation issues, with options for augmentation, investment or other maintenance to address those issues, is then published by AusNet and the other DNSPs for their respective networks, and is available for market participants to review.
  - (b) For any augmentation or maintenance works that involve an investment of greater than \$6 million, AusNet is required to follow the RIT-D process set out in Chapter 5 of the NER. Similar to the RIT-T process, AusNet must follow an economic cost-benefit test to identify the preferred options to meet the needs of the distribution network, ie, the option that maximises the present value of net economic benefit to all those who produce, consume and transport electricity. The RIT-D process is a public process that includes a dispute resolution process overseen by the AER, affording market participants the opportunity to consider and comment on AusNet's proposed investments in its network.
- 1212 Again, as with transmission, DNSPs must comply with performance and quality of supply standards set out in Schedule 5.1 of the NER. These require that AusNet ensure, among other things, that its distribution network is augmented such as to minimise interruptions to service, and in accordance with good electricity practice. Compliance with these standards and the above planning process occurs within the context of the STPIS regime that provides for substantial financial costs should AusNet fail to invest in its Victorian distribution network so as to ensure these standards are met.

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1213 Compliance with the above requirements removes any ability for AusNet to fail to invest in or augment its distribution network, or to favour investment in particular areas, so as to provide higher quality distribution services to customers of Origin's retail electricity business. The publicly transparent nature of the regulatory framework, including AER and AEMO oversight, means any attempt to discriminate in investment would be highly visible to impacted stakeholders such as non-Origin electricity retailers.

### 9.5 AusNet has no ability or incentive to discriminate in relation to renewal and maintenance and outages

1214 AusNet has no ability to discriminate in relation to maintenance and renewal of its Victorian distribution network so as to harm non-Origin retailers or to favour Origin. In theory there are two ways AusNet could use maintenance and renewal to discriminate against non-Origin retailers:

- (a) it could fail to adequately maintain and renew parts of the distribution network serving non-Origin retailers or selectively maintain and renew parts of the distribution network serving Origin as a retailer; or
- (b) it could take unnecessary or prolonged maintenance outages on lines that serve non-Origin retailers.

1215 In relation to the first theory of harm, there are several reasons why AusNet could not fail to adequately maintain and renew parts of its Victorian distribution network serving non-Origin retailers.

1216 **First**, as with the augmentation issues discussed above, AusNet is prevented from doing so due to the dispersal of Origin's retail customers geographically. In the same way AusNet could not target augmentation so as to favour or damage any one particular retailer or their customers, AusNet cannot target its renewal or maintenance works. A failure to renew or maintain any part of AusNet's distribution network will equally harm Origin customers in the same way as non-Origin customers. It is not possible for such a strategy to limit harms or benefits to any one retailer in a particular area.

1217 **Second**, any attempt to damage non-Origin retailers by failing to maintain and renew the distribution network would place AusNet in breach of electricity safety laws, its licence, and NER requirements.

1218 The Electricity Safety Act in Victoria requires AusNet to:

design, construct, operate, maintain and decommission its supply network to minimise as far as practicable:

- (a) the hazards and risks to the safety of any person arising from the supply network;
- (b) the hazards and risks of damage to the property of any person arising from the supply network; and
- (c) the bushfire danger arising from the supply network.<sup>639</sup>

1219 The Electricity Safety Act requires AusNet to submit an ESMS to ESV. ESV may require AusNet to obtain an independent validation of the scheme, or any part of it, and may also require the validation to assess the design, construction, operation, maintenance and decommissioning of the supply network or any part of it. ESV must accept an ESMS if it is satisfied that it is appropriate and complies with the Electricity Safety Act and regulations relating to such schemes. AusNet is required to comply with ESMS.

1220 Pursuant to the Electricity Safety Act, AusNet is subject to regular audits by Energy Safety Victoria of its safety and maintenance management including compliance with bushfire mitigation

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<sup>639</sup> *Electricity Safety Act 1998* (Vic), s98(c).

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- plans, the code of practice and electric line clearance, the electric lines and municipal emergency management plan and the ESMS. There are significant financial penalties if AusNet fails to comply with such an audit or is found through such an audit not to have complied with the relevant provisions of the Electricity Safety Act and relevant regulations made under this legislation.
- 1221 It would be inconceivable that responsible officers in AusNet would deliberately neglect any issue relating to renewal or maintenance of the distribution *network that would put AusNet at risk of not meeting its obligations under the Electricity Safety Act.*
- 1222 In addition, AusNet's distribution business is licensed by the ESC. The licence includes a requirement that AusNet maintain its technical capacity to undertake all distribution activities authorised by its licence and comply with various codes including the requirements under the Electricity Safety Act.
- 1223 The system standards and power system performance and quality of supply standards in Schedules 5.1A and 5.1 of the NER that apply to AusNet as a TNSP also apply to its role as DNSP. As with transmission, these require AusNet to (among other things) arrange for maintenance of its distribution network to ensure continuous transfer of electricity, minimise interruptions, and to restore agreed capability at a connection point as soon as reasonably practicable following any interruption at a connection point. The need to comply with standards would further reduce any ability to discriminate in relation to maintenance.
- 1224 **Third**, AusNet's maintenance and renewal activities are subject to a high degree of transparency and regulatory oversight.
- 1225 As part of its five-yearly pricing proposal AusNet sets out a renewal and operating proposal, which would be subject to public review and AER approval. AusNet retains discretion as to how to apply the capital expenditure allowance. The joint planning process undertaken with other DNSPs would, however, provide a further layer of transparency and oversight.
- 1226 Significant capital expenditure is governed by the RIT-D process set out in Chapter 5 of the NER. As described in the NER, the purpose of the test is to identify the credible option that maximises the present value of the net economic benefit to all those who produce, consume and transport electricity in the NEM. The RIT-D process applies where the estimated capital cost of the proposed investment exceeds \$6 million. The RIT-D is a highly transparent process, involving consultation with all registered participants in the NEM, AEMO, interested parties and non-network providers and persons registered on AusNet's industry engagement register. Unless an exemption applies, a draft project assessment report is required to be published and consulted on, and then a final project assessment report must be published. Any disputes in relation to the application of the RIT-D may be referred to the AER.
- 1227 In relation to maintenance, the AER similarly approves an operating expenditure allowance set through a process targeted at ensuring the operating expenditure allowance reflects the efficient cost of providing transmission services.
- 1228 **Fourth**, failing to adequately maintain and renew a distribution network would involve very significant risks for AusNet.
- 1229 As noted above, AusNet's compliance with electricity safety requirements is regularly audited by the ESV and a failure to comply may result in AusNet incurring significant financial and reputational penalties.
- 1230 The reliability of supply and quality of supply components of the STPIS also apply to AusNet's distribution network as well as its transmission network. Under these components, AusNet's revenue is increased (or decreased) based on changes in AusNet's service performance. A

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failure to maintain the quality of distribution services and to minimise outages and interruptions to service through lack of maintenance would cause financial harm to AusNet through the STPIS. It could also lead to a failure to observe minimum service levels set out in the Electricity Distribution Code in connection with supply restoration and reliability, which can result in requirements to make ESC-specified payments to retail customers impacted by such failures.

1231 AusNet is also subject to technical obligations under the Electricity Distribution Code, including as to good asset management and quality of supply. AusNet is subject to GSLs under the Electricity Distribution Code. In relation to supply restoration and energy supply reliability, in general terms, GSLs cover:

(a) **supply restoration**:<sup>640</sup> if a customer experience unplanned, sustained outage of:

- (i) more than 18 hours per financial year (July to June), AusNet will pay \$130;
- (ii) more than 30 hours per financial year, AusNet will pay \$190;
- (iii) more than 60 hours per financial year, AusNet will pay \$380; and

This is an annual scheme that is paid quarterly.

(b) **low reliability**:<sup>641</sup> if a customer's power was interrupted for more than three minutes:

- (i) more than 8 times per financial year, AusNet will pay \$130;
- (ii) more than 12 times per financial year, AusNet will pay \$190;
- (iii) more than 20 times per financial year, AusNet will pay \$380; and

This is an annual scheme that is paid quarterly.

(c) **momentary outage**:<sup>642</sup> if a customer's power was interrupted for less than or equal to three minutes:

- (i) more than 24 times per financial year, AusNet will pay \$40;
- (ii) more than 36 times per financial year, AusNet will pay \$50; and

This is an annual scheme that is paid quarterly.

(d) **major event day**:<sup>643</sup> if a major event, such as extreme weather or a storm, disrupts a customer's power for more than 12 hours, AusNet will pay \$90. AusNet will make the payment to an affected customer's retailer within 60 business days of a major event.<sup>644</sup>

1232 GSL payments set out above will appear as a credit on a customer's power bill. Failure to meet GSLs set out above can easily be identified by customers and their retailers. Failure to make GSL payments or make those payments on time both attract civil penalties under the ESC Act.<sup>645</sup>

1233 Most fundamentally AusNet would not jeopardise its social licence to operate by deliberately failing to renew and maintain a section of the network so as to attempt to provide a financial benefit to Origin.

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<sup>640</sup> Electricity Distribution Code, cl 14.5.1.

<sup>641</sup> Electricity Distribution Code, cl 14.5.2

<sup>642</sup> Electricity Distribution Code, cl 14.5.2

<sup>643</sup> Electricity Distribution Code, cl 14.6.

<sup>644</sup> Electricity Distribution Code, cl 14.8.4.

<sup>645</sup> Electricity Distribution Code, sch 1.

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- 1234 **Finally**, and as discussed in more detail in below, AusNet is required to comply with the DRFG, which include a requirement not to discriminate in favour of affiliated entities such as Origin Energy Markets. This non-discrimination obligation includes a specific obligation:
- in like circumstances to provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider.
- 1235 In summary:
- (a) any ability to fail to renew or maintain a section of the distribution network so as to prejudice a non-Origin generator is removed by:
    - (i) the fact that retail customers are geographically dispersed;
    - (ii) obligations imposed on AusNet under electricity safety laws, its licence and the NER;
    - (iii) the role of the ESV, ESC and the AER in enforcing compliance with these obligations including the conduct of regular audits;
    - (iv) the high degree of transparency and regulatory oversight of the AER in relation to renewal and maintenance activities;
    - (v) the very significant risks that AusNet would face if it failed to adequately renew or maintain the transmission network; and
    - (vi) the non-discrimination obligations in the DRFG.
  - (b) any ability to 'over' renew or maintain a section of the distribution network so as to prefer Origin retail is removed by:
    - (i) the fact that retail customers are geographically dispersed;
    - (ii) the high degree of transparency and regulatory oversight of the AER in relation to renewal and maintenance activities;
    - (iii) in the case of renewal the need for AusNet to conduct an RIT-D process; and
    - (iv) the non-discrimination obligations in the DRFG.
- 1236 In relation to the second theory of harm, there is no ability to take outages in a way which would seek to selectively harm customers of non-Origin retailers. The dispersal of Origin's retail customers geographically make such a strategy implausible. Taking an extended outage in a particular area would impact Origin as well as non-Origin customers.
- 1237 In any event, as in the context of transmission outages, there is considerable transparency around planned and unplanned outages concerning AusNet's distribution network. This includes through AusNet's and other DNSPs DAPR reporting requirements, which set out planned maintenance and outages for the forthcoming five-year period, and AusNet's obligations with respect to reporting planned outages to AEMO projected assessment of system adequacy (the PASA process described in more detail in **Annexure A**). Any attempt to manipulate or manufacture outages so as to harm non-Origin retail customers would be easily detected.
- 9.6 AusNet has no ability to discriminate in relation to load shedding**
- 1238 In certain circumstances of high demand, parts of the Victorian retail electricity market or large industrial customers may have the volume of electricity they can acquire reduced. This is referred to as 'load shedding', which is the deliberate and controlled reduction of electricity supply to parts of the electricity network in order to maintain system stability and the supply-demand balance. Load shedding is a rare occurrence and may be required as an absolute last resort after all

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supply and demand response options available to AEMO have been exhausted (such as importing more power from other states, wholesale demand response, use of emergency energy reserves and calling on the Reliability and Emergency Reserve Trader).

- 1239 There are two main types of load shedding:
- (a) automatic load shedding, where the network equipment switches off to protect the network (ie, where there is a sudden disruption to the electricity network); and
  - (b) manual load shedding, where AEMO directs the NSP to load shed if demand passes maximum supply levels.
- 1240 There is no ability for AusNet to target load shedding at customers of non-Origin electricity retailers. In respect of manual load shedding, AEMO rather than AusNet identifies the amount and duration of electricity shortfalls, determines whether load shedding is necessary so as to maintain system security and prevent power outages and other risks, and directs the NSP to load shed.
- 1241 Approaches vary between the states and territories, and each has a plan developed by the relevant state or territory government in collaboration with the electricity industry for how manual load shedding is to be carried out in their jurisdiction. In Victoria, the Victorian Jurisdictional System Security Coordinator (which is currently AEMO's role) determines the priority order of load shedding with advice provided by a technical working group consisting of Government and Network Service Providers.
- 1242 When AEMO determines load shedding is required (generally as a last resort measure), it will work with the Victorian government and seek advice from Victorian distribution networks, including AusNet, to determine the priority of load shedding across Victoria so as to minimise its impact, particularly on important community facilities such as health and emergency services facilities, AEMO also seeks to rotate load shedding outages where possible to ensure the same area is not impacted disproportionately and that the same area is not impacted more than once. Ultimately however AEMO determines if load shedding is to occur and the priority in which parts of a distribution network are to be affected, and will instruct distribution networks such as AusNet to load in accordance with AEMO's determination. AusNet is therefore not able to control load shedding to favour Origin's interests.

### 9.7 AusNet has no ability or incentive to cross subsidise or discriminate

#### Purpose of electricity distribution ring-fencing guidelines

- 1243 As with the transmission, the NEL and the NER provide for the AER to make DRFG, which are intended to ensure natural monopoly transmission owners are not able to leverage any market power in relation to distribution into contestable markets in which they participate.
- 1244 AusNet as a DNSP must comply with the DRFG which are published by the AER.<sup>646</sup> Similar to the TRFG, ring-fencing under the DRFG refers to the legal and functional separation of regulated services provided by a DNSP (ie, Direct Control Services) from the provision of contestable services by an affiliated entity.
- 1245 The DRFG do this in two ways:
- (a) they contain provisions designed to ensure that there is **no cross subsidisation** between a natural monopoly distribution business and a contestable business such as generation or retail; and

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<sup>646</sup> NER, cl 6A.21.1.

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- (b) they contain provisions designed to ensure that there is ***no misuse of confidential information or other discrimination*** against a competing contestable business such as generation and retail.
- 1246 Importantly, the DRFG can be amended by the AER to reflect changes in industry structure including changes arising from the growth of renewables and changes in ownership structure. The NER provides that when amending the DRFG, the AER must:
- (a) consider, without limitation, the need, so far as practicable, for consistency between the DRFG and TRFG; and<sup>647</sup>
- (b) consult with participating jurisdictions, registered participants, AEMO and other interested parties, and such consultation must be otherwise in accordance with the distribution consultation procedures set out in Part G of Chapter 6 of the NER.<sup>648</sup>
- 1247 Most recently, the AER finalised version 3 of the DRFG which involved an extensive consultation process, including the following key milestones:
- (a) **August 2019** - the AER hosted stakeholder workshops in Sydney and Melbourne;
- (b) **November 2019** – the AER published the issues paper discussing possible amendments;
- (c) **May 2021** – the AER published draft guideline and explanatory statement;
- (d) **June 2021** - the AER conducted further consultative forums;
- (e) **July 2021** - submissions on draft guideline closed;
- (f) **November 2021** – the AER published final guideline and explanatory statement; and
- (g) **February 2022** - DRFG (Version 3) took effect.
- 1248 By imposing ring-fencing obligations and giving the AER the power to impose additional ring-fencing requirements on DNSPs, the energy regulatory framework implicitly acknowledges that affiliates of DNSPs and their affiliates may participate in retail (and generation) and establishes a regime to address risks of anticompetitive conduct.
- 1249 As a result of the Proposed Acquisition structure, Origin Energy Markets would become an affiliated entity and related electricity service provider of AusNet for the purposes of the DRFG.<sup>649</sup>
- 1250 The DRFG provisions in relation to cross subsidisation, misuse of confidential information and other forms of discrimination are discussed in turn below.
- Cross subsidisation**
- 1251 This section considers AusNet's ability to use its regulated revenue from distribution services to cross subsidise Origin's contestable electricity retail business.
- 1252 As outlined above, the AER regulates prices for AusNet's Direct Control Services. Furthermore, the price of negotiated distribution services (if any) is agreed commercially based on a regulated framework and subject to an AER dispute resolution under the NEL.<sup>650</sup> This regulatory framework should ensure that cross subsidisation is not possible.

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<sup>647</sup> NER, cl 6.17.2(c).

<sup>648</sup> NER, cl 6.17.2(d).

<sup>649</sup> Similar to Version 4 of the TRFG, the DRFG define 'affiliated entity' as a legal entity: a) which is a direct or indirect shareholder in the DNSP or otherwise has a direct or indirect legal or equitable interest in the DNSP; b) in which the DNSP is a direct or indirect shareholder or otherwise has a direct or indirect legal or equitable interest; or c) in which a legal entity referred to in paragraph (a) or (b) is a direct or indirect shareholder or otherwise has a direct or indirect legal or equitable interest. In addition, under the DRFG, a 'related electricity service provider' includes any affiliated entity of the DNSP. Under the Proposed Acquisition structure, Brookfield Corporation will have a direct or indirect legal or equitable interest in both AusNet and Origin and Origin will therefore be an affiliated entity and related electricity service provider of AusNet for the purposes of the DRFG.

<sup>650</sup> NEL, Part 10.



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- 1253 This position is reinforced by the following provisions of the DRFG:
- (a) The DRFG require a DNSP to provide distribution services (and transmission services) only and not provide other services. This does not prevent an affiliated entity of a DNSP from providing Other Services.<sup>651</sup>
  - (b) The DRFG require a DNSP to establish and maintain internal accounting procedures which allow it to demonstrate the nature and extent of transactions between it and its affiliated entities.<sup>652</sup>
  - (c) The DRFG require a DNSP to allocate or attribute costs to distribution services in a manner that is consistent with cost allocation principles and an approved cost allocation methodology. A DNSP must establish, maintain and keep records that demonstrates how it meets these obligations.<sup>653</sup>
- 1254 The requirement for legal separation and the rules related to preparation of accounts and the application of an AER approved cost allocation methodology work with the price regulatory regime to ensure that there can be no cross subsidisation of a contestable business by the distribution business.

### **Misuse of confidential information and other discrimination**

- 1255 This section considers whether AusNet could:
- (a) misuse confidential information it receives as a DNSP from non-affiliated retailers (for example, by providing that information to Origin Energy Markets);
  - (b) provide information about its own distribution networks (for example, planned outages or information about congestion) to Origin Energy Markets but not to other non-affiliated retailers; or
  - (c) otherwise discriminate against non-affiliated retailers or confer a competitive advantage on an affiliated retailer.
- 1256 In relation to the first theory of harm, the NER and the DRFG both contain provisions that ensure a distribution business cannot misuse commercially sensitive / confidential information obtained from non-affiliated retailers connected to its distribution system to advantage an affiliated retailer. They do so in the following ways:
- (a) The NER requires that each Registered Participant (including a DNSP) must use all reasonable endeavours to keep confidential any confidential information that comes into its possession or control or of which it becomes aware.<sup>654</sup> Confidential information is defined broadly under the NER and would cover any information that is provided to a DNSP which is or has been provided under or connection with the NER that is confidential or commercially sensitive. It also includes any information derived from such confidential information. It is a tier 1 civil penalty provision under the NEL if a DNSP fails to meet the following obligations:<sup>655</sup>
    - (i) not disclose confidential information to any person except as permitted by the NEL.<sup>656</sup>

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<sup>651</sup> DRFG, cl 3.1(b).

<sup>652</sup> DRFG, cl 3.2.1.

<sup>653</sup> DRFG, cl 3.2.2.

<sup>654</sup> NER, cl 8.6.1.

<sup>655</sup> NEL, cl 6(1) and Schedule 1. A breach of tier 1 civil penalty provisions attracts a maximum penalty of the greater of: (1) \$10,000,000; (2) three times the value of the benefit received; or (3) 10% of annual turnover in preceding 12 months, if court cannot determine benefit obtained from the breach.

<sup>656</sup> NER, cl 8.6.1(b)(1).

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- (ii) only use or reproduce confidential information for the purpose for which it was disclosed, or another purpose contemplated by the NEL; and<sup>657</sup>
  - (iii) not permit unauthorised persons to have access to confidential information.<sup>658</sup>
- (b) The DRFG also impose obligations in relation to the treatment of certain confidential information and requires DNSPs to:
  - (i) keep Ring-fenced Information confidential.<sup>659</sup> This covers a wide range of information about electricity networks, electricity customers or electricity services acquired by AusNet in connection with the provision of Direct Control Services that is not already publicly available; and
  - (ii) only use Ring-fenced Information for the purpose for which it was acquired or generated.<sup>660</sup>

1257 In relation to the second theory of harm, the DRFG contain provisions that ensure a distribution business cannot provide its affiliated generator with first mover advantage by sharing information relating to its distribution business with an affiliated retailer that is not shared with all retailers (eg, planned network investment, outage information and areas of network congestion). They do so in the following ways:

- (a) AusNet as a DNSP is required to ensure the information it provides in relation to regulated distribution services to any associate that takes part in a related business is available to any other party.<sup>661</sup>
- (b) Establish an information sharing protocol that sets out how and when it will make equal information available to other electricity services providers.<sup>662</sup>
- (c) Establish, maintain and keep an information register about information that has been shared.<sup>663</sup> This register also documents the kind of information requested by an electricity service provider and describes the kind of information requested in sufficient detail that allows other legal entities to make an informed decision about whether they wish to request the same information. To the extent that a request for information of the same kind listed on the information register is made, the DRFG require that a DNSP must comply with that request.

1258 In addition to the robust safeguards against misuse of commercially sensitive information set out above, the DRFG impose further non-discrimination obligations on DNSPs more generally. They require DNSP not to discriminate (either directly or indirectly) between a related electricity service provider (which would include Origin Energy Markets) and a competitor (or potential competitor) of a related electricity service provider in connection with the provision of:

- (a) Direct Control Services by the DNSP (whether to itself or to any other legal entity); and / or
- (b) Contestable Electricity Services by any other legal entity.<sup>664</sup>

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<sup>657</sup> NER, cl 8.6.1(b)(1).

<sup>658</sup> NER, cl 8.6.1(b)(3).

<sup>659</sup> DRFG, cl 4.3.1(a).

<sup>660</sup> DRFG, cl 4.3.1(b).

<sup>661</sup> DRFG, cl 4.3.3.

<sup>662</sup> DRFG, cl 4.3.3(d).

<sup>663</sup> DRFG, cl 4.3.4.

<sup>664</sup> DRFG, cl 4.1(b).

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- 1259 The non-discrimination obligation includes specific requirements that a DNSP:
- (a) in dealing or offering to deal with a related electricity service provider, treat the related electricity service provider as if it were not a related electricity service provider (that is, as if it had no connection or affiliation with the DNSP);
  - (b) in like circumstances, deal or offer to deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions;
  - (c) in like circumstances, provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider; and
  - (d) subject to complying with laws, not disclose to a related electricity service provider information the DNSP has obtained through its dealings with a competitor (or potential competitor) of the related electricity service provider where the disclosure would, or would be likely to, provide an advantage to the related electricity service provider.<sup>665</sup>
- 1260 In practice, the following systems and processes are in place to achieve compliance with the non-discrimination requirements set out above:
- (a) In terms of ensuring AusNet employees treat the related electricity service provider as if it were not a related electricity service provider, AusNet has set up a ring-fencing page on its intranet which contains resources relating to key ringfencing educational information. All AusNet employees have access to the ringfencing intranet site at any time. AusNet has developed an online training program on the topic of ring-fencing for electricity distribution policy. The online training module for employees is accessible via SuccessFactors. It includes a do's and don'ts when dealing with affiliated entities. Upon completion of the training, employees receive a completion report to prove the training is complete. The compliance team monitors the completion status of the online training.
  - (b) To ensure that AusNet in like circumstances, deals or offers to deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions:
    - (i) AusNet has worked closely with its legal team to develop various Statement of Works.
    - (ii) AusNet has implemented Master Service Agreement(s) (**MSAs**) to formalise existing and future arrangements for contestable electricity services provided by affiliated entities to AusNet. The MSA was developed based on a third party contract format, to ensure the terms and conditions set out are not discriminating against an external party.
    - (iii) Any direct control services provided to affiliated entities are provided on equivalent terms and conditions, including price to non-affiliated entities receiving the same services in the same situation or circumstances. Examples include connection enquiries or connection services. In particular, AEMO is also involved during the detailed enquiry and connection application stage of the connection process and is in a position to monitor AusNet's compliance with this obligation.
    - (iv) AusNet has robust procurement and other contracting processes for obtaining, or providing, services from, or to, affiliated entities, including any contracting requirements and legal approval. This includes establishing the delegation of

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<sup>665</sup> DRFG, cl 4.1(c).

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authority matrix, where regulated energy services staff are restricted from making a decision for another affiliated entity. There are formal decision-making processes implemented before contracting a related electricity service provider.<sup>666</sup>

- (c) As set out in other parts of this application, the quality, reliability and timeliness of electricity distribution services are closely monitored and audited by the ESC and ESV. Failure to offer services of substantially the same quality, reliability and timeliness of service to a related electricity service provider as its competitors can be easily detected by regulators. Affected retailers can also raise their concerns with ESC, ESV and AER, prompting investigations of AusNet's compliance with the DRFG.
- (d) In relation to equal information sharing, in practice, AusNet publishes information relevant to customers and retailers within its distribution network to all customers and retailers at the same time through:
  - (i) advance notice of network investment;
  - (ii) advance notice of outages; and
  - (iii) advance notice of areas of network congestion.

The sharing of information set out above is again heavily regulated and audited. For example, outage notifications are audited monthly by the ESC under AusNet's distribution license and guaranteed service levels. AusNet is also required under the NER to publish a large amount of network planning documentation which covers areas of network congestion, including under the RIT-D process and demand management rules. There are also additional reporting requirements in Victoria that go above the national requirements pursuant to AusNet's distribution license conditions and the Distribution Code. All of the processes described above ensure that any failure to comply with DRFG in this regard is easily detectable.

1261 The DRFG also impose obligations in relation to the separation of offices, staff, branding and promotions so that it cannot confer a competitive advantage on an affiliate providing Contestable Electricity Services such as retail. These obligations include:

- (a) **Physical separation / co-location:** AusNet as a DNSP will have a separate office from an affiliated provider of contestable retail services such as Origin Energy Markets.<sup>667</sup>
- (b) **No staff sharing:** subject to limited exceptions<sup>668</sup>, AusNet as a DNSP will ensure that its staff who are involved in the provision or marketing of Direct Control Services are not also involved in the provision or marketing of Contestable Electricity Services (ie, electricity retail) by a related electricity service provider such as Origin Energy Markets.<sup>669</sup>
- (c) **Independent branding and no cross promotion:** AusNet as a DNSP must use branding for its Direct Control Services that is independent and separate from the branding used by a related electricity service provider for Contestable Electricity Services and not advertise or promote its Direct Control Services and Contestable Electricity Services that are not Direct Control Services together.<sup>670</sup>

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<sup>666</sup> EY, AusNet - Annual ring-fencing compliance independent assessment 2021 (April 2022) <<https://www.aer.gov.au/system/files/21%20AusNet%20-%20Findings%20Report%20-%20PUBLIC.pdf>>.

<sup>667</sup> DRFG, cl 4.2.1.

<sup>668</sup> DRFG, cl 4.2.2(b).

<sup>669</sup> DRFG, cl 4.2.2(a).

<sup>670</sup> DRFG, cl 4.2.3.

### Enforceability and penalties of distribution ring-fencing guidelines

- 1262 The AER is responsible for monitoring, investigating and enforcing compliance with obligations under the NER, including clause 6.17.1 of the NER which requires all DNSPs to comply with the DRFG prepared by the AER.
- 1263 In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the DRFG. They include:
- (a) **Binding reporting obligations:** The DRFG require AusNet to establish and maintain appropriate internal procedures to ensure it complies with the DRFG.<sup>671</sup> Each year, AusNet prepares and submits to the AER a ring-fencing compliance report. The report has been made publicly available by the AER and identifies the measures AusNet has taken to ensure compliance with the DRFG, any compliance breaches and the purpose of all transactions between AusNet and an affiliate.<sup>672</sup> In addition, the DRFG also requires AusNet to notify the AER in writing within 15 business days of becoming aware of a breach of its obligations under the DRFG, except in relation to this obligation itself and the production of the annual compliance report.<sup>673</sup>
  - (b) **Compliance audits:** the DRFG require that AusNet's annual DRFG compliance report must be independently verified for compliance with each provision of the DRFG by a qualified independent auditor.<sup>674</sup>
  - (c) **Compulsory notices:** the DRFG provides that the AER may, at any time, require a DNSP to provide a written response to a complaint or concern the AER raises with the DNSP about its compliance with the DRFG, including where the AER has previously required the DNSP to provide one or more written responses to the relevant complaint or concern.<sup>675</sup>
  - (d) **Information from consumers, regulated businesses and other stakeholders:** the AER receives information on potential compliance concerns from stakeholders (including consumers, energy businesses, energy ombudsman schemes, other market bodies, government agencies and consumer groups) in the form of calls, correspondence and meetings. The AER also has a number of regular networks through which compliance concerns are raised and referred, including its Customer Consultative Group.
  - (e) **Market data:** the AER receives data on activities in wholesale and retail energy markets and natural monopoly network sectors for a range of purposes under national energy laws. The AER can use information and data received or collected in the course of other aspects of the AER's work for compliance and enforcement purposes, including in relation to a DNSP's compliance with the DRFG.
  - (f) **Information requests and targeted reviews:** the AER can ask AusNet for information about their compliance – both in respect of identified matters and as part of wider reviews of compliance practices and processes in an emerging area of concern.
- 1264 The AER also has a range of enforcement options to ensure compliance with the DRFG and to respond to and address potential non-compliance. They include:
- (a) **Infringement Notices:** the AER can issue infringement notices where it considers that a breach of a civil penalty provision (which include the requirements to comply with all

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<sup>671</sup> DRFG, cl 6.1.

<sup>672</sup> DRFG, cl 6.2.

<sup>673</sup> DRFG, cl 6.3.

<sup>674</sup> DRFG, cl 6.2.1.

<sup>675</sup> DRFG, cl 6.4.

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aspects of the DRFG set out above as well as confidentiality obligations under the NER discussed above at 1260(a)) has been committed. Payment of an infringement notice does not constitute an admission of a breach, but if a DNSP chooses to make payment then the AER cannot later bring proceedings in relation to that breach.

- (b) **Court Enforceable Undertakings:** the AER can accept a court enforceable undertaking from a DNSP for alleged breaches of the NER, including the DRFG.<sup>676</sup> The AER noted that enforceable undertakings can provide tailored solutions to address conduct that has given rise to the alleged breach. For example, an enforceable undertaking might include commitments to undertake an audit to ensure that the business has identified the root cause of the breach and the risk of future breaches is mitigated or could contain commitments that relate to consumer redress. The AER is able to seek court orders including declarations of a breach or injunctions if a DNSP has not complied with a court enforceable undertaking.
- (c) **Civil Proceedings:** the AER can institute and conduct civil proceedings for alleged breaches of the NER, including the DRFG.<sup>677</sup> The AER may seek declarations in relation to the breaches as well as a range of orders, including to undertake an action to cease or remedy the breach, implement a compliance program, perform community service or release a public notice. The AER can also apply for an injunction to restrain the party from engaging in the conduct or require action to be taken. If the obligation that has been breached is a civil penalty provision (which include the requirements to comply with all aspects of the DRFG set out above as well as confidentiality obligations under the NER discussed above at 1260(a)), the AER may seek orders for payment of civil penalties. The maximum penalty amounts will be indexed every three years to ensure their deterrent value is maintained. The NEL sets out the factors which the court must consider in determining the amount of the civil penalty to be paid.<sup>678</sup>

1265 The requirements described above impose obligations that will ensure AusNet cannot discriminate in favour of Origin or against competing retailers, whether by providing unequal access to information, misusing competing retailers' confidential information or otherwise discriminating against Origin's competitors or conferring a competitive advantage on Origin.

### 9.8 Impact of different ownership of AusNet and Origin Energy Markets

1266 As discussed above in relation to transmission, the lack of any ability or incentive for AusNet to foreclose Origin's retail competitors is reinforced by the fact that AusNet and Origin Energy Markets are separate entities, owned by different Brookfield funds and with different co-investors and the enforceable undertaking that Brookfield is prepared to offer.

### 9.9 Virtual Power Plants, PV systems and batteries

1267 This section considers the slight overlap between Origin, AusNet and / or Intellihub in relation to Virtual Power Plants (**VPP**), rooftop photovoltaic systems (**PV Systems** or solar systems), and battery storage.

#### (a) Virtual Power Plants

1268 A VPP broadly refers to an aggregation of individually distributed energy resources (**DER**) (such as decentralised generation, storage and controllable loads) coordinated using software and communications technology to deliver services for power system operation and electricity markets (ie, services traditionally performed by a conventional power plant).

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<sup>676</sup> NEL s 59A.

<sup>677</sup> NEL s 59.

<sup>678</sup> NEL s 64.

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- 1269 The DER are plugged into the grid and, with an external or embedded hardware controller and sophisticated software this supply and / or demand response can contribute to one or more markets. In Australia, grid connected VPPs are focused on coordinating PV Systems, battery storage, and controllable load devices (such as air-conditioners and pool pumps) through the market.
- 1270 VPPs are coordinated through either a cloud-based or on-site gateway. A cloud-based gateway can be used where the inverter (or other DER) has embedded energy management capability, whereas an on-site gateway is a dedicated device that manages DER behind-the-meter (**BTM**), (eg, Reposit smart controllers or SwitchDin's droplet). On-site gateways generally have the advantage of being able to manage multiple devices BTM and so optimise consumption, storage and exports in line with price signals, but some inverters (such as SolarEdge's Energy Hub inverters) also include these capabilities.
- 1271 VPPs can be coordinated by a DER aggregator (who is not otherwise a retailer), a retailer or the distributor. The relevant third party will contract with consumers for access to their DER. This is usually in the form of an agreement for access either under certain conditions (such as high wholesale prices), for a maximum number of times per year or for unrestricted access. These types of arrangements can be broadly categorised as for network reliability purposes (network services) or as ancillary to a residential offering (market services). A VPP can provide network reliability by minimising demands on a constrained line or by allowing power to be supplied in an area affected by a line outage. A VPP can also provide market services allowing an aggregator or retailer to reduce demand and so costs during periods of high electricity prices and to take advantage of periods of low electricity prices. In return, DER owners receive financial rewards that vary greatly in their form. Current residential VPP offers include:
- (a) upfront hardware (battery or other technology) discounts;
  - (b) for services ancillary to a residential offering, a discounted bill; and
  - (c) financial (or other) rewards.
- 1272 DNSPs' roles in relation to VPPs are limited to technical aspects of their connection to the DNSP's distribution network. In particular, a DNSP will assess whether the relevant assets are supported by the network and whether that connection will affect the overall performance, resilience and stability of the network. No additional approvals or consents are required from a DNSP in relation to the installation and operation of PV systems outside of the connection process outlined in section 9.3 above.
- Origin's VPP activities**
- 1273 Origin is a VPP platform provider. Origin's VPP offering is known as **Origin Loop**.
- 1274 Origin Loop is one of the largest VPPs in Australia with around 449 MW of assets connected as part of its VPP offering.<sup>679</sup>
- 1275 Origin Loop controls a range of DERs such as solar, batteries, air conditioning, hot water systems, smart plugs and electric vehicle chargers, through Origin's cloud-based software. Origin Loop uses data from a range of sources to forecast demand such as weather forecasts, usage data, market trends and historical consumption patterns. Based on this data, the connected assets can be used to manage supply and demand. For example, Origin Loop can discharge power from batteries when appropriate during peak-demand periods.
- 1276 For residential customers, Origin Loop is offered to electricity customers that live in certain geographical areas and who have or agree to buy a compatible battery system and inverter and

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<sup>679</sup> Origin, 2023 Half Year Report, <[https://www.originenergy.com.au/wp-content/uploads/Half\\_Year\\_Report\\_2023-5\\_FINAL.pdf](https://www.originenergy.com.au/wp-content/uploads/Half_Year_Report_2023-5_FINAL.pdf)>

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have a reliable internet connection. Origin provides a benefit to customers with distributed energy resources. Current offers for residential customers include discounts on batteries and monthly bill credits. Larger customers can also receive financial incentives where their distributed energy resources are connected to the VPP.

- 1277 Origin Loop is compatible with a broad range of devices and when Origin finds a new asset / or device type it will build capability to connect (provided there is path to connect more of these asset types). Origin uses various connection types from third party cloud API and local hubs to smart meters. The role smart meters play is as a connection hub in this context. However, there are other connections as well, so meters are part of a suite of connection types.

### ***Intellihub's VPP activities***

- 1278 Intellihub does not provide VPP services to customers. Rather, it plays a small role in the VPP supply chain as an application programming interface (**API**) provider, helping DER devices to integrate with third party VPP platforms.
- 1279 Intellihub's API is called deX. deX – an acronym for decentralised energy exchange – interfaces between the device and the VPP network operator (eg, the aggregator or retailer), ensuring interoperability and facilitating the flow of data between device and network operator. Intellihub supplies the deX API to original equipment manufacturers (**OEMs**) of DER devices, and also to VPP platform providers including retailers.
- 1280 deX is a secure API based platform provided to Intellihub by its technology supplier Cresconet. deX captures device details (eg, the model of a solar inverter and related parameters) and the National Meter Identifier number for the premises where the device is installed, but Intellihub does not have any access to any third party information within the deX platform.
- 1281 deX is not a VPP platform; it does not manage peak supply and demand. It does not, for instance, charge and discharge batteries to meet peak demand. deX is merely the software interface between the device and the operator, with the operator performing the discharge.
- 1282 deX is not locked into any single device or VPP platform. It is capable of interfacing between a range of distributed energy resources and VPP platforms. The purpose of deX is to provide a centralised mechanism by which the VPP network operator can easily connect to a range of different devices and avoid having to run distinct bilateral operations with distinct device manufacturers. deX does not rely on or use Intellihub's smart meters. It is a new business offering arising from Intellihub's acquisition of GreenSync in 2022.

### ***AusNet's VPP activities***

- 1283 AusNet is currently undertaking two exploratory VPP projects. It is considering the use of VPPs to enhance network stability:
- (a) **VPP for grid reliability:** AusNet is exploring how Mondo's Ubi circuit control device can be used as a micro-grid in regional and remote areas in order to provide additional energy reliability in those areas. This trial is focused on areas (within the AusNet distribution region) that are prone to natural disasters such as bushfires and consequently, electricity outages. AusNet is currently seeking expressions of interest from homeowners in specified areas. The proposal envisages connecting a participant's battery to a network of batteries through Mondo Ubi, Ubi would then manage the network to ensure the stability of energy supply to all users. In return, participants would receive \$1800 (excl. GST) off the price of a battery system and a free Ubi device. Unlike VPPs offered by electricity retailers, a VPP for grid reliability would provide AusNet with the ability to discharge participants batteries to allow their electricity to be used by other participants in the VPP in emergency situations.



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- (b) **Project Edge:** Since 2021, AusNet (through its subsidiary Mondo) has been working with the Australian Renewable Energy Agency (ARENA) and AEMO to create a simulated market and trading mechanism for DER assets. This is a trial only with consumers receiving a \$200 payment for participating. If this trial is successful and the project proceeds, it may become a competitor or Origin Loop.

1284 **Confidential to AusNet.**

### ***No substantial lessening of competition in the supply of retail VPP services to consumers***

1285 There is no horizontal overlap between Origin and Intellihub's VPP activities and either no or de minimis overlap between Origin and AusNet's VPP activities.

### ***Origin Loop and Intellihub:***

1286 Origin Loop is a standalone, end-to-end VPP platform provider. It manages the full spectrum of inputs necessary to supply VPP services to end consumers. Origin Loop's customers are Origin's retail customers.

1287 By contrast, Intellihub is not a VPP platform provider. It is not directly participating in building, owning or operating VPPs. Rather, it is an API provider, and its product deX is limited to providing an interface between device and network operator. Intellihub's customers are OEMs and retailers providing VPPs. As a result, Intellihub is a supplier to retailers such as Origin rather a competitor in relation to VPPs.

### ***Origin Loop and AusNet services***

1288 While AusNet is considering how VPPs can be used in its business, it is considering a different use case – it will not supply a VPP service ancillary to an electricity retail service. Rather it is considering using the VPP concept to provide electricity reliability to customers located in specified geographic areas.

1289 While it is technically possible that customers located in the areas subject to AusNet's VPP offering could also acquire a VPP service from Origin, the AusNet offering is currently only a trial and is directed at network stability not market services. In any event:

- (a) a large number of electricity retailers in Australia offer a VPP program (including AGL, Amber Electric, Diamond Energy, Discover Energy, EnergyAustralia, Energy Locals, Jacana Energy, Nectr, Powershop and Simply Energy);
- (b) there are an increasing number of DER aggregators (who are "retailer neutral") who offer a VPP service while allowing a customer to remain with their existing retailer (such as, sonnen VPP, Reposit VPP); and
- (c) barriers to entry are low – particularly for electricity retailers – with low capital costs.

### ***Intellihub's VPP activities do not give rise to any vertical integration concerns***

1290 Although Intellihub provides its deX product to retailers such as Origin, the Proposed Acquisition does not give rise to vertical competition concerns for two reasons.

1291 **First**, deX is not an essential input in retailer's VPP offerings. Instead VPP providers can interface directly with devices without needing an API acquired from a third party. Most VPP providers have built their offerings based around interfacing directly with devices. If they do choose to acquire an API from a third party, there are a range of alternatives to deX including alternative cloud-based technologies, such as SwitchDin.

1292 **Second**, deX exists to achieve interoperability between a given VPP platform and the many different DER device types. deX is a platform that allows VPP providers and OEMs to connect. To successfully perform this function, deX must have both a network of VPP customers and OEM

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customers. Like other two-sided platforms, the success of a platform like deX is dependent on network effects – increased numbers of VPP providers using deX will make deX more attractive to OEMs and vice versa. In fact, **Confidential to Intellihub**. From a commercial perspective, a strategy to only supply deX to Origin Loop is not viable and would undermine the value of deX to OEMs.

1293 As a result, Intellihub has neither the ability nor incentive to engage in foreclosure strategies directed at Origin's VPP competitors.

### ***AusNet has no ability to engage in a foreclosure strategy in relation to the supply of VPP services in the AusNet distribution area***

1294 For a retailer to establish a VPP, the only cooperation required from a DNSP is in relation to connections. In order for a retailer to offer a VPP service to customers, it requires a connection to the distribution network. As described at section 9.3, the requirements of the NER as well as specific Victorian regulations prevent AusNet from discriminating in relation to connection and access to electricity distribution networks, whether by way of new connections or variations to existing connections.

1295 As a result, AusNet would not have any ability to engage in a foreclosure strategy directed at Origin's VPP competitors.

### **(b) Supply of C&I energy management services**

1296 Rooftop PV Systems convert sunlight into electricity producing zero greenhouse gas emissions. PV systems have long been popular with Australian homeowners. At January 2022, more than 2.6 million households and businesses in the NEM had installed rooftop PV systems and there were 316,000 new installations in 2021.<sup>680</sup>

1297 PV systems can be purchased outright or installed under a power purchase agreement. Under a power purchase agreement, the energy provider installs the system on site and sells the generated electricity to the customer. The customer pays for the electricity produced by the system. Customers often sell excess energy back to their retailer in return for a feed-in tariff.

1298 DNSPs' roles in relation to PV Systems are limited to technical aspects of their connection to the DNSP's distribution network. In particular, a DNSP will assess whether the relevant assets are supported by the network and whether that connection will affect the overall performance, resilience and stability of the network. No additional approvals or consents are required from a DNSP in relation to the installation and operation of PV Systems outside of the connection process outlined in section 9.3 above.

### ***Origin's PV systems activities***

1299 Origin provides installation of PV systems and batteries to residential and business customers, as well as ongoing support and maintenance services.

1300 Origin has established a dedicated business unit tailored energy solution offering for C&I customers called **Origin Zero** to support C&I customers on their decarbonisation journey. The Origin Zero team works with C&I customers to develop tailored energy and decarbonisation solutions. These solutions can include PV systems as well as batteries, other renewable energy solutions, demand response, energy management and electric vehicle fleet management. a specific portfolio which will help them decarbonise. This can involve a range of different products including DER such as PV systems. Origin Zero enables customers to purchase solar via three methods: by purchasing solar outright, via on bill finance options and via PPA's of varying tenures.

### ***Mondo's Energy Management systems activities***

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<sup>680</sup> State of the Energy Market 2022 – Report, page 214-15 (Annexure 12).

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1301 AusNet, through its subsidiary Mondo, supplies energy management systems to commercial and industrial (C&I) customers. It does so either by way of a finance lease arrangement or a power purchase agreement. A finance leasing arrangement involves Mondo leasing PV systems to a customer for installation at their own site and the customer has use of the electricity generated by the PV systems. Under the power purchase arrangement, Mondo will enter into an agreement with a C&I customer for the customer to offtake PV generated electricity at a certain price. For example, Mondo provides the solar solution for the Deakin University Solar Farm.

1302 **Confidential to AusNet.**

### ***No substantial lessening of competition in the supply of PV systems***

1303 There is no overlap in the supply of PV systems to households. Mondo's supply is limited to C&I customers and therefore any overlap is in relation to a sub-segment of the market. Even in relation to C&I customers, Mondo's business is too small for the Proposed Acquisition to impact competition. For completeness, it is noted that the market for the supply of small-scale PV systems is highly competitive. Most energy retailers have a PV offering (including AGL and EnergyAustralia) and in addition, there are a range of independent PV system suppliers (such as Solahart, Arise Solar, Bradford Energy, Solargain and SolarHub).

### **(c) Batteries**

1304 For completeness, it is noted that Origin is seeking to develop large scale batteries to provide firming capacity to its generation fleet. In particular it is seeking to build batteries at the site of its Mortlake (Victoria), Eraring (New South Wales) and Darling Downs (Queensland) generators.

1305 AusNet / Mondo has developed, or is developing, three batteries:

- (a) **Phillip Island:** In approximately 2021, Mondo successfully tendered to manage the delivery and implementation of a 5 MWh battery solution to AusNet, as the DNSP, for use on Phillip Island for example in the event of outages on the line servicing Phillip Island or during peak demand periods (such as over summer).
- (b) **Ballarat:** AusNet hosts a 30 MWh battery at its Ballarat terminal station. The "Ballarat Big Battery" project was funded by the Victorian government, ARENA, AusNet and EnergyAustralia. The battery contributes to meeting peak energy demand and enhances network stability and security. EnergyAustralia rather than AusNet operates the battery with AusNet receiving a fixed annuity.
- (c) **Thomastown:** AusNet is developing a Battery Energy Storage System in Thomastown, 14 kilometres north of Melbourne, Victoria. The Thomastown battery will have a maximum power output of 300 MW and a storage capacity of 600 MWh. Designing and planning activities have begun but the battery is not expected to be operational before 2025.

1306 There is little if any competitive overlap between the batteries being developed by Origin to support its generation activities and the batteries being developed by AusNet to enhance network security. In any event, the development of batteries is a vigorously competitive activity with existing generators, new renewables generators and others competing to develop batteries.

1307 We note that Version 4 of the TRFG now prohibits AusNet from entering into an agreement granting another legal entity the right to use any battery owned by AusNet unless for the sole purpose for providing the TNSP with network support services.

## 10 No substantial lessening of competition in gas retail markets

### 10.1 Introduction

1308 Origin is a gas retailer in Victoria and other Eastern Australia States. AusNet is not a gas retailer. As a result, no horizontal competition issues arise in any gas retail market.

1309 AusNet owns one of three Victorian gas distribution networks. Origin is one of many retailers who utilises those networks to sell gas to customers that are connected to those distribution networks. Given this vertical relationship we expect the ACCC will wish to consider whether vertical competition issues may arise, in particular, whether AusNet has the ability and incentive to use its position in the Victorian gas distribution market to anti-competitively foreclose Origin's retail rivals.

1310 AusNet does not have the ability or incentive to use its position as the owner of a Victorian gas distribution network to foreclose Origin's retail rivals as a result of a combination of the following:

- (a) gas distribution systems are heavily regulated to ensure AusNet cannot misuse any market power it may otherwise have without regulation. The gas distribution regulatory regime is continuing to evolve to reflect changes in gas markets and to address emerging issues;
- (b) the gas regulatory regime includes ring-fencing rules. Their purpose is to ensure where there is vertical integration between a gas distribution business and a contestable business, the gas distribution business is operated in a way that does not adversely affect competition in the contestable market;
- (c) the fact that retail customers are geographically dispersed across a gas distribution network makes many theoretical foreclosure strategies impossible. It is difficult to imagine, for example, how selectively upgrading one part of a gas distribution network (say, a particular suburb) could advantage an associated retailer; and
- (d) there is a high level of transparency over relevant aspects of AusNet's operation of its gas distribution network. There is no possibility of subtle forms of discrimination not being detected.

1311 **Figure 113** below summarises why AusNet would not have the ability or incentive to engage in a foreclosure strategy in any area of gas distribution network activities, followed by a more detailed discussion by area.

**Figure 113: AusNet has no ability or incentive to engage in a foreclosure strategy in any area of gas distribution network activities**

Area of activity: Distribution	Ability
<b>Pricing: Reference services and non-reference services</b>	<p>AusNet is a covered pipeline service provider (<b>CPSP</b>) with its entire gas distribution asset regulated by the AER. The AER approves reference tariffs for reference services which applies unless otherwise agreed. Gas ring-fencing requirements prevent AusNet from discriminating in favour of an associated retailer (which would include Origin) through lower pricing / better access terms.</p> <p>Non-reference services which are subject to dispute resolution process under Chapter 5 of the NGL and potential AER binding determination.</p>

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Area of activity: Distribution	Ability
<b>Access: Connection and access</b>	<p>Under the NGR, gas distributors (whether CPSPs or operators of non-scheme pipelines), including AusNet, cannot refuse connection services to gas distribution networks. In relation to basic or standard connections services, a gas distributor must make an offer to connect the customer to the network within 10 business days of the connection request.</p> <p>In relation to a negotiated service connection, a gas distributor must negotiate in accordance with the negotiation framework set out in Rule 119K of the NGR and use best endeavours to make an offer to connect the customer to the network within 65 business days of the request.</p>
<b>Access: Augmentation and investment</b>	<p>AusNet would not have the ability to discriminate against third party gas retailers or favour Origin's retail gas business in relation to investing in its Victorian distribution network given:</p> <p>(a) There is no feasible way in which AusNet could ensure such a strategy was sufficiently targeted given that Origin's retail customers are dispersed among the customers of other retail electricity suppliers and customers can and do switch between retailers.</p> <p>(b) Augmentation is subject to regulation and transparent processes.</p>
<b>Access: maintenance and outages</b>	<p>AusNet would not have the ability to discriminate against third party gas retailers or favour Origin's retail gas business in relation to maintaining its Victorian distribution network given:</p> <p>(a) There is no feasible way in which AusNet could ensure such a strategy was sufficiently targeted given that Origin's retail customers are dispersed among the customers of other retail electricity suppliers and customers can and do switch between retailers.</p> <p>(b) Maintenance is subject to regulation and transparent processes.</p> <p>(c) Gas Distribution Code places positive obligations on AusNet to maintain its gas distribution network to ensure ongoing delivery of gas to all customers.</p>
<b>Cross subsidisation, information and discrimination</b>	<p>AusNet is subject to the gas ring-fencing requirements (<b>GRFR</b>). Those rules:</p> <p>(a) Require legal separation of the distribution business from the contestable businesses to ensure there is no cross subsidisation.</p> <p>(b) Impose obligations in relation to confidential information and / or separation of staff.</p> <p>(c) Contain rules about associate contracts including a requirement to comply with the competitive parity rule, which requires AusNet to ensure that any pipeline services that it provides to an associate are provided as if that associate were a separate unrelated entity.</p>
<b>Enforceability and penalties of NGL and NGR</b>	<p>In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the NGL and NGR. The AER also has a range of enforcement options to ensure compliance with the NGL and NGR and to respond to and address potential non-compliance.</p>

### 10.2 AusNet has no ability or incentive to discriminate in relation to pricing

1312 AusNet operates one of the three gas distribution networks in Victoria. AusNet is a CPSP meaning it is subject to full price regulation by the AER.

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1313 Distribution services may be provided by a CPSP either as reference services or non-reference services:

- (a) **Reference services:** In the case of AusNet, these services currently comprise:
- (i) **haulage reference services** which involve transporting gas through a distribution pipeline to end-use customers; and
  - (ii) **ancillary reference services** which include on-site meter and gas installation test, disconnection service, reconnection service and special meter reading service.<sup>681</sup> These services are long standing services provided to customers on a user pays basis. That is, customers only pay for these services in the event that they need them. The costs for these services are therefore directly attributed to the requesting customer.<sup>682</sup>

Revenues and prices for reference services are regulated by the AER through five yearly distribution determinations.

- (b) **Non-reference services:** Non-reference services will be available to users or prospective users as agreed or as determined in accordance with Part 12A of the NGR.

1314 This section considers AusNet's ability to use the pricing of its gas distribution services to foreclose non-affiliated retailers in the following ways:

- (a) discriminating between affiliated and non-affiliated retailers in setting reference tariffs for reference services; and
- (b) discriminating between affiliated and non-affiliated retailers in setting tariffs for non-reference services.

### **Reference services**

1315 The AER makes five yearly access arrangement decisions approving or setting reference tariffs that may be charged for reference services in the next regulatory period. As part of that process:

- (a) the AER approves (or otherwise revises) AusNet's proposal in relation to which services are to be reference services;
- (b) the AER approves (or otherwise revises) AusNet's proposal for the total revenue it should be able to earn for each regulatory year through the application of a building block model;
- (c) the AER approves (or otherwise revises) AusNet's proposal for how total revenue is to be allocated between reference and other services in accordance with revenue and pricing principles set out in the NGR;
- (d) AusNet's gas access arrangement defines three broad reference tariff types, being:
  - (i) Tariff V is a volume-based tariff that is applied to the majority of customers connected to the AusNet's network. The annual GJ volume limit for Tariff V is 10,000 Gigajoules (**GJ**) in any 12-month period. The Maximum Hourly Quantity (**MHQ**) demand limit is 10GJ consumption in any one hour;
  - (ii) Tariff D is a demand-based tariff and applies only to large business customers connected to the AusNet's network. To qualify for Tariff D, a customer should be

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<sup>681</sup> In AusNet's revised gas access arrangement reference services proposal for 2023-28 dated 24 January 2023 <<https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ausnet-services-access-arrangement-2023-28>>, AusNet is proposing to include two new ancillary reference services (which are meter and service removal and minor meter alter position) which are in moderate to high demand and have largely predictable costs.

<sup>682</sup> 2022 Gas Distribution Annual Tariff Submission dated 1 January 2022 <[https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Annual%20Tariff%20Submission%202022%20v1.0%20-%20October%202021\\_0.pdf](https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Annual%20Tariff%20Submission%202022%20v1.0%20-%20October%202021_0.pdf)>

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consuming either more than 10,000 GJ in any 12-month period, or the MHQ limit of 10 GJ in any hour; and

- (iii) Tariff M is a demand-based tariff and applies only to large business customers connected to the AusNet's network. To qualify for Tariff M, an existing Tariff V customer should be using either more than the Tariff V consumption limits of 10,000 GJ of gas in any 12-month period or more than MHQ limit of 10 GJ in any hour. Where a Tariff V customer's load exceeds the 10,000 GJ/year or 10GJ/hour limits they may be transferred to Tariff M.<sup>683</sup>

- (e) This tariff classification and guidance provided by the NGR on how revenue should be allocated between tariff classes removes any ability for AusNet to set prices to target individual customers by reference to who their gas retailer is.

- 1316 It is possible for AusNet to charge more or less than the reference tariff if its customer agrees. In any access dispute, however, the reference tariff for a reference service must be applied, essentially removing any ability for AusNet to charge **above** the reference tariff for a reference service. In theory AusNet could charge less than the reference tariff for a reference service to Origin. The gas ring-fencing requirement set out in the NGL / NGR would, however, prevent AusNet from doing so.
- 1317 As a result of the Proposed Acquisition structure, AusNet and Origin Energy Markets would become associates for the purposes of the NGL and the GRFR. Accordingly, AusNet will be subject to the GRFR in its dealings with Origin.<sup>684</sup>
- 1318 The GRFR prevents AusNet from entering into any associated contracts (including with Origin Energy Markets) that are inconsistent with the competitive parity rule, which requires a CPSP to ensure that any pipeline services that the CPSP provides to an associate are provided as if that associate were a separate unrelated entity.<sup>685</sup> For example, if AusNet is charging all distributors the reference tariff for a reference service but offered to provide that reference service to Origin Energy Markets at a discount to the reference tariff, that would be a clear breach of competitive parity rule.
- 1319 In terms of compliance monitoring, the AER issued an Annual Compliance Order under section 48(1) of the NGL in November 2008 to all CPSPs.<sup>686</sup> It requires that the CPSPs report on their compliance status regarding key regulatory obligations (including obligations relating to associated contracts) for the 12-month period ending 30 June of each year by 5pm 31 October of that year (or by 9am, the next business day if 31 October falls on a weekend or a public holiday). This means any breaches of the competitive parity rule will be readily discovered. It is a civil penalty provision under the NEL if a CPSP fails to comply with the competitive parity rule.<sup>687</sup> In addition, third parties (such as competitors of Origin Energy Markets) are able to take civil action against AusNet to recover damages associated with any competitive harm caused by the breach.
- 1320 Given the AER's oversight of the reference services and the application of the GRFR set out above, there is no ability for AusNet to use its pricing of reference services to discriminate against Origin Energy Markets' retail competitors.

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<sup>683</sup> AER, AusNet Services - Access Arrangement 2018-22 <<https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ausnet-services-access-arrangement-2018-22>> (Annexure 26).

<sup>684</sup> The NGL defines 'associate' via an abridged version of the *Corporations Act 2001* (Cth). A person (the second person) is an associate of the primary person if the primary person is a body corporate and the second person is a body corporate that is controlled by an entity that controls the primary person.

<sup>685</sup> NGL, s 148.

<sup>686</sup> AER, *Annual Compliance Order 2008* <<https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/annual-compliance-order-2008>>.

<sup>687</sup> NGL, ss 3, 148.

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- 1321 In relation to non-reference services, the prices for those services are not regulated upfront by the AER. Rather, they are agreed by negotiation between AusNet and a customer. If agreement cannot be reached, however, then the dispute resolution process under Chapter 5 of the NGL applies and, subject to limited exceptions,<sup>688</sup> the AER can make a binding determination about any matter relating to the provision of a pipeline service to a prospective user or user, including price.<sup>689</sup>
- 1322 It should also be borne in mind that reference services are chosen, in part, to ensure that reference tariffs set for those reference services act as a guide to the pricing for other services. The reference service factors to which the AER must have regard in deciding whether a pipeline service should be specified as a reference services, include consideration of the usefulness of specifying the pipeline service as a reference service in supporting access negotiations and dispute resolution for other pipeline services.
- 1323 Finally, AusNet's non-reference services will make up less than 1% of its revenue in the forthcoming regulatory period, indicating these services are of limited importance in the context of gas distribution services generally.<sup>690</sup> Given this, and the fact AusNet owns only one of three gas distribution networks in Victoria, it is unlikely that any foreclosure strategy in relation to pricing of non-reference services (even if possible) could substantially lessen competition in the Victorian gas retail market.
- 10.3 AusNet has no ability or incentive to discriminate in relation to connection and access**
- 1324 AusNet will not be able to discriminate against competitors of Origin's retail gas business in relation to providing connection and access to AusNet's Victorian gas distribution network (for example, by refusing or delaying connection and access).
- 1325 Under the NGR, gas distributors (CPSPs and operators of non-scheme pipelines), including AusNet cannot refuse connections services to gas distribution networks:
- (a) In relation to basic or standard connections (ie, those that do not require substantial work to the distribution network, or where the AER has approved a model standing offer), make an offer to connect the customer to the network within 10 business days of the connection request.<sup>691</sup>
  - (b) In relation to a negotiated service connections (such as to new residential developments that require augmentation of the distribution network), negotiate in accordance with the negotiation framework set out in Rule 119K of the NGR<sup>692</sup> and use best endeavours to make an offer to connect the customer to the network within 65 business days of the request.<sup>693</sup>
- 1326 After an offer is accepted by a connecting applicant, clause 3.1(b) of the ESC's Gas Distribution Code sets out customer's 'connection entitlement' which requires a DNSP to use its best endeavours to connect a customer's gas installation:
- (a) at a supply address previously supplied by the Distributor within one business day or within a period agreed with the customer; or

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<sup>688</sup> NGL, s 163.

<sup>689</sup> NGL, ss 161,170.

<sup>690</sup> AER, Final decision - AusNet reference service proposal 2023-28, p 11

<<https://www.aer.gov.au/system/files/Ausnet%20Vic%202023%E2%80%9328-%20Reference%20service%20proposal%20-%20AER%20final%20decision.pdf>>.

<sup>691</sup> NGR, cl 119S.

<sup>692</sup> NGR, rule 119K sets out the negotiation framework that a DNSP must follow before making an offer in relation to a negotiated service connection, including providing information regarding the commercial terms and engineering requirements for a connection in a timely manner, and requiring that a DNSP conduct negotiations for a negotiated connection in good faith.

<sup>693</sup> NGR, cl 119V.



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- (b) at a new supply address on the date agreed with the customer or, where no date is agreed, within 20 business days.

1327 Furthermore, Schedule 1, Part E of the Gas Distribution Code sets out minimum GSLs in relation to gas connection, requiring a gas distributor to connect customers within one day of the agreed date. If a gas distributor fails to meet this GSL, a payment of \$80 per day will be payable to the connection applicant (up to a maximum of \$240). This further disincentivises a DNSP from using delayed connection as a means to discriminate against an associate's competitor's retail customers. Failure to make the required GSL payments to customers can also result in enforcement action by the ESC including civil penalties under the *ESC Act*.<sup>694</sup>

### 10.4 AusNet has no ability or incentive to discriminate in relation to augmentation and investment

1328 AusNet cannot augment its distribution network or invest in distribution assets so as to favour the Origin retail gas business, or fail to invest in parts of its network so as to harm non-Origin gas retailers, due to the regulation of its distribution assets and the oversight of the AER.

1329 **First**, AusNet does not have the ability to discriminate against non-Origin gas retailers by failing to augment or invest in parts of its gas distribution network. As with its electricity distribution network: Origin's retail gas customers are dispersed among non-Origin gas customers. A refusal to augment or invest in a particular part of AusNet's gas distribution network would harm Origin's retail customers in the same way it would harm non-Origin customers. Similarly, there is no way to target augmentations to only advantage Origin's retail customers. Even if there were, retail contestability means that an Origin customer could switch to a non-Origin retailer at any time.

1330 **Second**, the determinations made by the AER in respect of AusNet's revenue require assessment and approval of AusNet's planned capital and operating expenditure. Specifically, AusNet must submit its capital expenditure (by asset class) over the past access arrangement period and forecast capital expenditure over the forthcoming access arrangement period to the AER as part of its proposal for access arrangements for the forthcoming five-year period.<sup>695</sup> The AER reviews AusNet's plans having regard to criteria focused on the efficiency of the expenditure, the costs that a prudent operator would require to achieve the same objectives, and realistic expectations of demand and cost inputs for the capital expenditure. The AER will not approve or disapprove of particular projects or investments, however if the AER determines that the proposed expenditure does not meet the expenditure criteria, it will decline to accept AusNet's proposed expenditure which removes any ability for AusNet to recoup revenue for a proposed augmentation or investment.

1331 When making its assessment, the AER requires extensive data to be provided by AusNet to justify the proposed expenditure, including economic evidence demonstrating AusNet's plans are prudent and efficient, and evidence establishing the reasons for new programs or higher costs compared with historical expenditure.<sup>696</sup> In practice this means that AusNet must justify any augmentations or investments to the AER from an economic efficiency standpoint. If AusNet were to favour any part of its gas network so as to favour particular customers (ie, those that are customers of Origin's retail business) this would be scrutinised by the AER through the pricing determination process.

1332 **Further**, the pricing determination process is a publicly transparent one. AusNet's proposals, and its supporting information and models, are published on the AER website and the AER and

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<sup>694</sup> ESG, *Gas Distribution System Code of Practice* (1 January 2023) cl 1.6  
<<https://www.esc.vic.gov.au/sites/default/files/documents/Gas%20Distribution%20System%20Code%20of%20Practice%20-%20version%2016.pdf>> (*Gas Distribution Code*).

<sup>695</sup> NGR, cl 72(1)(a)(i).

<sup>696</sup> NGR, cl 71.

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AusNet consult stakeholders to obtain feedback on the proposal.<sup>697</sup> Non-Origin retailers as well as customers impacted by AusNet's plans have the opportunity to consider AusNet's proposed augmentations and investments and raise concerns if they consider AusNet is seeking to favour its own interests, or discriminating in the way it augments or invests in its network. The highly visible nature of this process removes any practical ability to engage in a discriminatory strategy in this regard.

### 10.5 AusNet has no ability or incentive to discriminate in relation to maintenance and outages

- 1333 AusNet is also not able to manipulate gas distribution maintenance and outages to provide lower quality gas distribution services to non-Origin retail gas customers, or higher quality services to Origin gas customers.
- 1334 As with electricity distribution, AusNet is prevented from doing so due to the dispersal of Origin's retail gas customers geographically. A failure to maintain any part of AusNet's gas distribution network will harm Origin customers in the same way as non-Origin customers. It is not possible for such a strategy to limit harms to any one retailer in a particular area. The same would apply to any attempt to improve service quality in a part of the network.
- 1335 In addition, any deliberate strategy by AusNet to fail to maintain its gas distribution network, or reduce service quality in that network, would be prevented by regulatory obligations under the Gas Distribution Code.
- 1336 Part 2 of the Gas Distribution Code requires AusNet to:
- (a) use reasonable endeavours to maintain the capability of its distribution system;<sup>698</sup>
  - (b) establish a firm maintenance program for its distribution network each year for the forthcoming year, as well as an indicative maintenance program for the following five years (updated on a rolling basis);<sup>699</sup>
  - (c) meet guaranteed service levels for tariff V customers (which includes the substantial majority of residential, commercial and industrial customers)<sup>700</sup> – these guaranteed services levels include obligations to pay financial compensation to customers affected by repeated unplanned interruptions to gas supply, or interruptions to gas supply that are not restored within periods set out in the Gas Distribution Code;<sup>701</sup> and
  - (d) meet a range of additional obligations in relation to the ongoing operation and system security of its distribution network, including to establish operational and system security standards for its network, maintain ongoing supply pressure and delivery to connection points, and to ensure that gas delivered meets prescribed standards of quality.<sup>702</sup>
- 1337 The above requirements place positive obligations on AusNet to maintain its gas distribution network to ensure ongoing delivery of gas to all customers, and to do so within parameters prescribed by the ESC. Compliance with these requirements removes any ability to fail to maintain pipelines servicing non-Origin customers. AusNet's compliance is audited by the ESC, and failure to implement requisite systems to ensure consistent maintenance across its network, or any identified breaches, will impact AusNet's gas licence in Victoria.

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<sup>697</sup> NGR, cl 58.

<sup>698</sup> Gas Distribution Code, clause 2.3.

<sup>699</sup> Gas Distribution Code, clause 2.3.

<sup>700</sup> 'Tariff V' is a volume based tariff for customers who use less than 10,000 GJ within a 12 month period or less than 10 GJ per hour, see AusNet 2022 Gas Distribution Annual Tariff Submission, 1 January 2022.

<sup>701</sup> Gas Distribution Code, clause 2.2 and Schedule 1, Part E.

<sup>702</sup> Gas Distribution Code, clause 2.1.

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- 1338 Furthermore, AusNet's gas distribution maintenance plans are subject to the AER, and public, scrutiny. As with its augmentation planning discussed above, AusNet is required to submit to the AER its maintenance plans as part of each five yearly access arrangement proposal setting out planned capital expenditure and operating expenditure.<sup>703</sup> The AER's scrutiny of such plans and public involvement in scrutinising those plans limits any ability AusNet might have to direct maintenance in a way that favoured Origin (although ultimately the AER approves an overall operating expenditure budget rather than requiring specific maintenance activities to be undertaken).
- 1339 Much like with electricity, there are safety implications that prevent AusNet from failing to maintain any part of its gas distribution network to serve some commercial interest. There are significant consequences for a failure to maintain any part of the network, including significant environmental, safety and health hazards from incidents such as gas leaks, as well as interruptions to supply from pipeline failures. This can result in regulatory enforcement measures and customer claims. AusNet's operation and maintenance program is therefore routinely audited by ESV pursuant to the *Gas Safety Act 1997 (Vic)*, *Pipelines Act 2005 (Vic)* and the *Gas Industry Act 2001 (Vic)* to prevent any operation and maintenance failures. AusNet does not have the ability to conceal any attempt at obtaining commercial advantage for Origin's retail gas business by failing to maintain any part of its network as this would be identified in ESV's audits, leading to regulatory enforcement outcomes and, as with an electricity distribution failure, significant community safety and reputational risks.
- 1340 In relation to outages, the Gas Distribution Code also prevents AusNet from using supply interruptions to hinder non-Origin customers. Clause 9.5 of the Gas Distribution Code requires AusNet to minimise the duration of interruptions to gas supply, including for works on its distribution network.<sup>704</sup> AusNet is also required to notify affected parties, and AEMO, of any planned maintenance that will require gas supply interruptions 10 days prior to such works being carried out,<sup>705</sup> and must promptly notify affected parties and AEMO of any unplanned interruptions.<sup>706</sup> These requirements mean that any attempt to use supply interruptions and maintenance to interrupt supply for non-Origin customers would be highly visible. Gas distribution and transmission network operators are also required to report outage frequency and duration, and unaccounted for gas<sup>707</sup> each year to the AER as part of the AER's annual gas performance reporting functions, which adds further regulatory oversight and visibility to AusNet's gas pipeline operation and maintenance programs.

### 10.6 AusNet has no ability or incentive to cross subsidise or discriminate

#### *Purpose of ring-fencing requirements for gas pipelines*

- 1341 Chapter 4, Part 2 of the NGL and Part 5 of the NGR set out ring-fencing requirements in relation to pipelines and pipeline services (including both covered pipelines and non-scheme pipelines). AusNet must comply with both the NGL and NGR. Similar to the TRFG and DRFG, the purpose of the GRFR is to ensure natural monopoly gas distributors are not able to leverage any market power in relation to distribution into contestable markets in which they participate.
- 1342 The GRFR does so in the following ways:
- (a) they contain provisions designed to ensure that there is **no cross subsidisation** between a gas distribution and a contestable business such as gas retail; and

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<sup>703</sup> NGR, cl 72(1)(a)(ii).

<sup>704</sup> Gas Distribution Code, clause 9.5.

<sup>705</sup> Gas Distribution Code, clause 9.1.

<sup>706</sup> Gas Distribution Code, clause 9.6.

<sup>707</sup> Gas supplied into the gas network that is unaccounted for in deliveries from the network, due to causes such as damaged pipelines and leakage, measurement and calculation errors, theft or unmeasured gas used for operational purposes.

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- (b) they contain provisions designed to ensure that there is ***no misuse of confidential information or other discrimination*** against a competing contestable business such as gas retail.
- 1343 The NEL also empowers the AER to make a determination requiring a CPSP such as AusNet to comply with additional ring-fencing requirements.<sup>708</sup>
- 1344 By imposing ring-fencing obligations and giving the AER the power to impose additional ring-fencing requirements on gas distributors, the gas regulatory framework implicitly acknowledges that affiliates of regulated gas distribution businesses may participate in gas retail markets and establishes a regime to address risks of anticompetitive conduct.
- 1345 The GRFR provisions in relation to cross subsidisation and misuse of confidential information are discussed in turn below.
- Cross subsidisation***
- 1346 As outlined above, the AER regulates prices for reference services. Furthermore, the price of non-reference services is subject to AER dispute resolution. This regulatory framework should ensure that cross subsidisation is not possible. This position is reinforced by the following provisions of the GRFR:
- (a) **Structural separation:** AusNet as a CPSP must not carry on a related business which includes the business of producing, purchasing or selling natural gas or processable gas.<sup>709</sup>
- (b) **Separate accounts:** AusNet must prepare, maintain and keep separate accounts in respect of pipeline services provided by means of every pipeline owned by it and prepare a consolidated set of accounts in respect of the whole of its business.<sup>710</sup>
- 1347 Similarly, to the TRFG and DRFG, the structural separation and requirement for separate accounts, in conjunction with the AER approved access arrangement, ensures that there can be no cross subsidisation between a gas distributor and a contestable business such as gas retail.
- Misuse of confidential information and other forms of discrimination***
- 1348 The GRFR also contains provisions designed to ensure that a CPSP cannot misuse confidential information obtained from other retailers connected to the gas distribution pipelines or otherwise discriminate against retailers that may compete with a related business of AusNet. It does this in the following ways.
- 1349 **First**, the GRFR require AusNet to ensure that its Marketing Staff are not also working for an associate that takes part in a related business (such as Origin Energy Markets) and vice versa.<sup>711</sup> This ensures that there will be no inadvertent sharing of information between regulated and contestable business through staff sharing that may give Origin Energy Markets an unfair advantage over other market participants.
- 1350 **Second**, unless otherwise approved by the AER, the GRFR also prevent AusNet from entering any associate contract that:
- (a) has the purpose, or would have (or be likely to have) the effect of substantially lessening competition in a market for natural gas services;<sup>712</sup> or

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<sup>708</sup> NGL, s 143(1).

<sup>709</sup> NGL, s 139.

<sup>710</sup> NGL, s 141.

<sup>711</sup> NGL, s 140.

<sup>712</sup> NGL, s 147.

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- (b) is inconsistent with the **competitive parity rule**, which requires a CPSP to ensure that any pipeline services that the CPSP provides to an associate are provided as if that associate were a separate unrelated entity.<sup>713</sup>
- 1351 The scope of associate contracts is broad and would cover any contracts AusNet enters with Origin Energy Markets in connection with the provision of pipeline services and any other contract AusNet enters into in connection with the provision of pipeline services that provides a direct or indirect benefit to Origin Energy Markets that is not at arm's length. In practical terms, the obligations around associate contracts ensure that AusNet cannot discriminate in favour of Origin Energy Markets or against competing retailers through commercial agreements whether by providing services on unequal terms or on terms that adversely affect competition in a gas retail market.
- 1352 In addition, Part 10 of the NGR sets out information that gas pipeline service providers such as AusNet must publish on its website. It includes details of the pipeline services offered, the historical demand for these services, actual prices payable, and costs and profits associated with each pipeline service. The AER noted that information published by service providers under Part 10 will help users assess the reasonableness of offers. This information will reduce information asymmetry, which will facilitate more timely and effective negotiations between service providers and users. In addition, the AER is undertaking a consultation process to develop Pipeline Information Disclosure Guidelines which will give guidance and instruction to service providers about what information they must publish, and how the information must be published on their website. This will ensure that all service providers publish usable, accessible, and transparent information that will provide the greatest benefit to users. Given the robust information sharing obligations currently in place and are expected to be in place soon, AusNet is unlikely to hold any information (not otherwise required to be disclosed publicly) that can be provided to Origin Energy Markets which may provide a competitive advantage.
- 1353 The requirements described above together ensure that AusNet will not be able to discriminate in favour of Origin Energy Markets or against other retailers by passing on confidential information to Origin Energy Markets through common Marketing Staff or entering into commercial agreements that have the purpose or effect of substantially lessening competition or that are inconsistent with the competitive parity rule.

### 10.7 Enforceability and penalties of NGL and NGR

- 1354 Among other functions, the AER is responsible for monitoring, investigating and enforcing compliance with obligations under the NEL and NGR, including those relating to ring-fencing requirements in relation to pipelines and pipeline services.
- 1355 In relation to monitoring and investigating compliance, the AER can access information from a wide range of sources to monitor compliance and identify and investigate potential breaches of the NGL and NGR. They include:
- (a) **Binding reporting obligations:** as mentioned above, the AER issued an Annual Compliance Order under section 48(1) of the NGL in November 2008 to all CPSPs. It requires that the CPSPs report on their compliance status regarding key regulatory obligations (including obligations relating to associated contracts) for the 12-month period ending 30 June of each year by 5pm 31 October of that year (or by 9am, the next business day if 31 October falls on a weekend or a public holiday).
  - (b) **Compulsory notices:** the AER can serve a compulsory notice on a person if it has reason to believe the recipient is capable of providing information, producing a document

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<sup>713</sup> NGL, s 148.

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or giving evidence that the AER require for the performance or exercise of our functions or powers under the NGL.<sup>714</sup>

- (c) **Information from consumers, regulated businesses and other stakeholders:** the AER receives information on potential compliance concerns from stakeholders (including consumers, energy businesses, energy ombudsman schemes, other market bodies, government agencies and consumer groups) in the form of calls, correspondence and meetings. The AER also has a number of regular networks through which compliance concerns are raised and referred, including its Customer Consultative Group.
- (d) **Market data:** the AER receives data on activities in wholesale and retail energy markets and natural monopoly network sectors for a range of purposes under national energy laws. The AER can use information and data received or collected in the course of other aspects of the AER's work for compliance and enforcement purposes.
- (e) **Information requests and targeted reviews:** the AER can ask AusNet for information about their compliance – both in respect of identified matters and as part of wider reviews of compliance practices and processes in an emerging area of concern.

1356 The AER also has a range of enforcement options to ensure compliance with the NGL and NGR and to respond to and address potential non-compliance. They include:

- (a) **Infringement Notices:** the AER can issue infringement notices where it considers that a breach of a civil penalty provision has been committed. The key GRFR provisions are civil penalty provisions. Payment of an infringement notice does not constitute an admission of a breach, but if a CPSP chooses to make payment then the AER cannot later bring proceedings in relation to that breach.
- (b) **Court Enforceable Undertakings:** the AER can accept a court enforceable undertaking from a CPSP for alleged breaches of the NGL and NGR.<sup>715</sup> The AER noted that enforceable undertakings can provide tailored solutions to address conduct that has given rise to the alleged breach. For example, an enforceable undertaking might include commitments to undertake an audit to ensure that the business has identified the root cause of the breach and the risk of future breaches is mitigated or could contain commitments that relate to consumer redress. The AER is able to seek court orders including declarations of a breach or injunctions if a CPSP has not complied with a court enforceable undertaking.
- (c) **Civil Proceedings:** the AER can institute and conduct civil proceedings for alleged breaches of the NGL and NGR.<sup>716</sup> The AER may seek declarations in relation to the breaches as well as a range of orders, including to undertake an action to cease or remedy the breach, implement a compliance program, perform community service or release a public notice. The AER can also apply for an injunction to restrain the party from engaging in the conduct or require action to be taken. If the obligation that has been breached is a civil penalty provision, the AER may seek orders for payment of civil penalties. The maximum penalty amounts will be indexed every three years to ensure their deterrent value is maintained. The NGL sets out the factors which the court must consider in determining the amount of the civil penalty to be paid.<sup>717</sup>

1357 AusNet reports to the AER annually on compliance measures and reporting requirements AusNet has in place to fulfil its obligations under the NGL and NGR pursuant to AER's Annual Gas Compliance Order.

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<sup>714</sup> NGL, s 42.

<sup>715</sup> NGL, 230A.

<sup>716</sup> NGL, 229.

<sup>717</sup> NGL, 234.

**10.8 Impact of different ownership of AusNet and Origin Energy Markets**

1358 As discussed above in relation to transmission, the lack of any ability or incentive for AusNet to foreclose Origin Energy Markets' gas retail competitors is reinforced by the fact that AusNet and Origin Energy Markets are separate entities, owned by different Brookfield funds and with different co-investors and the enforceable undertaking that Brookfield is prepared to offer.

## 11 No substantial lessening of competition in electricity generation markets through AusNet's electricity distribution system

### 11.1 Introduction

1359 Embedded generators are generating units that convert a form of energy (such as wind and solar) into electricity that are connected within a distribution system and that do not have direct access to the transmission network. They are also known as distributed generation or local generation given electricity is generated from the sources, often renewable energy sources, near the point of use instead of centralised generation sources from the power plant. Embedded generators may include solar and wind farms that connect to distribution system rather than the transmission system. They might also include community virtual power plants involving solar and battery assets connecting to a distribution system and may be facilitated by a retailer.

1360 AusNet owns one of five Victorian electricity distribution networks to which embedded generators may connect. Origin participates in the Victorian or NEM wide generation market notably through its existing Victorian generation asset (Mortlake). Given this potential vertical relationship we expect the ACCC will wish to consider whether vertical competition issues may arise, in particular, whether AusNet may have the ability and incentive to use its position as owner of one of the five Victorian distribution systems so as to foreclose Origin's embedded generation competitors.

1361 Different regulatory paths exist for connection of embedded generators, depending on the generation capacity and other technical factors.<sup>718</sup> At a high level, the main paths are set out in **Figure 114** below:

**Figure 114: Regulatory paths for connection of embedded generators**

Category	Embedded generator attributes	Typical connection regime
1	The embedded generator is capable of exporting to the distribution system in excess of 5MW.	The generator must register as a Market Participant and must seek connection in accordance with Chapter 5 of the NER.
2	The embedded generator: <ul style="list-style-type: none"> <li>(a) is not capable of exporting to the distribution system in excess of 5MW;</li> <li>(b) sells its output directly to the NEM; and</li> <li>(c) does not satisfy AS 4777.<sup>719</sup></li> </ul>	The generator must register as a Market Participant and must seek connection in accordance with Chapter 5 of the NER.  In practice we expect there are relatively few categories 2 embedded generators.
3	The embedded generator: <ul style="list-style-type: none"> <li>(a) is not capable of exporting to the distribution system in excess of 5MW;</li> <li>(b) sells its output to or via a Market Participant (for example, a retailer); and</li> <li>(c) does not satisfy AS 4777.</li> </ul>	The generator qualifies as a Non-Registered Embedded Generator and can seek connection under Chapter 5A of the NER.  Typically, these are treated as a Negotiated Connection under the distribution connection policies.
4.	The embedded generator:	The generator qualifies as a Micro

<sup>718</sup> In most cases, the connection applicant can elect to pursue connection via a more 'onerous' connection path, for example a category 3 embedded generator can pursue the category 2 pathway.

<sup>719</sup> For embedded generators connected to the electricity grid via inverters, AS 4777 Standard specifies the expected performance and behaviour of inverters at low voltages (such as households or small-scale commercial) and the necessary tests for compliance.



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Category	Embedded generator attributes	Typical connection regime
	(a) is not capable of exporting to the distribution system in excess of 5MW; (b) sells its output to or via a Market Participant (for example, a retailer); and (c) satisfies AS 4777.	Embedded Generator and can seek connection under Chapter 5A.  Typically, these are treated as a Basic Connection Service under the distribution connection policies.  Most rooftop solar facilities fall into this category.

1362 Category 3 and 4 embedded generators who sell their output via a market participant, for example, a retailer, can seek connection under Chapter 5A of the NER. Connection of generators of this type is discussed in section 9.3 above. Category 1 and 2 embedded generators must register themselves as a market participants and must seek connection in accordance with Chapter 5 of the NER, rather than Chapter 5A. This section focusses on Chapter 5 connections, ie, negotiated connections with embedded generators with a capacity greater than 5 MVA or selling output directly to the NEM (ie, category 1 and 2 embedded generators).

1363 AusNet does not have the ability or incentive to use its position as the owner of a Victorian electricity distribution network to foreclose non-Origin embedded generation as a result of a combination of the following:

- (a) electricity distribution systems are regulated to ensure they cannot misuse any market power they may otherwise have without regulation;
- (b) the electricity regulatory regime includes distribution ring-fencing guidelines made by the AER. Their purpose is to ensure where there is vertical integration between a distribution business and a contestable business, the distribution business is operated in a way that does not adversely affect competition in the contestable market; and
- (c) there is a high level of transparency over relevant aspects of AusNet's operation of its distribution networks. There is no possibility of subtle forms of discrimination not being detected.

## 11.2 No ability or incentive to discriminate in relation to pricing

### *Pricing of Chapter 5 Connections*

1364 For negotiated connections with a capacity  $\geq 5$ MVA, AusNet as a DNSP must negotiate in good faith with an embedded generator to reach an agreement in respect of the pricing of the following charges:<sup>720</sup>

- (a) the connection service charge to be paid by the embedded generator in relation to distribution connection assets to be provided by the DNSP;<sup>721</sup>
- (b) the use of system services charge (**NUOS**) to be paid by the embedded generator in relation to any augmentations or extensions required to be undertaken on all affected transmission networks and distribution networks;<sup>722</sup>
- (c) the amount to be paid by the embedded generator to the DNSP in relation to the costs reasonably incurred by the DNSP in providing distribution network user access;<sup>723</sup>

<sup>720</sup> NER, cl 5.3AA(f).

<sup>721</sup> NER, cl 5.3AA(f)(1).

<sup>722</sup> NER, cl 5.3AA(f)(3).

<sup>723</sup> NER, cl 5.3AA(f)(4)(i).

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- (d) the compensation to be provided by the DNSP to the embedded generator in the event that the generating units of the embedded generator are constrained off or constrained on during a trading interval;<sup>724</sup> and
- (e) the compensation to be provided by an embedded generator to the DNSP in the event that dispatch of the embedded generator causes another generator to be constrained off or constrained on during a trading interval.<sup>725</sup>
- 1365 The maximum NUOS charges are regulated by Chapter 6 of the NER and must be set in accordance with the NDSC.<sup>726</sup>
- 1366 There is no ability to discriminate in relation to the other connection charges for the following reasons.
- 1367 **First**, as discussed above in Chapter 9, under the Electricity Distribution Code published by the ESC, augmentations required as part of connections to the distribution network in Victoria are contestable. In particular, AusNet is specifically required to call for tenders for any construction works it proposes to augment its distribution network in connection with a connection service.
- 1368 AusNet's connection guideline for embedded generation of greater than 5 MW states that:
- Where connection of the embed generator requires extension and / or augmentation to the distribution network (22 KV / 66 KV) these works can be considered as "contestable". The connection applicant may choose to undertake these works; however, they must engage AusNet services approved accredited designers and constructors to undertake these network extensions and augmentations (including tendering).
- Where an extension and / or augmentation is contestable in this manner there is no ability for AusNet to discriminate in relation to the capital costs of such extension or augmentation.
- 1369 **Second**, Rule 5.3A of the NER establishes a framework for the negotiation of the connection of embedded generators. That framework, which is discussed further below, provides for the provision of information in a way which is designed to facilitate agreement on charges.
- 1370 **Third**, under Rule 5.1.2(e)(2) of the NER, disputes in relation to charges that may be levied on an embedded generator can be referred to the AER in accordance with the dispute resolution procedures in Part L of Chapter 6 of the NER. In determining an access dispute about access charges, or involving access charges, the AER must give effect to the principle that access charges should be based on costs reasonably incurred by the DNSP in providing distribution network users access.
- 1371 **Fourth**, the DRFG obligations not to discriminate would apply in relation to a connection of an embedded generator.
- 1372 The combination of the above factors means there is no ability for AusNet to discriminate against non-Origin embedded generators in relation to the pricing of negotiated connections with a capacity  $\geq 5$ MVA.
- 11.3 No ability or incentive to discriminate in relation to connection and access**
- 1373 AusNet will not be able to discriminate against non-Origin embedded generators in relation to providing or delaying providing connection and access to AusNet's Victorian distribution networks.
- 1374 For negotiated embedded generation connections with a capacity  $\geq 5$  MVA under Chapter 5, AusNet as a DNSP is required to comply with detailed prescribed steps under the NER when responding to a connection application including a prescribed timeframe within which AusNet

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<sup>724</sup> NER, cl 5.3AA(f)(4)(ii).

<sup>725</sup> NER, cl 5.3AA(f)(4)(ii).

<sup>726</sup> NER, cl 5.3AA(g).

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must respond to a connection query. This highly prescribed connection process can be summarised as follows:

- (a) **Preliminary Connection Enquiry:** After an embedded generator lodges a Connection Enquiry Form (in a form published on AusNet's website), AusNet is required to provide a preliminary enquiry response to the connection enquiry within 15 days of receipt of this enquiry and all relevant information.<sup>727</sup>
- (b) **Letter agreement engagement:** To progress from the preliminary connection enquiry stage, an embedded generator must first agree a letter agreement with AusNet which defines the services to be performed by AusNet and covers costs of the detailed enquiry stage, the connection application stage, the preparation of the offer as well as contract negotiations. The amount of the enquiry fee must not be more than necessary to cover the reasonable costs of work required to prepare a detailed response to the enquiry.<sup>728</sup>
- (c) **Detailed enquiry:** After the embedded generator lodges a Detailed Enquiry Form along with all the information requested in the preliminary response. AusNet is required to provide a detailed response to the connection enquiry within 30 business days of receipt of all relevant information, unless agreed otherwise.<sup>729</sup>
- (d) **Connection Application:** After the embedded generator lodges a Connection Application request and provides all the information requested in the detailed enquiry response, both AusNet and AEMO will complete an assessment of the connection application and issue a response under Rules 5.3.4A and 4B of the NER relating to negotiated access standards and system strength impact assessment.
- (e) **Offer:** AusNet is required to provide the embedded generator with a firm offer after a complete connection application is submitted.<sup>730</sup> AusNet in the information pack it publishes pursuant to clause 5.3A.3 of the NER indicated that it would provide such an offer within 4 months from a complete connection application.<sup>731</sup>
- (f) **Contract Execution and Project Delivery:** If the embedded generator accepts the offer to connect, AusNet Services must negotiate and enter into Connection Agreements with the embedded generator. Once agreements have been executed and all conditions precedent have been met as well as payment made, the project moves into the delivery stage.

1375 Given the prescribed timing applicable to this connection process, AusNet does not have the ability to discriminate against non-Origin embedded generators seeking a Chapter 5 connection through refusing or delaying connection. Furthermore, AEMO is also involved during the detailed enquiry and connection application stage of the connection process. In particular, AEMO must:

- (a) approve the Preliminary Impact Assessment at the detailed enquiry stage;
- (b) complete an assessment of the connection application at the connection application stage; and
- (c) issue an acceptance during the generator commissioning stage.

This means any attempts by AusNet to unreasonably delay a connection enquiry will be highly visible to both the embedded generator as well as AEMO.

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<sup>727</sup> NER, cl 5.3A.5.

<sup>728</sup> NER, cl 5.3A.4.

<sup>729</sup> NER, cl 5.3A.8.

<sup>730</sup> NER, cl 5.3A.10.

<sup>731</sup> AusNet, Embedded Generation Guidelines <[https://www.ausnetservices.com.au/-/media/project/ausnet/corporate-website/files/solar/5000kw-or-greater/embedded-generation-guidelines-sop-33-05\\_issue-5---nov-2022.pdf?rev=fadd9fc3bbaf46f09ca5b648b8969567](https://www.ausnetservices.com.au/-/media/project/ausnet/corporate-website/files/solar/5000kw-or-greater/embedded-generation-guidelines-sop-33-05_issue-5---nov-2022.pdf?rev=fadd9fc3bbaf46f09ca5b648b8969567)>

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1376 Furthermore, the DRFG non-discrimination obligations would apply and it would be unlawful for AusNet to deliberately delay a non-Origin Energy Markets embedded generator connecting as compared to an Origin Energy Markets embedded generator connecting.

### **11.4 No ability or incentive to discriminate in relation to augmentation, maintenance and renewal**

1377 Augmentation and investment planning in relation to Victorian distribution networks undergoes a public transparent process that is conducted jointly with other distribution networks and with AEMO and AER oversight. The same regulatory process outlined in section 9.4 above applies to works relating to embedded generators connecting to the distribution network.

1378 In relation to maintenance and renewal work, AusNet as a DNSP must comply with performance and quality of supply standards set out in schedule 5.1 of the NER. These require that AusNet ensure, among other things, that its distribution network is maintained and operated so as to minimise interruptions to service, and in accordance with good electricity practice. In addition, as part of the connection agreement, if an embedded generator is constrained on or off, a DNSP may be required to pay compensation to an embedded generator. A failure to maintain the quality of distribution services and to minimise outages and interruptions to service through lack of maintenance would cause financial harm to AusNet through the agreed compensation regime. This limits AusNet's incentive to discriminate against non-affiliated generators in relation to maintenance and renewal.

1379 Furthermore, as discussed in section 9.5 above, the maintenance of AusNet's electricity distribution network is closely tied to the safety of that network. If AusNet were to reduce maintenance or quality of services in a particular part of its distribution network, this could have significant safety repercussions. AusNet and other electricity distributors are monitored and audited by ESV to identify, among other things, whether the lack of maintenance could result in a failure to observe relevant safety standards. In addition, the practical ramifications of safety hazards would involve significant reputational, legal and compliance consequences for AusNet, including regulatory enforcement measures and customer claims. These risks outweigh any hypothetical incentive to engage in discriminatory maintenance of its distribution network. The publicly visible nature of such risks also removes any incentive by AusNet to engage in such a strategy, as there would not be any way of concealing outages or safety-related events.

1380 There is also considerable transparency around planned and unplanned outages concerning AusNet's distribution network. This includes through AusNet's and other DNSPs DAPR reporting requirements, which set out planned maintenance and outages for the forthcoming five-year period, and AusNet's obligations with respect to reporting planned outages to AEMO (ie, the PASA process described in **Annexure A**). Any attempt to manipulate or manufacture outages so as to harm non-Origin embedded generators would be easily detected.

### **11.5 No ability or incentive to cross subsidisation and discrimination**

1381 As outlined in section 9.7 above, the DRFG contain provisions designed to ensure that:

- (a) there is no cross subsidisation between a natural monopoly distribution business and a contestable business such as embedded generation; and
- (b) there is no misuse of confidential information or other discrimination against a competing contestable business such as embedded generation.

1382 The requirement for legal separation and the rules related to the preparation of accounts and the application of an AER approved cost allocation methodology work set out in **Annexure A** ensures that there can be no cross subsidisation of a contestable embedded generation business by AusNet as a DNSP.

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- 1383 Similarly, the regulation under the NER and the DRFG relating to misuse of confidential information and non-discrimination outlined in **Annexure A** is equally relevant to embedded generation. AusNet would not be able to:
- (a) misuse confidential information it receives from non-affiliated embedded generators as a DNSP (for example, by providing that information to Origin Energy Markets);
  - (b) provide information about its own distribution networks (for example, planned outages or information about congestion) to Origin Energy Markets but not to other non-affiliated embedded generators; or
  - (c) otherwise discriminate against non-affiliated embedded.

## 12 No substantial lessening of competition in gas and electricity retail markets through Jemena's transmission and distribution assets

- 1384 It is expected that Temasek will acquire a 9.9% interest in Brookfield LP, which will acquire the Origin Energy Markets business. To the best of Temasek's knowledge, Temasek does not own any assets in Australia that give rise to a horizontal overlap with Origin Energy Markets.
- 1385 Temasek has, through SP Group, a 40% interest in Jemena. Jemena is an owner of gas pipelines and distribution systems and electricity distribution systems. Origin Energy Markets is one of many retailers who transport gas throughout the eastern states using Jemena's pipelines and whose customers are connected to distribution networks owned by Jemena. Around 12 retailers currently contract on various Jemena pipelines including the Eastern Gas Pipeline, Queensland Gas Pipeline and Northern Gas Pipeline (when it is operational).
- 1386 We expect the ACCC will wish to consider whether vertical competition issues arise, in particular, whether Jemena has the incentive and ability to use its position as a transmission and distribution system owner to anti-competitively foreclose Origin's retail rivals.
- 1387 This section of the Application explains:
- (a) in relation to **Jemena**, that it does not have the ability or incentive to use its position as gas pipeline owner and gas and electricity distribution system owner to foreclose Origin's retail rivals and thereby lessen competition in any relevant retail market;
  - (b) in relation to **Evoenergy**, that it does not have the ability or incentive to use its position as a gas and electricity distribution system owner to foreclose Origin's retail rivals and thereby lessen competition in retail markets in ACT and New South Wales; and
  - (c) in relation to **United Energy**, that it does not have the ability or incentive to use its position as a gas distribution system owner to foreclose Origin's retail rivals and thereby lessen competition in a Victorian retail market.
- 1388 In summary:
- (a) Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to engage in vertical foreclosure;
  - (b) Temasek's interest in Jemena (which in turn has a 50% interest in Evoenergy and a 34% interest in United Energy) is only 40%, and indirect through SP Group, which operates independently from Temasek, meaning it has limited ability to engage in vertical foreclosure. As a matter of long-standing governance policy, Temasek does not direct the business decisions or operations of its portfolio companies and therefore its portfolio companies operate independently of Temasek on day-to-day basis, including SP Group; and
  - (c) the Jemena, Evoenergy and United Energy assets are, in any event, regulated removing any ability to engage in vertical foreclosure.

### 12.1 Jemena has no ability or incentive to foreclose Origin's retail rivals in the New South Wales gas retail market

#### ***Gas Transmission Pipelines: Eastern Gas Pipeline and VicHub Interconnect***

- 1389 Jemena owns 100% of the Eastern Gas Pipeline (**EGP**) and the VicHub Interconnect. The EGP is currently one directional only – gas is transported from the Gippsland Basin at Longford and Orbost in Victoria to Sydney. The VicHub Interconnect allows gas to flow from the EGP into the

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Victorian Transmission System. VicHub is a separate asset to the EGP and operates as a gateway between EGP and the Victorian Transmission System (**VTS**). VicHub allows for gas to physically be delivered from the EGP to VTS and notionally (not physically) from the VTS to the EGP. It provides transportation services only and cannot store gas.<sup>732</sup> VicHub delivers gas to the VTS, which forms the boundary of the Victorian Declared Wholesale Gas Market (**DWGM**). The DWGM is a facilitated market operated by AEMO that allows gas market participants to buy and sell gas in Victoria. Retailers can use VicHub to transport gas to and from this market for sale or purchase. Jemena is considering modifications to allow for bidirectional flows, this is discussed further at section 12.2 below.

- 1390 Retailers of gas in New South Wales can acquire gas from either (i) producers in South Australia and Queensland (via the Moomba to Sydney pipeline) or (ii) producers in Victoria. As regards gas from Victoria, gas producers and retailers can transport gas to New South Wales via the EGP or via the Victorian Transmission System (**VTS**) and the Moomba to Sydney Pipeline (**MSP**) which connect near Culcairn and are both owned by APA Group (with the VTS operated by AEMO). This connection is referred to as the Victoria Northern Interconnect (**VNI**).
- 1391 An overview of these two pipelines is set out in **Figure 115** below.

**Figure 115: Overview of pipelines that can transport gas from Victoria to New South Wales**

Pipeline	Key facts	Regulation
<b>Eastern Gas Pipeline</b>	<p>Use: Transports gas from the Gippsland Basin in Victoria to markets in Sydney and regional centres along the route. Gas is supplied to the Eastern Gas Pipeline at Longford and Orbost by local gas producers and through the VicHub Interconnect facility</p> <p>Length: 797 km<sup>733</sup></p> <p>Capacity: 350 terajoules per day</p>	<p>The EGP is a non-scheme pipeline. It is regulated as such under the NGR.</p> <p>Part 10 of the NGR requires the publication of the following:</p> <p>(a) Standing terms and conditions for the EGP, the standing price (being the price applicable to the service under the standing terms and conditions) and other information about prices and charges applicable to the pipeline service including the charging structure (any minimum charges and additional charges such as imbalance and overrun charges).<sup>734</sup></p> <p>(b) Financial information and historical demand information in the form and containing information specified in pipeline information disclosure guidelines and a cost allocation methodology, comply with cost allocation principles.<sup>735</sup></p> <p>Part 12 of the NGR establishes:</p> <p>(a) a commercially orientated arbitration process to resolve access disputes in a cost-effective and efficient manner;<sup>736</sup>and</p> <p>(b) principles that the arbitrator must have regard to when determining access disputes, which are consistent with the outcomes of a workably competitive market.<sup>737</sup></p>

<sup>732</sup> Further details and diagrams can be found on the Jemena website (<https://www.jemena.com.au/pipelines/vichub>).

<sup>733</sup> Jemena, *What we own* <<https://jemena.com.au/about/what-we-own>>.

<sup>734</sup> NGR, cl 101C.

<sup>735</sup> NGR, cl 101D.

<sup>736</sup> NGR, division 6.

<sup>737</sup> NGR, cl 113Z.

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Pipeline	Key facts	Regulation
<b>Victoria Northern Interconnect (VNI)</b>	<p>Use: Gas can be injected at numerous locations in Victoria and withdrawn at the Interconnect at Walla Walla, New South Wales.</p> <p>Capacity: 223 terajoules per day north haul</p> <p>195 terajoules per day south haul</p>	<p>The VNI is part of the Victorian transmission system (<b>VTS</b>). The VTS is a covered pipeline under the NGL and NGR and is subject to full regulation. The VTS is owned and maintained by APA and operated by AEMO under the Victorian market carriage system.</p> <p>Under the NGR, APA was required to lodge an Access Arrangement with, and have it approved by, the AER.<sup>738</sup> Pursuant to Rule 48, the Access Arrangement contains the following elements:</p> <p>(c) for each reference service:</p> <p style="padding-left: 20px;">(i) the reference tariff; and</p> <p style="padding-left: 20px;">(ii) the other terms and conditions on which each reference service will be provided;</p> <p>(d) capacity trading requirements;</p> <p>(e) queuing requirements; and</p> <p>(f) extension and expansion requirements.</p>

- 1392 Jemena has no ability or incentive to foreclose Origin's retail rivals in a way that substantially lessens competition in New South Wales retail supply.
- 1393 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its ownership of the EGP to discriminate in favour of Origin.
- 1394 **Second**, Temasek's interest in Jemena is only 40%, with the remaining interest owned by State Grid, and indirect through SP Group, which operates independently from Temasek, meaning it has limited ability to seek to use its ownership of the EGP to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy.
- 1395 **Third**, the EGP does not have market power because of alternatives available to customers which means it has no ability to foreclose. If Jemena was to refuse access to the EGP to Origin's retail competitors or seek to charge them a higher price, then customers:
- (a) seeking to transport gas from Victoria to New South Wales could switch to the VNI; or
  - (b) could switch to acquiring gas from South Australian or Queensland producers and transport that gas via the Moomba to Sydney pipeline.
- 1396 There is spare capacity on both the EGP and the VNI making switching possible.<sup>739</sup> At September 2021, gas was flowing north to New South Wales around 98% of the time (via the EGP and the VNI). By 2026, it is expected that northerly flows will only occur around 53% of the time.<sup>740</sup> A decrease in demand for northerly gas transport will result in both the EGP and VNI having increased unutilised capacity. The presence of unutilised capacity makes switching to the VNI

<sup>738</sup> The VTS access arrangement is available at: Always Powering Ahead, *Victorian Transmission System 2023-27 access arrangement* (December 2022) <<https://www.apa.com.au/globalassets/our-services/gas-transmission/east-coast-grid/victorian-transmission-system/apa-vts-access-arrangement-2023-27.pdf>>.

<sup>739</sup> AER, Average daily flows – NSW/ACT demand region (monthly), <<https://www.aer.gov.au/wholesale-markets/wholesale-statistics/average-daily-flows-nsw-act-demand-region-monthly>>; AEMO, Medium Term Capacity Outlook (future). <<https://aemo.com.au/energy-systems/gas/gas-bulletin-board-gbb/data-gbb/gas-flows>>.

<sup>740</sup> Oakley Greenwood, *Issues Affecting Demand and Supply for Gas on the Victorian Transmission System* (September 2021) 20 <<https://www.aer.gov.au/system/files/APA%20VTS%20-%20Access%20Arrangement%202023-27%20-%20Oakley%20Greenwood%20-%20Issues%20Affecting%20Demand%20and%20Supply%20for%20Gas%20on%20the%20VTS%20%28September%202021%29%20-%20December%202021.pdf>>.



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possible. It also places competitive pressure on the EGP to offer the best price possible and maximise volumes by providing services to all potential customers.

- 1397 **Fourth**, the EGP is a non-scheme pipeline and is regulated as such under the NGR. Under Part 10, Jemena is required to disclose standard pricing information and standard terms and conditions. Although these prices and terms are not determined by the AER, this transparency provides pipeline customers with information that allows them to better negotiate transport contracts. Jemena must also publish weighted average pricing and revenue information. Any pricing can be compared to Jemena's weighted average pricing information and pipeline customers can negotiate on this basis. If that negotiation is unsuccessful, Part 12 also provides for an arbitration process that customers can use to resolve a dispute. These measures would make it very difficult for Jemena to engage in foreclosure strategies.

### **Gas distribution pipeline: Jemena New South Wales Gas Network**

- 1398 Jemena operates the gas distribution network that covers Sydney, Newcastle, the Central Coast and Wollongong.
- 1399 We expect the ACCC may wish to consider whether vertical competition issues may arise and whether Jemena has the ability and incentive to use its position in the New South Wales gas distribution market to anti-competitively foreclose Origin's retail rivals in New South Wales.
- 1400 Jemena has no ability or incentive to foreclose Origin's retail rivals in a way that substantially lessens competition in New South Wales retail supply.
- 1401 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its ownership of the Jemena New South Wales Gas network to discriminate in favour of Origin.
- 1402 **Second**, Temasek's interest in Jemena is only 40%, with the remaining interest owned by State Grid, and indirect through SP Group, which operates independently from Temasek, meaning it has limited ability to seek to use its ownership of the Jemena New South Wales Gas network to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy.
- 1403 **Third**, all gas distributors are subject to the NGL and NGR and are regulated by the AER. Therefore – like AusNet (as outlined in Chapter 9) – Jemena does not have the ability under the regulatory regime to use its position to foreclose Origin's rivals. The impact of the regulatory regime is briefly summarised below:
- (a) **No ability or incentive to discriminate in relation to price:** Jemena New South Wales Gas Network is fully regulated by the AER and is subject to AER approved access determinations. Jemena is required to provide access to its reference services on the terms set out in the AER approved access arrangement. Jemena also offer others non-reference services (interconnection service and negotiated service) which are not subject to price regulation under the AER approved access arrangement. These non-reference services are subject to dispute resolution process under Chapter 5 of the NGL. Subject to limited exceptions, the AER can make a binding determination about any matter relating to the provision of a pipeline service to a prospective user or user, including price.<sup>741</sup> The AER's oversight of distribution services means that there is no ability for Jemena to use its gas distribution pricing to discriminate against Origin's retail competitors for reference services.
  - (b) **No ability or incentive to discriminate in relation to connection and access:** Under the NGR, Jemena cannot refuse connections services to gas distribution networks. For

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<sup>741</sup> NGL, ss2(1) definitions of 'dispute resolution body' and 'relevant adjudicator', 161(3).

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basic or standard connections, Jemena and other DNSPs must make an offer to connect the customer to the network within 10 business days of the connection request.<sup>742</sup> For negotiated service connections, Jemena and other DNSPs must comply with the NRG's negotiation framework and use best endeavours to make an offer to connect the customer to the network within 65 business days of the request.<sup>743</sup>

- (c) **No ability to discriminate in relation to augmentation, investment or maintenance services:** Jemena could not target investment or maintenance in a way that unfairly benefits Origin's retail gas business, or in a way that harms Origin's competitors. Origin's gas customers are dispersed through the Jemena Gas Network in New South Wales. This means that there is no possible means by which Jemena could selectively invest in or maintain parts of its network to benefit only Origin and not other retailers connected to the same part of the network. Reducing maintenance or quality of services in a particular part of the distribution network would create safety hazards and reputational, legal and compliance risks for Jemena that would outweigh any hypothetical incentive to engage in discriminatory maintenance of its distribution network.

### 12.2 Jemena has no ability or incentive to foreclose Origin's retail rivals in the Victorian gas retail market

- 1404 The EGP is currently one directional only – gas moves from Victoria to Sydney. Jemena is planning modifications to the pipeline to allow for bidirectional flows with earliest practical completion in 2024.<sup>744</sup> Whilst market fundamentals relating to supply and demand outlooks support the need for the project, Jemena's willingness to progress the project will be conditional on confirmed timing for commencement of operation of the Port Kembla Energy Terminal (**PKET**) and sufficient underwriting of capacity by customers to justify the business case for the investment and on transportation agreements with customers to underwrite the investment.<sup>745</sup> Initially following modifications, it is envisaged that the EGP will transport gas from the Orbost gas plant, PKET and from backhaul/swaps. Longer term, there may be other opportunities provided gas can be supplied to the EGP at sufficient pressure to physically flow onto the pipeline.
- 1405 The EGP is currently regulated under the National Gas Rules. Any changes are dependent on the decision and actions of the Australian government and the Australian Energy Regulator (AER).
- 1406 Given this potential expansion of the EGP, we expect the ACCC will wish to consider whether Jemena has the incentive and ability to use its position as a transmission system owner to anti-competitively foreclose Origin's retail rivals in Victoria.
- 1407 Historically, Victoria has been able to meet its own gas demand through local production. However, production in Victoria (particularly at Longford) has been falling. From 2027, shortfalls in gas supply across the southern East coast states are likely if no additional gas is transported south from Queensland.<sup>746</sup> Unless new southern production is developed, Victoria will require more supply from outside of the state to cover its winter demands for heating in future.<sup>747</sup>

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<sup>742</sup> NGR, r119S(1)(a).

<sup>743</sup> NGR, r119(V)(1).

<sup>744</sup> *State of the Energy Market 2022 – Report*, Figure 4.9.3 (**Annexure 12**).

<sup>745</sup> ACCC, *Gas Inquiry – January 2023 Interim Report* (January 2023), 137

<[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL\\_0.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL_0.pdf)> (**Gas Inquiry – January 2023**).

<sup>746</sup> ACCC, *Australian Domestic Gas Outlook 2023 speech*; (21 March 2023) <<https://www.accc.gov.au/about-us/media/speeches/australian-domestic-gas-outlook-2023-speech#:~:text=AEMO%27s%20latest%20projections%20from%20March,to%20sell%20more%20domestic%20gas>>

(**ACCC Australian Domestic Gas Outlook 2023 speech**)

<sup>747</sup> ACCC *Australian Domestic Gas Outlook 2023 speech*.

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- 1408 In future it is expected that the majority of gas for retail supply in Victoria will continue to be sourced locally from Victorian producers (in the Gippsland Basin and the Otway Ranges) but will be supplemented with supply from Queensland and South Australia.
- 1409 Retailers wishing to acquire gas from producers outside of Victoria can currently only transport gas from New South Wales into Victoria via the VNI. However, there are a range of projects, including the EGP, that are either planned or being planned, to meet increased demand for gas to be transported from Queensland and New South Wales to Victoria.
- 1410 An overview of anticipated projects and upgrades for moving gas from Queensland and New South Wales to Victoria is set out in **Figure 116** below.

**Figure 116: Southerly pipelines including any anticipated upgrades and developments**

Pipeline	Proposed development / upgrades	Capacity / increase in capacity	Expected date of commissioning
<b>Eastern Gas Pipeline</b>	Jemena has entered into a Project Development Agreement with AIE to connect the planned Port Kembla Energy Terminal ( <b>PKET</b> ) with the EGP and to allow bi-directional flow, so gas can be transported both north (to Sydney) and south (to Victoria) from PKET simultaneously. <sup>748</sup>	As part of the PKET project, there are plans for the EPG to be upgraded to become bidirectional. The upgrade will initially allow 200 TJ/d in reverse flows south to Victoria. Potential future expansion includes the installation of a compressor at Kembla Range to increase the southbound capacity on the EGP to 323 TJ/d. <sup>749</sup>  Initially, southerly transportation of gas will be possible from the Orbost gas plant, PKET and from backhaul/swaps. Longer term, there may be other opportunities provided gas can be supplied to the EGP at sufficient pressure to physically flow onto the asset.	The earliest practical completion of these works is Winter 2024. <sup>750</sup>  The works to make the pipeline bi-directional will be subject to FID.
<b>Port Campbell Adelaide Pipeline (PCA) (SEAGas)</b>	Potential change to PCA to bi-directional to enable gas to flow to Victoria <sup>751</sup>	In March 2022, Venice Energy announced that it was finalising a joint feasibility study with the owners of the SEA gas pipeline that will make	Construction of the LNG terminal and associated facilities commenced in the second half of 2022. Commissioning is expected in the first half of 2024. <sup>754</sup>

<sup>748</sup> AEMO, *Gas Statement of Opportunities* (March 2022), page 52 <[https://aemo.com.au/-/media/files/gas/national\\_planning\\_and\\_forecasting/gsoo/2022/2022-gas-statement-of-opportunities.pdf?la=en](https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2022/2022-gas-statement-of-opportunities.pdf?la=en)> (**Gas Statement of Opportunities 2022**).

<sup>749</sup> *Gas Statement of Opportunities 2022*, 57.

<sup>750</sup> *Gas Statement of Opportunities 2022*, 57.

<sup>751</sup> *Gas Inquiry – January 2023*136.

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Pipeline	Proposed development / upgrades	Capacity / increase in capacity	Expected date of commissioning
		<p>the pipeline infrastructure bi-directional.<sup>752</sup></p> <p>Capacity not yet known.</p> <p>The 2022 AEMO Gas Statement of Opportunities notes that the proposed development of the LNG import terminal at Port Adelaide 'would likely need pipeline expansions, upgrades, or duplication to be able to move gas directly into Victoria (for example, reversing the SEAGas Pipeline)'.<sup>753</sup></p>	
<b>Moomba Sydney Pipeline</b>	Staged expansion to increase capacity <sup>755</sup>	<p><b>Stage 1:</b> +12% (increase capacity by 30 TJ/d from 446 TJ/d to 475 TJ/d)</p> <p><b>Stage 2:</b> + 13% (increase capacity by 90 TJ/d from 475 TJ/d to 565 TJ/d)</p> <p><b>Stage 3:</b> +25%</p>	<p><b>Stage 1:</b> March 2023 with services to begin by winter 2023</p> <p><b>Stage 2:</b> March 2024 with services to begin by Winter 2024</p> <p><b>Stage 3:</b> FID not reached yet</p>

Source: Various publicly available sources, as referenced in relevant footnotes

- 1411 The bi-directional upgrade to the EGP is still in planning phases and its completion is not certain, however if Jemena does upgrade the EGP for bi-directional flows, it will not, in future, have any ability or incentive to foreclose Origin's retail rivals in a way that substantially lessens competition in Victorian retail supply.
- 1412 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its ownership of the EGP to discriminate in favour of Origin.
- 1413 **Second**, Temasek's interest in Jemena is only 40%, with the remaining interest owned by State Grid, and indirect through SP Group, which operates independently from Temasek, meaning it has limited ability to seek to use its ownership of the EGP to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy.
- 1414 **Third**, the EGP does not have market power because of alternatives available to customers which mean it has no ability to foreclose. If Jemena was to refuse access to Origin's retail competitors or seek to charge them a higher price, then:
- (a) Customers wishing to transport gas south to Victoria could switch to the VNI or once upgraded, the PCA (via South Australia); or
  - (b) Customers could also seek to acquire gas from Victorian producers.

<sup>754</sup> Venice Energy, *Outer Harbor LNG Project* <<https://veniceenergy.com/outer-harbor-lng-project/>>.

<sup>752</sup> Abi Larkin, *Venice Energy accelerates LNG import terminal construction* (2 March 2022) LNG Industry <<https://www.lngindustry.com/liquid-natural-gas/02032022/venice-energy-accelerates-lng-import-terminal-construction/>>.

<sup>753</sup> *Gas Statement of Opportunities 2022*, 57.

<sup>755</sup> *Gas Inquiry – January 2023*, 138.

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In addition, Jemena will require a minimal level of contracted capacity to make the southerly operation of the EGP economically viable. It is therefore incentivised to provide services to all gas retailers going forward to ensure that costs associated with the EGP upgrade can be covered (through maximising contracted capacity).

1415 **Fourth**, the EGP will continue to be regulated as a non-scheme pipeline under the NGR at a minimum following any upgrade. For the reasons set out at paragraph 1396 above, regulatory regime, including the transparency measures and availability of arbitration, will make it very difficult for Jemena to engage in foreclosure strategies.

### 12.3 Jemena has no ability or incentive to foreclose Origin's retail rivals in any east coast gas retail market

1416 Jemena owns the Northern Gas Pipeline (**NGP**). The NGP is a 622 km pipeline that transports gas, unidirectionally, from the Amadeus Gas Pipeline in Tennant Creek, Northern Territory to Mount Isa, Queensland. From Mount Isa it can be transported down the Carpentaria Gas Pipeline into the broader east coast gas pipeline network and on to demand centres throughout eastern Australia. It has a capacity of 90 TJ/d.

1417 Recently, the NGP was shut down between September and December 2022 and March 2023 due to the drop in production from the Blacktip offshore field which resulted in inconsistent and inadequate gas flows to enable the safe operation of the facility.<sup>756</sup> Jemena does not expect the short-term supply constraint to affect the long term operation of the NGP.<sup>757</sup> The NGP was brought back online when supply and demand conditions stabilised and sufficient gas was available for restart.

1418 Over the next 2-3 years, Jemena's focus is to monitor the outcome of the Eni drilling at Blacktip gas field to understand the implications for NGP operations and work with market participants to connect new sources of supply to the NGP.

1419 Jemena has no ability or incentive to foreclose Origin's rivals in a way that substantially lessens competition in gas retail supply in any east coast gas retail market.

1420 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its ownership of the NGP to discriminate in favour of Origin.

1421 **Second**, Temasek's interest in Jemena is only 40% with the remaining interest owned by State Grid, and indirect through SP Group which operates independently from Temasek, meaning it has limited ability to seek to use its ownership of the NGP to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy.

1422 **Third**, Jemena has limited ability or incentive to discriminate in favour of Origin's gas retail business in the eastern states. This is because:

- (a) The NGP is operating with excess capacity. Historically, the NGP has had excess capacity due to a low level of contracted capacity. As is demonstrated from its closure over recent times, is reliant on there being a minimum volume of gas for operation. It is therefore economically incentivised to ensure that enough capacity is contracted to allow its operation. This was noted by the AEMC in its determination granting the NGP a derogation from Part 23, it quoted that "[APA Group] consider that ...rather than seeking

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<sup>756</sup> ABC, *NT's Blacktip gas field production drops, forcing shutdown of Northern Gas Pipeline* <<https://www.abc.net.au/news/2022-10-22/blacktip-gas-field-production-problems-power-and-water/101555526>>; ABC, *NT's Blacktip gas field production drops, forcing shutdown of Northern Gas Pipeline* <<https://www.abc.net.au/news/2022-10-22/blacktip-gas-field-production-problems-power-and-water/101555526>>.

<sup>757</sup> AFR, *NT gas breakdown adds to east coast energy woes* <<https://www.afr.com/companies/energy/nt-gas-breakdown-adds-to-east-coast-energy-woes-20221012-p5bp7y>>.

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to exercise monopolistic market power, the commercial incentives of the NGP are quite the opposite – to offer competitive rates that support customers and encourage utilisation" given only a third of the pipeline's capacity has been contracted under firm long term arrangements.<sup>758</sup>

- (b) Commercial and industrial customers located in Mount Isa are key customers for gas transported through the NGP. There is no gas distribution network in Mount Isa and therefore no retail customers. Although gas can be transported from Mount Isa into the broader east coast gas market, the aggregate transportation costs to Adelaide, Sydney and Melbourne become very significant. The indicative standing price for transporting gas from the Northern Territory (Tennant Creek to Sydney, Melbourne (Culcairn) or Adelaide ranges from \$4.88-\$5.27/GJ which can add a significant amount to delivered gas prices.<sup>759</sup> As a consequence supply of gas through the NGP is not competitively significant for gas retailers in the east coast market under normal supply conditions. East coast gas retailers will continue to predominantly source gas from Queensland, South Australian and Victorian producers.

1423 **Fourth**, the NGP is subject to a set of Access Principles agreed with the Northern Territory Government as part of the competitive tender process in October 2014.<sup>760</sup> According to the Access Principles, Jemena must:

- (a) supply firm services and as-available services on a non-discriminatory basis;
- (b) provide access seekers with access to firm services at tariffs set out in the access principles and as-available services at the rates published on Jemena's website;
- (c) notify the Northern Territory of any proposed increases/decreases in tariffs; and
- (d) resolve any disputes with an access seeker in accordance with the dispute resolution procedure.

1424 This regime, including the transparency measures and availability of a regulated dispute resolution process, will make it very difficult for Jemena to engage in foreclosure strategies.

### 12.4 Jemena's other transmission pipeline interests

#### *Jemena's Queensland Pipelines*

1425 Jemena owns 100% of the Queensland Gas Pipeline (**QGP**), the Darling Downs Pipeline (**DPP**) and the Atlas Gas Processing Facility Pipeline (**Atlas Gas Pipeline**).

1426 **The Queensland Gas Pipeline** links the Wallumbilla Gas Supply Hub (**WGS**H) in south central Queensland to large industrial gas users in Gladstone and Rockhampton and retail distribution networks in Gladstone, Rockhampton and the Wide Bay area. Gas is sourced from conventional gas and coal seam fields located along the pipeline route in the Bowen-Surat basins and the Dennison Trough.

1427 **The Darling Downs Pipeline** links WGS

H with the Talinga gas plant (near Chinchilla) and the Darling Downs gas-fired power station (owned by Origin Energy Markets). Gas is sourced from the Talinga coal seam gas fields in the Bowen-Surat basin, which are owned by Australia Pacific

<sup>758</sup> AEMC, *Rule Determination – National Gas Amendment (Northern Gas Pipeline – Derogation from Part 23) Rule 2019* (4 July 2014) 41 <<https://www.aemc.gov.au/sites/default/files/2019-07/GRC0047%20-%20final%20determination%20-%20rule%20determination.pdf>>.

<sup>759</sup> ACCC, *Gas inquiry 2017-2030 interim report* (January 2023); 100; <[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL\\_0.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL_0.pdf)>.

<sup>760</sup> APGA, *Northern Gas Pipeline* <https://www.apga.org.au/northern-gas-pipeline>; Jemena, NGP Access Principles <https://jemena.com.au/documents/pipeline/ngp-access-principles.aspx>; AEMC, *Northern Gas Pipeline Derogation from Part 23 of NGR* <<https://www.aemc.gov.au/sites/default/files/2019-06/Jemena.PDF>>.

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LNG.<sup>761</sup> Origin Energy Markets receives gas through this pipeline at the Darling Downs Power Station.

1428 **The Atlas Gas Pipeline** links WGSB with Senex's Atlas gas fields (owned by Jemena) via the Darling Downs Pipeline. The pipeline is used solely to transport Senex's gas.<sup>762</sup> Jemena owns and operates the Atlas Gas Processing Facility and Pipeline. Currently this facility and pipeline are only connected to the Senex owned Atlas Gas Fields.

1429 An overview of these three pipelines is set out in **Figure 117** below:

**Figure 117: Overview of Jemena owned pipelines in Queensland**

Pipeline	Key facts	Regulation
<b>Queensland Gas Pipeline</b>	<p><b>Use:</b> Transports gas from the Surat Basin, Denison Trough and Bowen Basin to Gladstone and Rockhampton. Natural gas and coal seam gas enters the pipeline at Wallumbilla and at various receipt points located near gas fields along the pipeline route. The Queensland Gas Pipeline links the Wallumbilla gas hub in south central Queensland to large industrial gas users in Gladstone and Rockhampton. This pipeline connects to the retail networks in Gladstone, Rockhampton and Wide Bay.</p> <p><b>Length:</b> 627 km<sup>763</sup></p> <p><b>Capacity:</b> Approximately 145 TJ per day</p>	Non-scheme pipeline under the NGR
<b>Darling Downs Pipeline</b>	<p><b>Use:</b> The DDP consists of three interconnected gas transmission pipeline licences in the Darling Downs region in South-East Queensland that operate as a single pipeline network. It transports gas from the Bowen-Surat basin to the Wallumbilla gas hub, Origin Energy Markets' 630MW Darling Downs Power Station and to APLNG's export pipeline.</p> <p><b>Length:</b> 292 km</p> <p><b>Capacity:</b> ranging from 155 TJ per day to 502 TJ per day</p>	Non-scheme pipeline under the NGR
<b>Atlas Gas Pipeline and processing facility</b>	<p><b>Use:</b> The Atlas Gas Processing Facility (<b>AGPF</b>) and pipeline were designed and constructed by Jemena to process and transport gas from Senex Energy's Atlas block in the Surat Basin to Wallumbilla, via Jemena's Darling Downs Pipeline (DDP). Since commencement of commercial operation in November 2019, production at the AGPF has increased to the nameplate of 48TJ/d in March 2022. The AGPF connects to the DDP via a 60 km lateral pipeline.</p> <p><b>Length:</b> 60 km</p>	On 7 July 2020, the AER granted Atlas Gas a Category 2 exemption under Part 23 of the NGR. Under transitional arrangement that exemption has been continued with the effect that Jemena is exempt from the obligation to publish certain information under Part 10 of the NGR with respect to

<sup>761</sup> AEMC, QLD: Darling Downs Pipeline <[https://www.aemc.gov.au/energy-rules/national-gas-rules/gas-scheme-register/gld-darling-downs-pipeline#:~:text=The%20Darling%20Downs%20Pipeline%20\(DDP,a%20diameter%20of%20450%20mm](https://www.aemc.gov.au/energy-rules/national-gas-rules/gas-scheme-register/gld-darling-downs-pipeline#:~:text=The%20Darling%20Downs%20Pipeline%20(DDP,a%20diameter%20of%20450%20mm)>; Origin, Exploration and production <<https://www.originenergy.com.au/about/who-we-are/what-we-do/exploration-production/>>.

<sup>762</sup> AEMC, QLD: Atlas Gas Processing Facility Pipeline <<https://testsite.aemc.gov.au/energy-rules/national-gas-rules/gas-scheme-register/gld-atlas-gas-processing-facility-pipeline>>.

<sup>763</sup> Jemena, What we own <<https://jemena.com.au/about/what-we-own>>.

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Pipeline	Key facts	Regulation
	<b>Capacity:</b> ~40 TJ/d	Atlas Gas. The exemption expires on 1 March 2024. <sup>764</sup> The basis of the exemption is that the pipeline is a single shipper pipeline. <sup>765</sup>

Source: Various publicly available sources, as referenced in relevant footnotes

- 1430 Jemena has no ability or incentive to foreclose Origin's rivals in a way that substantially lessens competition in Queensland gas retail supply or Queensland generation.
- 1431 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its ownership of the DDP and QGP to discriminate in favour of Origin.
- 1432 **Second**, Temasek's interest in Jemena is only 40%, with the remaining interest owned by State Grid, and indirect through SP Group, which operates independently from Temasek, meaning it has limited ability to seek to use its ownership of the DDP and QGP to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy.
- 1433 **Third**, DDP and QGP are non-scheme pipelines regulated as such under the NGR. As outlined above in paragraph 1397, under Part 10, Jemena is required to disclose standard pricing information and standard terms and condition for non-scheme pipelines, which provides pipeline customers with information that allows them to better negotiate transport contracts. If a gas retail competitor of Origin were to request pricing and receive an offer that is significantly more expensive, or the terms were significantly different and unattractive, that customer can easily request services at the standard rate and on the standard terms. It is also not possible for Jemena to publish a standard rate that is so unattractive to retail customers that will discourage contracting with Jemena. This is because in addition to publishing standard pricing and terms, Jemena must also publish weighted average pricing and revenue information. As such, any pricing can be compared to Jemena's weighted average pricing information and pipeline customers can negotiate on this basis. If that negotiation is unsuccessful, Part 12 also provides for an arbitration process that customers can use to resolve a dispute. These transparency measures make it very difficult for Jemena to engage in foreclosure strategies.

### ***Roma North Pipeline and Colongra Gas Transmission Pipeline***

- 1434 Jemena owns 100% of the Roma North Gas Processing Facility Pipeline (**RNP**) and Colongra Gas Transmission and Storage Pipeline (**CGT**).
- 1435 RNP transports gas for Senex, a natural gas producer, from the Roma North gas fields to GLNG's export pipeline. The gas is then transported to GLNG's LNG processing facility at Curtis Island,<sup>766</sup> where is refined into LNG and exported to Asian markets. Gas that travels through this pipeline never enters domestic retail markets.
- 1436 CGT transports gas for Snowy Hydro, a Commonwealth Government owned generator, to the Colongra Power Station (**CPS**). The CPS is gas-fired power station owned by Snowy Hydro. It operates as a peaking plant that supplies electricity at short notice during periods of peak demand or system emergency situations.

<sup>764</sup> Mark McLeish, *AER letter to Jemena Re: Part 23 exemption – Atlas Gas Processing Facility Pipeline* (7 July 2020) AER <<https://www.aer.gov.au/system/files/AER%20letter%20to%20Jemena%20re%20Part23%20exemption%20for%20Atlas%20Gas%20Processing%20Facility%20Pipeline%20-%202020%20July%202020.pdf>>.

<sup>765</sup> Jemena, *Part 23 (Access to Non-scheme Pipelines) Exemption Application Form*, AER, 3 <<https://www.aer.gov.au/system/files/Jemena%20-%20Atlas%20GPF%20Part%2023%20exemption%20applicaton%20-%202018%20June%202020.pdf>>.

<sup>766</sup> AEMC, *QLD: GLNG Pipeline* <<https://www.aemc.gov.au/energy-rules/national-gas-rules/gas-scheme-register/qld-glng-pipeline>>.



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1437 Jemena's ownership of RNP and CGT does not give rise to any vertical relationships with Origin Energy Markets because both pipelines are single shipper pipelines that do not transport gas to retailers. These pipelines are therefore not discussed further here.

### 12.5 Jemena has no ability or incentive to foreclose Origin's retail rivals in the Victorian electricity retail market

#### Overview

1438 Jemena owns one of five Victorian electricity distribution networks.

1439 The ACCC may wish to consider whether vertical competition issues may arise and whether Jemena has the incentive and ability to use its position in the Victorian electricity distribution markets to anti-competitively foreclose Origin's retail rivals in Victoria.

1440 Jemena has no ability or incentive to foreclose Origin's retail rivals in a way that substantially lessens competition in Victorian retail supply.

1441 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its ownership of a Victorian electricity distribution network to discriminate in favour of Origin.

1442 **Second**, Temasek's interest in Jemena is only 40%, with the remaining interest owned by State Grid, and indirect through SP Group, which operates independently from Temasek, meaning it has limited ability to seek to use its ownership of a Victorian electricity distribution network to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy.

1443 **Third**, all electricity distributors are subject to the NEL and NER and are regulated by the AER. Therefore – like AusNet (and as outlined in Chapter 9) – Jemena does not have the ability under the regulatory regime to use its position to foreclose Origin's rivals. The impact of the regulatory regime is briefly summarised below.

- (a) **No ability to discriminate in relation to pricing:** The principal services provided by Jemena in Victoria are direct control services. The prices for providing direct control services are regulated by the AER through its five yearly distribution determinations. The AER regulates both maximum allowable revenue and tariffs for direct control services and Jemena cannot reduce the tariff paid by a customer of an affiliated retailer or increase the tariff paid by a customer of a non-affiliated retailer.
- (b) **Pricing of negotiated distribution services:** Jemena has not proposed to provide any services on a negotiated basis in the 2021–26 regulatory control period.<sup>767</sup> If in future, Jemena provides services classified by the AER as negotiated distribution services under the NER, negotiations with customers must comply with the negotiation framework which has been approved by the AER (including a dispute resolution process). This regime means that Jemena cannot discriminate against Origin's retail competitors.
- (c) **No ability or incentive to discriminate in relation to connection and access:** Jemena has no ability to discriminate in favour of Origin's retail electricity business in relation to connection and access to electricity distribution networks due to the regulatory framework including the requirements of the NER and the Electricity Distribution Code. Jemena must follow specific steps that are prescribed to ensure a DNSP provides information to

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<sup>767</sup> AER, Final Decision – Jemena Distribution Determination 2021 to 2026: Overview (30 April 2021); 1-10 <<https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Jemena%20distribution%20determination%202021%E2%80%9326%20-%20Overview%20-%20April%202021.pdf>>; AER, Final Decision – United Energy Distribution Determination 2021 to 2026: Overview (30 April 2021) 1-9 <<https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20United%20Energy%20distribution%20determination%202021%E2%80%9326%20-%20Overview%20-%20April%202021.pdf>>

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connection applicants regarding the commercial terms and engineering requirements for connection to occur in a timely manner, and to conduct negotiations for a negotiated connection in good faith with the applicant. Jemena is required to make connections within set timeframes irrespective of their chosen retailer. A DNSP's failure to provide access to the distribution network following a customer request can result in enforcement action by the ESC including civil penalties under the *ESC Act*.<sup>768</sup> The ESC regularly audits and investigates DNSPs against their compliance with service levels in relation to connection services and reliability of supply.

- (d) **No ability to discriminate in relation to augmentation, investment or maintenance services:** Jemena could not target investment or maintenance in a way that unfairly benefits Origin's retail electricity business, or in a way that harms non-Origin electricity retailers due to the publicly transparent nature of the regulatory framework, including AER and AEMO oversight and the involvement of other market participants. There is no possible means by which a DNSP could selectively invest in parts of its network to benefit only one particular electricity retailer and not competing downstream providers connected to the same part of the network. The ramifications of reducing maintenance or quality of services in a particular part of the distribution network would create safety hazards and reputational, legal and compliance risks for Jemena that would outweigh any hypothetical incentive to engage in discriminatory maintenance of its distribution network.
- (e) **No ability to cross subsidise retail and distribution services:** The DRFG's requirement for a) legal separation by a DNSP (ie, direct control services) from the provision of contestable services by an affiliated entity; b) the internal accounting procedures rules regarding the nature and extent of transactions between a DNSP and its affiliated entities; and c) the application of an AER approved cost allocation methodology related to regulated and contestable services ensure that there can be no cross subsidisation of a contestable business by the distribution business.<sup>769</sup> In addition, due to the separate ownership, a cross subsidisation strategy is practically impossible.
- (f) **No ability to misuse confidential information or engage in other forms of discrimination:** The NER and the DRFG prevent Jemena from misusing competing retailers' confidential information, providing unequal access to information, or otherwise discriminating against Origin's competitors. Jemena is required to keep all ring-fenced information confidential and only use it for the purpose for which it was acquired or generated. Jemena will not be able to pass on information about planned distribution network investments or future network constraints that are not yet public to Origin Energy Markets in order to advise its customers on investment decisions or use short-term or real-time information on network congestion to inform Origin's operational decisions. Jemena must deal or offer to deal with a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider on substantially the same terms and conditions. Jemena must provide substantially the same quality, reliability and timeliness of service to a related electricity service provider and a competitor (or potential competitor) of the related electricity service provider. Each year, Jemena must prepare and submit to the AER a ring-fencing compliance report that is independently verified for compliance with each provision of the DRFG by a qualified auditor.

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<sup>768</sup> Essential Services Commission, *Electricity Distribution Code of Practice*, Version 1, 1 October 2022, cl 14.4, Sch 1.

<sup>769</sup> DRFG, cl 3.1(b); cl 3.2.1; cl 3.2.2.

**12.6 Evoenergy has no ability or incentive to foreclose Origin's retail rivals in the New South Wales and the ACT gas retail markets**

- 1444 Evoenergy owns and operates two gas networks that run through New South Wales: the Canberra system (covering Queanbeyan – Palerang in New South Wales) and the Nowra gas distribution. Jemena has an operating agreement for the gas distribution network where the day to day operations are outsourced to Jemena.
- 1445 The ACCC may wish to consider whether vertical competition issues may arise and whether Evoenergy has the incentive and ability to use its position in the New South Wales and ACT gas distribution markets to anti-competitively foreclose Origin's retail rivals in New South Wales and the ACT.
- 1446 Jemena has no ability or incentive to foreclose Origin's retail rivals in a way that substantially lessens competition in New South Wales or ACT retail supply.
- 1447 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its interest in Evoenergy to discriminate in favour of Origin.
- 1448 **Second**, Temasek's interest in Jemena which in turn owns 50% of Evoenergy is only 40% (with the remaining interest owned by State Grid) and indirect through SP Group, which operates independently from Temasek, which in turn owns 50% of Evoenergy, meaning it has limited (to no practical) ability to seek to use its interest in Evoenergy to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy. Similarly, the ACT government (which has a 50% interest in Evoenergy) is unlikely to approve any foreclosure strategy.
- 1449 **Third**, all gas distributors are subject to the NGL and NGR and are regulated by the AER. Therefore – like AusNet and Jemena (and as outlined in Chapter 9, and sections 12.1 and 12.2) – Evoenergy does not have the ability under the regulatory regime to use its position to foreclose Origin's rivals. Evoenergy's distribution network in the ACT is regulated in accordance with Part 12A of the NGR and the AER regulates access (usage) prices for gas distribution services specifically reference services through its five yearly distribution determinations and non-reference services as agreed or as determined in accordance with that Part.

**12.7 Evoenergy has no ability or incentive to foreclose Origin's retail rivals in the ACT electricity retail market**

- 1450 Evoenergy owns and operates the electricity network in the ACT. The electricity distribution network's day to day operations are managed internally by ActewAGL staff.
- 1451 The ACCC may wish to consider whether vertical competition issues may arise and whether Evoenergy has the incentive and ability to use its position in the ACT electricity distribution market to anti-competitively foreclose Origin's retail rivals in the ACT.
- 1452 Jemena has no ability or incentive to foreclose Origin's retail rivals in a way that substantially lessens competition in ACT retail supply.
- 1453 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its interest in Evoenergy to discriminate in favour of Origin.
- 1454 **Second**, Temasek's interest in Jemena which in turn owns 50% of Evoenergy is only 40% (with the remaining interest owned by State Grid), and indirect through SP Group, which operates independently from Temasek, meaning it has limited ability to seek to use its interest in Evoenergy to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy. Similarly,

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the ACT government (which has a 50% interest in Evoenergy) is unlikely to approve any foreclosure strategy.

1455 **Third**, all electricity distributors are subject to the NEL and NER and are regulated by the AER. Therefore – like Jemena (and as outlined in section 12.5 above) – Evoenergy does not have the ability under the regulatory regime to use its position to foreclose Origin's rivals.

### 12.8 United Energy has no ability or incentive to foreclose Origin's retail rivals in the Victorian electricity retail market

1456 United Energy owns one of five electricity distribution networks in Victoria. United Energy supplies more than 630,000 customers in a 1,472 square kilometre area from the south-eastern suburbs, down to the Mornington Peninsula.

1457 Jemena has no ability or incentive to foreclose Origin's retail rivals in a way that substantially lessens competition in Victorian retail supply.

1458 **First**, Temasek will have only a 9.9% indirect interest in Origin Energy Markets, meaning it has limited incentive to seek to use its interest in United Energy to discriminate in favour of Origin.

1459 **Second**, Temasek's interest in Jemena which in turn owns 34% of United Energy, is only 40% of Jemena (with the remaining interest owned by State Grid) and indirect through SP Group, which operates independently from Temasek, which in turn owns 34% of United Energy, meaning it has limited ability to seek to use its interest in Evoenergy to discriminate in favour of Origin. State Grid has a 60% interest in Jemena and no interest in Origin Energy Markets and is unlikely to approve any foreclosure strategy. Similarly, Cheung Kong Infrastructure Holdings (which has a 66% interest in United Energy) is unlikely to approve any foreclosure strategy.

1460 **Third**, all electricity distributors are subject to the NEL and NER and are regulated by the AER.<sup>770</sup> Therefore – like Jemena and Evoenergy (and as outlined in section 0 above) – United Energy does not have the ability under the regulatory regime to use its position to foreclose Origin's rivals.

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<sup>770</sup> AER, *Final Decision – United Energy Distribution Determination 2021 to 2026: Overview* (30 April 2021) pages 1 to 9 <<https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20United%20Energy%20distribution%20determination%202021%E2%80%9326%20-%20Overview%20-%20April%202021.pdf>>

## 13 No substantial lessening of competition in relation to smart meters

### 13.1 Overview

- 1461 Smart meters are primarily used in Australia in the electricity sector, and currently only to a very limited extent by water and gas retail customers. Smart meters typically serve three main customer categories across the NEM:
- (a) **Mass market customers:** Residential customers and small-to-medium-sized enterprises).
  - (b) **Embedded networks:** High-density residential buildings, retail, aged care communities and corporate parks).
  - (c) **Commercial and industrial (C&I):** Customers: ie, large businesses with direct access to the wholesale electricity market).
- 1462 The vast majority of the supply of smart meters is to energy retailers that service 'mass market' customers. The other customer segments, being C&I customers and embedded networks, are not material relative to the overall smart meter industry. For that reason, this overview focuses on the supply of smart meters to energy retailers supplying mass market customers, but further detail on servicing embedded networks and C&I customers can be found at paragraphs 705 and 706 above.
- 1463 Historically, the responsibility for installing and maintaining mass market smart meters sat with DNSPs. However, on 1 December 2017, AEMO introduced the Power of Choice reforms which were intended to enhance competition in this space and help mass market consumers (ie, residential customers and small-medium enterprises) better manage their electricity usage.
- 1464 It is now the responsibility of mass market electricity retailers in the NEM (excluding Victoria) to appoint a Metering Coordinator to maintain and install meters.<sup>771</sup> The mass market NEM (excluding Victoria) had a ~30% smart meter penetration rate in 2022,<sup>772</sup> with the AEMC expecting full deployment of smart meters by 2040 if the current rate of installation continued at the same pace.<sup>773</sup> The AEMC, seeking a faster rollout, has put forward a recommendation for a 100% uptake of smart meters in the mass market by 2030, as part of the transition to net zero.<sup>774</sup>
- 1465 The main and largest area of supply of smart meters is the 'mass market'. Mass market deployment of smart meters occurs in residential buildings and small-medium sized enterprises. The retailer is the key decision maker in determining the choice of metering provider, with meters installed at the customer's home or business.
- 1466 For mass market deployment, energy retailers typically hold tenders to award smart meter deployment contracts, with smart meter providers competing vigorously to win volumes.
- 1467 Energy retailers have significant volumes available for deployment. Each energy retailer's approach to allocating those volumes differs. The most common approach is for an energy

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<sup>771</sup> AEMC, *Rule Determination – National Electricity Amendment (Expanding competition in metering and related services) Rule 105* (26 November 2015), pages v-vi  
<<https://www.aemc.gov.au/sites/default/files/content/ed88c96e-da1f-42c7-9f2a-51a411e83574/Final-rule-determination-for-publication.pdf>>.

<sup>772</sup> AEMC, *Review of the regulatory framework for metering services - Draft Report* (3 November 2022) p 6  
<<https://www.aemc.gov.au/sites/default/files/2022-11/Draft%20report.pdf>>.

<sup>773</sup> AEMC, *Review of the regulatory framework for metering services* (16 September 2021), page 3  
<<https://www.aemc.gov.au/sites/default/files/2021-09/EMO0040%20Metering%20Review%20Directions%20paper%20FINAL.pdf#:~:text=Outside%20of%20Victoria%2C%20the%20current,not%20occur%20until%20after%202040>>.

<sup>774</sup> AEMC, *Draft Report – Review of the regulatory framework for metering services* (3 November 2022), page ii  
<https://www.aemc.gov.au/sites/default/files/2022-11/Draft%20report.pdf>.

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retailer to award a significant volume to the winning tenderer on an exclusive basis (or non-exclusive but sole basis<sup>775</sup> over a long term time horizon) while retaining some flexibility to retain relationships with other smart meter providers. Other retailers adopt panel arrangements, whereby smart meter providers must continue to offer a high quality service to continue to be awarded volumes. In either case, smart meter providers compete vigorously to be awarded large volume contracts or be appointed to a retailers panel, as the consequence of not providing the best possible terms could result in a long term loss in business (noting the infrequent nature of these tenders). The majority of energy retailers still have significant volumes to award ahead of AEMO's expected 2030 deadline.

- 1468 There is no obligation on a smart meter provider to provide metering services and no regulation of the price of these services.<sup>776</sup> The price of services is subject to commercial negotiations between the smart meter provider and the energy retailer.
- 1469 There are a number of suppliers of smart meters and related services to energy retailers for deployment across the mass market including **Intellihub**, **Vector**,<sup>777</sup> **Spotless**,<sup>778</sup> **Yurika**,<sup>779</sup> **PlusES**,<sup>780</sup> **Metropolis**<sup>781</sup> and others.
- 1470 These players also service embedded networks and C&I customers, but this comprises a much smaller proportion of their respective businesses than mass market deployment. A number of smaller players have particularly strong offerings for embedded networks (such as **Spotless**) or C&I customers (such as **Mondo**<sup>782</sup> and **PowerMetric**<sup>783</sup>). A brief description of each of the key smart meter providers in Australia is set out below, with additional detail in paragraph 709 above.
- (a) **Vector**: Vector has installed more than 2 million advanced meters across both Australia and New Zealand, with 528,000 advanced meters installed in Australia as at 31 December 2022.<sup>784</sup> Vector cites its customers as some of Australia and New Zealand's 'leading electricity and gas retailers',<sup>785</sup> with services offered for both residential and small business customers.
- (b) **Yurika**: Yurika has installed more than 500,000 meters across the NEM for residential, commercial and industrial customers.<sup>786</sup> Yurika cites long-standing partnerships with customers including Coles, Wesfarmers, McDonald's, the South Australian government, and Boral, as well as recently entered metering service agreements with a number of energy retailers including Ergon Retail, Telstra, Next Business Energy, and Iberdrola.<sup>787</sup>
- (c) **PLUS ES**: By 2022, PLUS ES had installed more than 1 million meters across the NEM,<sup>788</sup> and works in partnership with utilities providers to collect, store and deliver data services for more than 2.5 million meters.<sup>789</sup> PLUS ES cites its customers as 'Australia's

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<sup>775</sup> That is, a contract may be awarded to a single meter coordinator, but this is not exclusive and the energy retailer reserves the right to appoint another meter coordinator at any point.

<sup>776</sup> AEMC, *Rule Determination – National Electricity Amendment (Expanding competition in metering and related services) Rule 2015* (26 November 2015), page xi <<https://www.aemc.gov.au/sites/default/files/content/ed88c96e-da1f-42c7-9f2a-51a411e83574/Final-rule-determination-for-publication.pdf>>.

<sup>777</sup> Vector Metering, *Metering Solutions for a new energy future* <<https://vectormetering.com/au/>>.

<sup>778</sup> Spotless, *Integrated facilities services* <<https://www.spotless.com/>>.

<sup>779</sup> Yurika, *Connecting Australians to a sustainable energy future* <<https://www.yurika.com.au/>>.

<sup>780</sup> Pluses, *Enabling businesses to build out future communities* <<https://pluses.com.au/>>.

<sup>781</sup> Metropolis, *What we do* <<https://www.metropolis.net.au/>>.

<sup>782</sup> Mondo, *Business Metering* <<https://mondo.com.au/business/metering/>>.

<sup>783</sup> PowerMetric, *What we do* <<https://powermetric.com.au/what-we-do/metering/>>.

<sup>784</sup> Vector, *Market release – Vector announces solid half year results* (21 February 2023) p 6 <<https://blob-static.vector.co.nz/blob/vector/media/news-articles/04-vct-vector-announces-solid-half-year-results.pdf>>.

<sup>785</sup> Vector Metering, *Metering solutions for a new energy future* <<https://vectormetering.com/au/>>.

<sup>786</sup> Yurika, *Our approach* <<https://www.yurika.com.au/our-approach/>>.

<sup>787</sup> Energy Queensland, *Annual Report 2021-22* (19 August 2022) <[https://www.energyq.com.au/\\_data/assets/pdf\\_file/0019/1030834/EQL-Annual-Report-2021-22\\_DIGITAL.pdf](https://www.energyq.com.au/_data/assets/pdf_file/0019/1030834/EQL-Annual-Report-2021-22_DIGITAL.pdf)>.

<sup>788</sup> PLUS ES, *PLUS ES installs one millionth meter two years ahead of schedule* <<https://pluses.com.au/plus-es-installs-one-millionth-meter-two-years-ahead-of-schedule/>>.

<sup>789</sup> PLUS ES, *PLUS ES Utility Services* <<https://pluses.com.au/utility-services/>>.

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leading energy retailers, brokers and consultants', as well as direct commercial customers including utilities, embedded network operators and infrastructure owners.<sup>790</sup>

- (d) **Metropolis Metering:** Metropolis Metering has significant reach across the NEM. Metropolis Metering cites its customers as retailers, energy brokers and consultants, direct customers, and embedded networks.<sup>791</sup>
- (e) **Spotless:** In 2016, Spotless' CEO was quoted stating that Spotless had installed 1 million smart meters as part of the Victorian Advanced Metering Infrastructure Program, and read 3.5 million and 1.5 million meters four times a year in NSW and Southeast Queensland.<sup>792</sup>
- (f) **Mondo:** Mondo has installed more than 24,000 meters across the NEM,<sup>793</sup> and provides Metering Coordinator, Metering Provider, Metering Data Provider and Embedded Network Manager services.<sup>794</sup> Mondo cites its metering services customers as commercial and industrial customers, electricity authorities, energy retailers, and consultants. Mondo cites its metering services customers as commercial and industrial customers, electricity authorities, energy retailers, and consultants.
- (g) **PowerMetric:** PowerMetric operates across the NEM, as well as providing some services in Western Australia.<sup>795</sup> PowerMetric provides Metering Coordinator, Metering Provider and Metering Data Provider services.<sup>796</sup> PowerMetric cites its customers as energy brokers, energy retailers, embedded networks, and direct metering customers including dnata and yesgroup.<sup>797</sup>

1471 The Proposed Acquisition will have no effect on the supply of smart meters in the NEM (excluding Victoria) to the mass market, embedded networks or the C&I customers. There will be no increase in Intellihub's share of volumes, and it will continue to be constrained by existing players including Vector, Yurika, Spotless, PlusES and others.

1472 Section 5.3 above sets out a more detailed overview of the smart meter industry.

### 13.2 Relationship between Intellihub and Origin Energy Markets

1473 BIF IV owns 50% of Intellihub, a smart meter provider that delivers metering and data solutions principally, for the electricity sector. Origin, in its capacity as energy retailer, procures smart meters (and related services) for use in its downstream retail business from Intellihub.

1474 Origin used to have its own smart metering business, Acumen. It divested this business in June 2018 to Intellihub (then a joint venture between PEP and Landis+Gyr) for \$267 million.

1475 The sale of the Acumen business included the management and servicing of around 170,000 smart meters already deployed, and a long-term contract with Origin for the installation of **Confidential to Origin and Intellihub: a significant number of** smart meters to the mass market or embedded networks across Australia over the period 2018 to **Confidential to Origin and Intellihub: an end date in the future**, as well as a **Confidential to Origin and Intellihub: volume-related contractual commitment**. This contract formed the basis of the Intellihub business. The contract was varied in March 2022 (at the time Brookfield's investment in Intellihub was completed) to increase the volume commitment to **Confidential to Origin and Intellihub: a**

<sup>790</sup> PLUS ES, *Metering* <<https://pluses.com.au/metering/>>.

<sup>791</sup> Metropolis Metering, *What we do* <<https://www.metropolis.net.au/what-we-do/>>.

<sup>792</sup> Renew Economy, *Spotless advanced metering delivers 'power of choice'* (29 November 2016)

<<https://reneweconomy.com.au/spotless-advanced-metering-delivers-power-choice-56324/>>.

<sup>793</sup> Mondo, *Low Voltage Electricity Metering* <<https://mondo.com.au/business/low-voltage-electricity-metering/>>.

<sup>794</sup> Mondo, *Business* <<https://mondo.com.au/business/>>.

<sup>795</sup> PowerMetric, *Who we work with* <<https://powermetric.com.au/who-we-work-with/>>.

<sup>796</sup> PowerMetric, *About Us* <<https://powermetric.com.au/about-us/>>.

<sup>797</sup> PowerMetric, *Who we work with* <<https://powermetric.com.au/who-we-work-with/>>.

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**material proportion of Origin's smart meter requirements**, extend the term to **Confidential to Origin and Intellihub: a later date**, and included **Confidential to Origin and Intellihub: further contractual commitments**.

- 1476 Intellihub is not the exclusive supplier of mass market Metering Coordinator services to Origin. Origin has always maintained a panel of providers. Origin has acquired smart meters and related services from Vector since 2016 and continues to use Vector.
- 1477 Set out below is a discussion of whether following the Proposed Acquisition:
- (a) Intellihub would have the ability and incentive to use its position in the Australian smart meter market to anti competitively foreclose Origin's retail rivals and thereby lessen competition in the relevant electricity retail market (see section 13.3); or
  - (b) whether Origin has the ability and incentive to use its position in a relevant electricity retail market to anti competitively foreclose Intellihub's smart meter rivals and thereby lessen competition in the Australian smart meter market (see section 13.4)
- 1478 For completeness, AusNet (45.4% owned by Brookfield affiliates BSIP and BIP) runs a contestable, commercial energy business, Mondo, which includes a smart metering business that specialises in servicing embedded network and C&I customers. It does not service the mass market. Brookfield's interests in Mondo and Intellihub pre-date the Proposed Acquisition and are not merger specific.
- 1479 For the same reasons discussed below in respect of Intellihub and Origin, Mondo will not be in a position to leverage its position in the smart meter market to lessen competition in the energy retail market, and Origin will not be in a position to leverage its position in the retail market to lessen competition in the smart meter market.

### 13.3 Leveraging position in smart meter market to lessen competition in retail market

#### *Ability*

- 1480 Intellihub does not have the ability to discriminate against Origin's rivals in the retail business because it does not have market power.
- 1481 The ACCC has previously noted that:
- an integrated merged firm would only be able to engage in foreclosure strategies against rival downstream firms if it had sufficient market power in the upstream market — that is, where its downstream rivals faced insufficient viable supply alternatives.<sup>798</sup>
- 1482 Intellihub does not have market power. It is only one of a number of suppliers of smart meters in Australia and faces significant competitive constraint from suppliers like Vector, Yurika, Spotless, PlusES and others. Indeed, the level of competition in the supply of smart meters and related services in Australia is high.
- 1483 The purchasers of mass market smart meters are electricity retailers who conduct competitive tenders to appoint a company (or, in some instances, several companies) to supply and install smart meters. The infrequent and periodic nature of competition, with competitive tenders structured to produce high levels of competition involving multiple metering service providers, and with sophisticated buyers (being the electricity providers) which possess high levels of countervailing power, reinforces Intellihub's lack of market power. Estimated shares measured on the basis of smart meters already installed or smart meters contracted to be installed, do not provide a reliable guide to market power. What is relevant to the state of competition is that there are multiple independent alternative smart meter providers able to participate in competitive

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<sup>798</sup> ACCC, *Merger Guidelines* (November 2017) paragraph 5.30.



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tenders structured in a manner determined by electricity retailers. Intellihub is just one of a number of capable providers of smart meters and related services.

- 1484 As a result, Intellihub does not have the ability to refuse to supply or to discriminate against Origin's retail competitors.
- 1485 In relation to the supply and installation of new smart meters, if Intellihub refused to supply an Origin retail competitor that retailer would simply purchase smart meters from an alternative supplier. Similarly, if Intellihub sought to charge Origin 's retail competitors a higher price or to provide a lower quality of service or offered less attractive terms and conditions, Intellihub would lose the competitive tender to one of its competitors. Smart meter providers tender vigorously to win volumes from energy retailers. Pricing is often a very important aspect of any negotiation with the energy retailer given that metering represents a variable cost for energy retailers. Energy retailers have significant countervailing buyer power and operate sophisticated tender processes often awarding significant volumes (maximising the lumpiness of tenders and requiring metering providers to offer highly attractive terms) while also reserving the right to multisource.
- 1486 In relation to existing contracts to supply and install smart meters, the contracts entered into between Intellihub and other retailers would protect those retailers against discrimination by Intellihub. Intellihub has existing agreements in place with each of its customers that govern: (i) the number of smart meters to be deployed, and by when; (ii) its maintenance obligations, including how quickly repairs need to be made; and (iii) the level of data generated, and how that must be conveyed to the retailer.
- 1487 In practice, this means that Intellihub cannot favour Origin smart meter connections to the detriment of Origin's competitors or reduce the quality of its offering to Origin's competitors, as this will be in contravention of its existing contractual obligations.
- 1488 Any failure to meet contractual service levels could expose Intellihub, depending upon the terms of an individual retailer's contract, **Confidential to Intellihub: to adverse consequences under contractual terms**. In any event, Intellihub cannot favour one customer over another as its operating system is agnostic as to the energy retailer. When, for example, a request for the installation of a new smart meter comes in, or a request for maintenance, the request is automatically logged in Intellihub's system in the order in which it is received. The system does not differentiate between requests from different energy retailers.
- 1489 Aside from being bound by Australian privacy laws, the customer contracts also contain provisions that prevent Intellihub providing a retailer's commercially sensitive information to Origin. The contracts commonly contain a confidentiality clause requiring a retailer's confidential information to be kept confidential by Intellihub. Intellihub has a strict internal policy in place to address any actual or perceived conflict of interest associated with its access to commercially sensitive information from competing retailers. In any event, Intellihub only retains very limited customer information post-installation of the smart meter. **Confidential to Origin and Intellihub: Intellihub handles information in accordance with the terms of its agreement with Origin.** Figure 118 below is an extract from Schedule 2 of Intellihub's Accession, Amendment and Restatement Agreement: Master Services Agreement with Origin.

**Figure 118: Extract of deletion clause from Intellihub / Origin agreement Confidential to Origin and Intellihub: Intellihub handles information in accordance with the terms of its agreement with Origin**

### **Confidential to Origin and Intellihub**

Source: Intellihub / Origin agreement

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- 1490 In respect of the remainder of Intellihub's customers (EnergyAustralia, Alinta, AGL, Aurora, Telstra, Simply Energy and Red Energy), the obligation on Intellihub to delete, destroy, de-identify and / or return customer information arises in one or more of the following instances:
- (a) **Confidential to Intellihub: Circumstance in which Intellihub deletes information under key customer contracts**
  - (b) **Confidential to Intellihub: Circumstance in which Intellihub deletes information under key customer contracts**
  - (c) **Confidential to Intellihub: Circumstance in which Intellihub deletes information under key customer contracts**
- 1491 **Confidential to Intellihub: To the extent that the Proposed Acquisition proceeds, a competition protocol will govern use of information, staff separation, restrict communication, and reinforce physical and electronic separation, and physical access restrictions.**
- (a) **Confidential to Intellihub**
  - (b) **Confidential to Intellihub**
  - (c) **Confidential to Intellihub**
  - (d) **Confidential to Intellihub**
    - (i) **Confidential to Intellihub**
    - (ii) **Confidential to Intellihub**
  - (e) **Confidential to Intellihub**
- 1492 **Confidential to Intellihub: Various provisions in the competition protocol will, in effect, apply to Intellihub's customers across the board. Specifically, no director of Intellihub can serve on the board of a major competitor to one of its retail customers (which would include Origin). These arrangements merely serve to provide certainty to Intellihub's customers that the status quo will continue to be maintained, and Intellihub has no intention (or incentive) to alter this process going forward.**
- 1493 In summary, as a result of the above, Intellihub does not have the ability to discriminate against Origin 's rivals in the electricity retail business.
- Incentive***
- 1494 For similar reasons to those outlined above, Intellihub also has no incentive to favour Origin and discriminate against Origin's electricity retail competitors.
- 1495 Given the intense levels of competition observable in the industry, any discrimination by Intellihub against other energy retailers is likely to result in a loss of sales of smart meters to those energy retailers, with no certainty as to any positive impact on Origin's revenue in the energy retail market.
- 1496 Origin is only one of Intellihub's customers. Intellihub's revenue from servicing Origin's mass market customers currently comprises only **Confidential to Intellihub: 30 – 40%** of Intellihub's Australian revenue, or **Confidential to Intellihub: 40 – 50%** if embedded network customers are included.
- 1497 Origin is also still competing to service addressable customer opportunities. As discussed above, the AEMC has recommended, through its Power of Choice guidelines, that all existing meters should be replaced by smart meters by 2030. Save for **Confidential to Intellihub**, none of the energy retailers have yet entered into arrangements with smart meter providers for the entirety of their smart meter needs until 2030. There are approximately three million smart meters that

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remain uncontracted and contestable (ie, have not yet appointed a smart meter provider).<sup>799</sup> If Intellihub sought to discriminate against non-Origin retailers or in some other way preferred Origin, it would risk not being able to win this additional work.

- 1498 In summary, Intellihub would not have the incentive to risk its current and future revenue streams to favour Origin. This lack of incentive is reinforced by the fact that favouring Origin would not significantly advantage Origin in circumstances where retailers either have existing contracts in place, including with Intellihub, with defined service level obligations or, for meters yet to be installed, have a range of alternative suppliers to Intellihub.

### **Ownership**

- 1499 Intellihub's lack of any ability or incentive to discriminate against Origin's retail competitors is reinforced by their different ownership. The Intellihub and Origin interests will be held in different Brookfield funds, in separate business units, each with their own separate boards and management teams.
- (a) BIF IV owns 50% of Intellihub. The remaining 50% is held by PEP, through the PEP Smart Metering Fund (**PEP SMF**). GIC Infra, through an affiliate, is an investor in the PEP SMF, which is managed by PEP. GIC Infra's interests in PEP SMF is **Confidential to GIC: a majority**, giving it an indirect economic interest of **Confidential to GIC: a substantial minority** in Intellihub.
- (b) BGTF will hold the investment in Origin Energy Markets.
- 1500 The investment in Intellihub falls within BIF IV, in BAM's infrastructure division, and is led by its CEO, Samuel Pollock. BIF IV's investment in Intellihub is managed by investment personnel within the infrastructure group located in Sydney. The largest investor in BIF IV is BIP, a company separately listed in New York (NYSE:BIP) and Toronto, with a majority independent board of directors.
- 1501 On the other hand, BGTF is a recently established fund co-led by Mark Carney, BAM Chair and Head of Transition Investing, and Connor Teskey, CEO of Brookfield Renewable Power and Transition. The largest Brookfield investor in BGTF is BEP, a company also separately listed in New York (NYSE:BEP) and Toronto, with a majority independent board of directors.
- 1502 In practice, BGTF and BIF IV are each comprised of different investors. Each of BGTF and BIF IV are also managed by a different 'general partner' which has a duty to act in good faith and in the interests of that fund's investors' interests. The 50% ownership by the PEP SMF in BIF IV also means that PEP would never allow Intellihub to be operated to forgo profits or reduce service levels designed to benefit or give Origin an undue competitive advantage. Even though GIC Infra is a significant investor in the PEP SMF, and will also have an interest in Origin, PEP remains the manager of the PEP SMF with duties owed to other investors. Accordingly, it can be expected that PEP would not approve any Intellihub preferring Origin in circumstances where doing so would reduce Intellihub's profits or otherwise harm Intellihub.
- 1503 Furthermore, as set out at paragraph 528 above, the Intellihub board comprises two directors nominated by BIF IV and two directors nominated by PEP. With two directors, each BIF IV and PEP are equally represented. The effect of this is that BIF IV is unable to unanimously make any decisions on behalf of Intellihub which favour Origin or any other investment which a Brookfield managed fund makes. This serves as a significant safeguard against any perceived preferential

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<sup>799</sup> If a 100% penetration rate is achieved by 2030 across the NEM (excluding Victoria), Intellihub estimates ~8.3 million smart meters will need to be installed in total (assuming no growth in the current mass market customer segment). With the current rollout sitting at approximately 30% across the NEM (excluding Victoria), Intellihub estimates that only ~2.4 million smart meters have been deployed in the mass market to date, leaving around ~5.9 million contestable smart meters to still be installed to 2030. Intellihub estimates that either it or other metering providers have contracted approximately 50% of this volume leaving around 3 million uncontracted and contestable meters.

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treatment of Origin by Brookfield. Further, any BIF IV nominees appointed to the Intellihub board as a director or alternate director will not be permitted to be appointed as a director or alternate director to the Origin Board (and vice versa).

1504 Intellihub is managed day-to-day at the portfolio company level without the involvement of BIP or Brookfield Corporation. The Intellihub board and management team will make their own business decisions including investment and capital expenditure decisions unless it needs to request a capital drawdown from BIF IV for the investment or expenditure.

1505 In summary, the separate ownership and management of Intellihub and Origin reinforces Intellihub's lack of ability or incentive to discriminate in favour of Origin.

### **Conclusion**

1506 In summary, Intellihub has neither the ability nor the incentive to engage in a foreclosure strategy. Furthermore, any attempt by it to do so would not substantially lessen competition in any relevant retail market, given that Origin's competitors either already have contracts with suppliers for the supply and installation of smart meters or can acquire smart meters from other suppliers and installers in Australia, including PlusES, Spotless, Metropolis, Vector and Yurika.

### **13.4 Leveraging position in retail market to lessen competition in smart meter market**

#### **Ability**

1507 Origin does not have the ability to refuse to acquire from or otherwise discriminate against Intellihub's rivals in the smart meter industry for two key reasons.

1508 **First**, Origin is already in **Confidential to Origin and Intellihub** arrangement with Intellihub in respect of **Confidential to Origin and Intellihub**. In **Confidential to Origin and Intellihub**, Intellihub and Origin entered into **Confidential to Origin and Intellihub** metering supply arrangement, amended in **Confidential to Origin and Intellihub**, whereby Intellihub will supply Origin with **Confidential to Origin and Intellihub** smart meters to be deployed over a **Confidential to Origin and Intellihub** period. Origin originally owned the Intellihub business and it was sold together with this long term supply agreement in place.

1509 This means that, in practice, Origin does not have the ability to favour Intellihub, or discriminate against any of Intellihub's customers, as **Confidential to Origin and Intellihub** of its smart meter requirements have already been **Confidential to Origin and Intellihub** allocated to Intellihub.

1510 The relationship between Origin and Intellihub is not merger specific, and will remain unaffected by the Proposed Acquisition.

1511 **Second**, Origin does not have market power in relation to the acquisition of smart meters. It is one of a number of suppliers of energy retailing services in Australia who are seeking to acquire smart meters. Others include AGL, EnergyAustralia, Red Energy, Simply Energy or Aurora and Alinta. Those alternative customers would remain available for Intellihub's smart meter competitors. Although Origin is a material electricity retailer, it has a share (by customer accounts) of only approximately 24% of customers in the NEM.<sup>800</sup> This means that, even if Origin only purchased from Intellihub, 73% of the market remains contestable for metering services.

1512 **In addition**, to the extent that Intellihub's competitors were offering better terms to those which Intellihub was offering Origin (price, maintenance, service level arrangements, etc.) it would not be in Origin's commercial or financial interests to decline those terms, and accept a more unfavourable offering from Intellihub. Origin still has **Confidential to Origin and Intellihub** smart

<sup>800</sup> Calculated based on data from (i) AER retail energy market performance update for Quarter 2, 2022–23 <<https://www.aer.gov.au/retail-markets/performance-reporting/retail-energy-market-performance-update-for-quarter-2-2022%E2%80%9323>> for customers in Queensland, New South Wales, South Australia, Tasmania and the Australian Capital Territory and (ii) ESC Energy market dashboard, Q2, 2022-23 <<https://www.esc.vic.gov.au/electricity-and-gas/market-performance-and-reporting/victorian-energy-market-report/energy-market-dashboard>> for customers in Victoria.

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meters unallocated in its rollout to 2030, and it would not make commercial sense for it to accept less favourable terms from Intellihub than it could otherwise secure from another supplier, as doing so would jeopardise its ability to provide attractive terms in the downstream retail electricity market.

### *Incentive*

- 1513 For similar reasons to those discussed above in relation to incentive, Origin does not have the incentive to refuse to acquire from or otherwise discriminate against Intellihub's rivals in the retail business. **Confidential to Origin and Intellihub** of its volumes are **Confidential to Origin and Intellihub** contracted to Intellihub. Origin's remaining contestable volumes, as discussed above, still represent a substantial percentage of its total remaining contestable volumes. It would not be commercially sound for Origin to award its remaining smart meter volumes to a supplier that is not offering it the best terms. If that is not Intellihub, Origin will award its remaining volumes to a third party smart meter supplier.

### *Ownership*

- 1514 For the same reasons explained above, the fact that Intellihub and Origin are held in different Brookfield funds with their own separate management teams, coupled with the fact that Intellihub and Origin each have separate boards and separate management teams, reinforces the lack of any ability or incentive for Origin to discriminate against Intellihub's competitors.
- 1515 Post-Proposed Acquisition, if Origin enters into a contract with a related entity, that contract will need to be approved by the non-Brookfield shareholders in Origin.

### *Conclusion*

- 1516 In summary, Origin has neither the ability nor the incentive to engage in a foreclosure strategy. Furthermore, any attempt by it to do so would not substantially lessen competition in the Australian smart meter market, given that Intellihub's competitors either already have contracts with customers for the supply and installation of smart meters and / or can supply smart meters to other retail customers in Australia.

## 14 No substantial lessening of competition in the East Coast wholesale gas market

- 1517 EIG and MidOcean Energy currently own no assets in Australia. As set out in paragraph 595 however, MidOcean Energy has recently entered an agreement to acquire Tokyo Gas' minority and non-controlling interests in the Gorgon (1% interest), Ichthys (1.575% interest), Pluto (5% interest) and QCLNG (1.25% interest) LNG projects. MidOcean Energy's transaction with Tokyo Gas is expected to complete in **Confidential to MidOcean Energy**.
- 1518 Following completion of the Proposed Acquisition and the transaction with Tokyo Gas, MidOcean Energy's LNG interests will be as set out in **Figure 119** below (assuming in the case of the Tokyo Gas transaction that certain pre-emptive rights held by joint venture participants are not exercised). **Confidential to MidOcean Energy**.

*Figure 119: Future MidOcean Energy LNG interests*

Project	MidOcean Energy interest	Other JV participants
<b>APLNG (Qld)</b>	25.01%	ConocoPhillips (49.99%), downstream and proposed upstream operator <sup>801</sup> Sinopec (25%)
<b>QCLNG (Qld)</b>	2.5% of Train 2 (1.25% overall)	Shell (50% of Train 1; 97.5% of Train 2), project operator China National Offshore Oil Corporation (50% of Train 1)  (The 'Common Facilities' infrastructure is separately owned by Shell (73.75%) and Global Infrastructure Partners Australia (26.25%). However, the interests in the 'Common Facilities' infrastructure provide no interest in gas or LNG production or reserves).
<b>Ichthys (Northern Territory)</b>	1.575%	INPEX Group (66.245%), project operator TotalEnergies (26%) Taiwan (2.625%) Osaka Gas (1.2%) Kansai Electric Power (1.2%) JERA (0.735%) Toho Gas (0.42%)
<b>Pluto (WA)</b>	5%	Woodside Petroleum (90%), project operator Kansai Electric Power (5%)
<b>Gorgon (WA)</b>	1%	Chevron (47.3%), project operator ExxonMobil (25%) Shell (25%) Osaka Gas (1.25%) JERA <sup>802</sup> (0.417%)

Source: *State of the Energy Market 2022 – Report*, ACCC Gas Inquiry – July 2022 interim report

- 1519 As set out in section 4.14, EIG is in discussions with Senex regarding it (or its shareholders Hancock Energy / POSCO) investing in MidOcean Energy with an equity commitment equivalent

<sup>801</sup> Operator of APLNG's LNG export facility and LNG export sales business, see <<https://www.conocophillips.com.au/what-we-do/australia-pacific-lng/>>.

<sup>802</sup> A 50:50 joint venture between Japan-based TEPCO Fuel & Power and Chubu Electric Power.

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to **Confidential to MidOcean Energy: a minority investment**. This acquisition will give Senex an indirect interest in the Origin Integrated Gas business and the Tokyo Gas assets being acquired by MidOcean Energy. Neither Hancock Energy nor POSCO currently have any other ownership interests in East Coast gas production assets other than Senex, such that the competition analysis remains the same whether the potential investment was made by Senex or its shareholders.

1520 Senex owns two operational natural gas assets in the Surat Basin in Australia, being Atlas (100% interest) and Roma North (100% interest) (see additional detail about these assets in section 4.15. This section of the Application explains:

- (a) In relation to **MidOcean Energy**, that its ownership of interests in APLNG or QCLNG will not substantially lessen competition in the East Coast wholesale gas market.
- (b) In relation to **Senex**, that its potential interest in MidOcean Energy (and its resulting potential indirect investment in APLNG and QCLNG) will not substantially lessen competition in the East Coast wholesale gas market if its investment in MidOcean Energy completes.

### 14.1 No overlap except in the East Coast wholesale gas market

1521 APLNG principally supplies LNG into international markets and a smaller volume of domestic gas into the East Coast wholesale gas market. APLNG's gas production in financial year 2022 was 693PJ.<sup>803</sup> Approximately 76% of APLNG's total gas production during financial year 2022 was exported as LNG.<sup>804</sup> The balance was sold domestically, with around 150 PJs announced as having been sold to domestic gas customers under medium and long term contract.<sup>805</sup>

1522 Of the various projects in which MidOcean Energy will acquire a small interest from Tokyo Gas:

- (a) Pluto supplies domestic gas into the Western Australia wholesale gas market only. There is no pipeline connection between the Western Australian wholesale gas market and the East Coast wholesale gas market.
- (b) Gorgon supplies domestic gas into the Western Australia wholesale gas market only. There is no pipeline connection between the Western Australian wholesale gas market and the East Coast wholesale gas market.
- (c) Ichthys does not currently supply domestic gas. It is connected to pipelines servicing the Northern Territory for emergency supply purposes only, and otherwise produces gas solely for export as LNG.
- (d) QCLNG principally supplies LNG for export, but also supplies a smaller volume of domestic gas into the East Coast wholesale gas market.

1523 Senex also supplies domestic gas into the East Coast wholesale gas market. Senex does not itself export LNG. Of Senex's projects:

- (a) Roma North supplies the entirety of its natural gas production under a 20 year supply agreement to GLNG. GLNG liquefies the natural gas and supplies LNG into international markets. Senex does not hold an interest in GLNG.
- (b) Atlas supplies domestic gas into the East Coast wholesale gas market.

<sup>803</sup> Origin Energy Limited, 2022 Annual Report, page 17 <[https://www.originenergy.com.au/wp-content/uploads/Annual-Report-FY2022\\_FinalWeb.pdf](https://www.originenergy.com.au/wp-content/uploads/Annual-Report-FY2022_FinalWeb.pdf)>.

<sup>804</sup> Origin Energy Limited, 2022 Annual Report, page 18 <[https://www.originenergy.com.au/wp-content/uploads/Annual-Report-FY2022\\_FinalWeb.pdf](https://www.originenergy.com.au/wp-content/uploads/Annual-Report-FY2022_FinalWeb.pdf)>.

<sup>805</sup> APLNG Media Release: Australia Pacific LNG boost gas supply to domestic market, 17 August 2022 <<https://aplng.com.au/australia-pacific-lng-boosts-gas-supply-to-domestic-market/>>.

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1524 In summary, the only Australian horizontal overlap between MidOcean Energy's interests and the Origin Integrated Gas business is in relation to the supply of gas domestically into the East Coast wholesale gas market. This horizontal overlap arises from:

- (a) MidOcean Energy's 25.01% interest in APLNG, arising from MidOcean Energy's acquisition of the Origin Integrated Gas business; and
- (b) MidOcean Energy's 1.25% interest in QCLNG, arising from MidOcean Energy's acquisition of certain Tokyo Gas assets.

1525 In addition, in the event that Senex commits to invest in MidOcean Energy, the ACCC may also want to consider whether any overlap between MidOcean Energy (including its ownership of the Tokyo Gas assets and the Origin Integrated Gas business) and Senex could substantially lessen competition in the East Coast wholesale gas market. In this respect a horizontal overlap arises from:

- (a) MidOcean Energy's 25.01% interest in APLNG and 1.25% interest in the Tokyo Gas assets; and
- (b) Senex's ownership of Atlas and Roma North gas fields.

### 14.2 Nature of proposed interests in APLNG and QCLNG

#### **APLNG**

1526 As a result of the Proposed Acquisition, MidOcean Energy will acquire (via its acquisition of Origin) a direct interest in APLNG, and Senex will acquire (via its investment in MidOcean Energy) an indirect interest in APLNG. APLNG is an incorporated joint venture which has as its current shareholders Origin Energy Limited (27.5%), ConocoPhillips Australia Pacific LNG Pty Ltd (**ConocoPhillips**) (47.5%) and Sinopec Australia Pacific LNG Pty Limited (25%). As previously stated, immediately following completion of the Proposed Acquisition, MidOcean Energy intends to sell part of Origin's 27.5% interest in APLNG to ConocoPhillips, which will see ConocoPhillips acquire an additional 2.49% interest in APLNG. Following ConocoPhillips' acquisition of an additional 2.49% stake in APLNG, MidOcean Energy will hold 25.01% of the shares in APLNG (with that stake managed by EIG) and ConocoPhillips would hold 49.99%. **Confidential to MidOcean Energy.**

1527 APLNG comprises a two LNG train project located on Curtis Island in Queensland, pipelines connecting the upstream coal seam gas tenements that supply natural gas to APLNG and the liquefaction facilities at the LNG Plant located on Curtis Island, the gas and water processing facilities and gathering systems located on the various upstream CSG tenements, and associated gas and LNG sale and purchase agreements.

1528 APLNG and its wholly owned subsidiaries have interests in petroleum titles located in the Surat Basin and Bowen Basin. Some of these interests are held 100% by the relevant APLNG group entity. In other cases the relevant APLNG group entity is a participant in a number of upstream joint ventures with third parties), with the relationship of the tenement holder and the production of gas being governed by joint development and joint operating agreements (**JoAs**) between APLNG and these third parties.

1529 APLNG's share of gas produced from these interests is either:

- (a) sold to third party domestic gas customers; or
- (b) processed at APLNG's Curtis Island Liquefied Natural Gas (**LNG**) Facility and sold by APLNG Processing to third party customers under LNG sales arrangements.

1530 APLNG's two main LNG sales arrangements are long-term LNG sale and purchase agreements between APLNG Processing (as seller) and:



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- (a) China Petroleum and Chemical Corporation (as buyer); and
  - (b) Kansai Electric Power Co., Inc (as buyer).
- 1531 APLNG's shareholders (or members of its shareholders' groups) provide marketing and operator services to APLNG under the following arrangements:
- (a) Origin Energy Upstream Operator Pty Ltd (**Origin Energy Upstream**) has been appointed as APLNG's CSG Marketing Agent and Upstream Operator. The key services provided by Origin Energy Upstream in these roles are:
    - (i) in its capacity as CSG Marketing Agent:
      - (A) the marketing, sale and purchase, and transportation of gas (excluding LNG) recovered from upstream tenements that is to be sold into the Australian domestic market; and
      - (B) managing, and contract administration associated with, domestic gas marketing contracts and upstream agreements; and
    - (ii) in its capacity as Upstream Operator, the development, operation and management of APLNG's upstream tenements and assets; and
  - (b) ConocoPhillips has been appointed as APLNG's LNG Marketing Services Provider and Downstream Operator. The key services provided by ConocoPhillips in these roles are:
    - (i) in its capacity as LNG Marketing Services Provider, the marketing services for LNG produced at the Curtis Island LNG Facility; and
    - (i) in its capacity as Downstream Operator, the development, operation and management of APLNG's downstream assets.
- 1532 Origin also provides various corporate services to APLNG as Corporate Service Provider. Following MidOcean Energy's sale of part of Origin's 27.5% interest in the APLNG to ConocoPhillips, which will see ConocoPhillips acquire an additional 2.49% interest in APLNG, ConocoPhillips proposes to assume Origin's three service provider roles to APLNG as Upstream Operator, CSG Marketing Agent and Corporate Service Provider.

### **QCLNG**

- 1533 The transaction with Tokyo Gas, if completed, will result in MidOcean Energy acquiring a 1.25% interest QCLNG. QCLNG operates as a joint venture under the structure:
- (a) **Upstream interests:** the QCLNG joint venture parties hold various upstream tenements in the Bowen-Surat Basin. The relationship of the parties and production of gas from those tenements is governed by JoAs between Shell, CNOOC and Tokyo Gas in respect of each production area. **Confidential to MidOcean Energy: Certain QCLNG joint venture parties hold certain upstream interests in the Bowen-Surat Basin, which are governed by a series of agreements between relevant entities for the production of gas.** MidOcean Energy will step into Tokyo Gas' participating interest of 1.25% of the JoAs
  - (b) **LNG Trains:** the two LNG trains are owned through incorporated joint ventures in the following proportions:
    - (i) Train 1:
      - (A) **Shell:** 50%; and
      - (B) **CNOOC:** 50%; and
    - (ii) Train 2:

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- (A) **Shell:** 97.5%; and
- (B) **Tokyo Gas:** 2.5%.

Each of the participants in the Train 1 and Train 2 joint ventures process gas into LNG on behalf of the other joint venture participants, in return for a processing fee. This aspect of the QCLNG project is not involved in marketing or sales of domestic gas or LNG.

- (c) **Common facilities:** an unincorporated joint venture exists in relation to certain common facilities, being facilities used in common by more than one LNG train. The participating interests in the common facilities joint venture are:
  - (i) QGC Common Facilities Company Pty Ltd: 73.75%; and
  - (ii) **Confidential to MidOcean Energy: an entity wholly owned by clients and funds managed or advised by Global Infrastructure Partners Australia:** 26.25%.

The participants in the common facilities unincorporated joint venture receive a fee from the LNG train companies in return for providing access to the common facilities. The owners of the common facilities have no entitlement to gas reserves, or gas or LNG production, and are not involved in marketing or sales of domestic gas or LNG.

1534 Pursuant to gas sales agreements, gas is aggregated from each of Shell, CNOOC and Tokyo Gas as participants in the upstream tenements) and sold to a single buyer, being Walloons Coal Seam Gas Company (**GSC**). The buyer is controlled by Shell who has a 75% interest in GSC, with CNOOC having the remaining 25%.<sup>806</sup> The buyer is then responsible for marketing and sales of gas to end customers, including in respect of domestic gas. Critically Tokyo Gas has no interest in GSC. As a result, Tokyo Gas is not involved in the marketing and sale of gas to end customers and does not have visibility over pricing to those customers, or the individual volumes they receive. **Confidential to MidOcean Energy: Prices are calculated monthly and in proportion to the volume supplied by each operator.**

1535 **Confidential to MidOcean Energy: The parties have verification procedures in place for pricing calculations.**

1536 **Confidential to MidOcean Energy: The LNG produced is ultimately sold to various customers.**

1537 **Confidential to MidOcean Energy: An agreement between Shell, CNOOC and Tokyo Gas establishes a regime for managing the joint venture.**

### 14.3 MidOcean Energy's acquisition of the Origin Integrated Gas business will not result in a substantial lessening of competition

1538 MidOcean Energy's acquisition of the Origin Integrated Gas business will not result in any lessening of competition.

1539 **First**, MidOcean Energy will have only a de minimis 1.25% interest in QCLNG overall. This interest will not give it control or meaningful influence over the conduct of QCLNG operations. Shell, as the majority owner (with a 73.5% interest in the project overall) is the project operator. **Confidential to MidOcean Energy:**

- (a) **Confidential to MidOcean Energy.**
- (b) **Confidential to MidOcean Energy.**
- (c) **Confidential to MidOcean Energy.**

<sup>806</sup> Shell, Walloons, <<https://www.shell.com.au/about-us/projects-and-locations/qgc/walloons-trading.html>>.

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(d) **Confidential to MidOcean Energy.**

1540 **Second**, MidOcean Energy will not have a role in the marketing of domestic gas produced by QCLNG or receive competitively sensitive marketing information, and therefore will not be in a position to control output or marketing of gas produced by that project. Under the structure outlined above, Tokyo Gas sells its gas entitlement to GSC, which then sells gas to end customers. GSC is owned by Shell and CNOOC. Tokyo Gas has no interest in GSC and does not participate in any way in its marketing activities. **Confidential to MidOcean Energy.**

1541 Given that MidOcean Energy will have only a 1.25% interest in QCLNG, will not have control or meaningful influence over QCLNG operations, will have no involvement in QCLNG marketing **Confidential to MidOcean Energy**, the acquisition by MidOcean Energy of a 25.01% interest in APLNG cannot lessen competition in the East Coast wholesale gas market.

1542 This conclusion is reinforced by the fact that MidOcean Energy will have only a 25.01% interest in APLNG. Following MidOcean Energy's sale of 2.49% of Origin's 27.5% interest in the APLNG to ConocoPhillips, **Confidential to MidOcean Energy.**

1543 In respect of Origin's Integrated Gas interests in permits in the Canning Basin, an agreement has been executed to transfer Origin's interests to Buru Energy Limited. In respect of Origin's interests in the Cooper-Eromanga Basin, an agreement has been executed to transfer certain permits to Bridgeport, with the remaining 12 exploration permits under strategic review (see paragraph 622 above). There is therefore no competitive overlap between these interests and MidOcean Energy's Tokyo Gas interests.

#### 14.4 **Senex's potential investment in MidOcean Energy will not result in the Proposed Acquisition substantially lessening competition**

1544 Senex's potential **Confidential to MidOcean Energy: minority** investment in MidOcean Energy will not result in the Proposed Acquisition lessening competition.

1545 **First**, MidOcean Energy will be managed by EIG and Senex will not have control over it. All decisions relating to MidOcean Energy's portfolio companies will be made by EIG.

1546 The structure of Senex's investment in MidOcean Energy remains subject to commercial negotiation between the parties, however it is currently intended that Senex will invest at the MidOcean Energy, LLP level. Senex, may, however, invest at the MidOcean LNG Australia, LLP level. Any governance rights arising by virtue of Senex's investment in either MidOcean Energy, LLP or MidOcean LNG Australia, LLP will be akin to those of a limited partner only, save for the potential for a limited right **Confidential to MidOcean Energy: of appointment to the board of a MidOcean Energy entity**. Relevantly, Senex's position will not provide it with any rights to appoint a director to the board of APLNG or QCLNG or to any committees which exist under the joint venture arrangements for those projects. In this respect, if Senex (or Hancock and POSCO) do ultimately take a minority interest in MidOcean Energy, MidOcean Energy would be is prepared to provide an enforceable undertaking that it will procure that no person from Senex, Hancock or POSCO will be appointed to the board of APLNG.

1547 In addition, any Senex appointee to the board of a MidOcean Energy entity would owe the usual directors' duties **Confidential to MidOcean Energy: as well as arrangements regarding management of conflicts of interests.**

1548 MidOcean Energy will also not have control over APLNG or QCLNG, meaning that there is no ability for Senex to use its position as a limited partner in one of the EIG controlled funds invested in MidOcean Energy to lessen competition in the East Coast wholesale gas market:

(a) In relation to QCLNG, MidOcean Energy will have only a de minimis 1.25% interest in QCLNG overall. This 1.25% interest will not give MidOcean Energy, and in turn Senex,

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the ability to control or exert meaningful influence over QCLNG's operations. Further, given the QCLNG marketing structure (as set out in section 14.3 above), MidOcean Energy, and in turn Senex, will not have a role in the marketing of domestic gas produced by QCLNG or receive competitively sensitive marketing information, and therefore will not be in a position to control output or marketing of gas produced by that project; and

- (b) In relation to APLNG, MidOcean Energy will have only a 25.01% interest in the APLNG joint venture overall. As part of MidOcean Energy's sale of 2.49% of Origin's 27.5% interest in the APLNG to ConocoPhillips, **Confidential to MidOcean Energy**.

1549 Further, it is expected that the discussions of the relevant MidOcean Energy global board will concern strategic global LNG opportunities. It is not anticipated that the relevant MidOcean Energy global board will receive information concerning individual domestic gas contract pricing at APLNG or QCLNG as any such contracts are likely to fall below the materiality threshold for consideration of the MidOcean Energy global board of directors. To the extent it is considered that the relevant MidOcean Energy board in Australia will have access to information on APLNG domestic sales, this would not result in any material changes to Senex's current pricing visibility, given that gas producers already have significant visibility of gas supply pricing through the various gas hub based spot markets that exist (the Short Term Trading Markets or STTMs, and the Victorian Declared Wholesale Gas Market), customer feedback on competitiveness of offers made relative to other offers received, the ACCC's published net-back pricing, and the bid / offer information published by the ACCC as part of the gas market inquiry reporting.

1550 **Second**, Senex is not a major supplier to the East Coast wholesale gas market. As at 30 June 2021, Senex produced approximately 17.3 PJ of natural gas per year.<sup>807</sup> This represents less than 1% of the annual production of the East Coast wholesale gas market, which will have an annual production of approximately 1,996 PJ in 2023.<sup>808</sup> Senex's share of reserves is also small, with Senex's shares of East Coast gas market 2P and 2C reserves as at 30 June 2022 assessed by the ACCC as being approximately 2% of 2P reserves and less than 1% of 2C reserves.<sup>809</sup>

1551 As a result, the Senex production and reserves volumes are sufficiently small that any incremental change which is perceived to arise would not be sufficient to substantially lessen competition in the market.

1552 There are also:

- (a) other non-LNG project suppliers of similar or larger size, such as Santos, Arrow Energy, Esso, Woodside, Beach Energy and WestSide; and
- (b) smaller producers such as AGL, Armour Energy, Blue Energy, Bridgeport, Central Petroleum, CleanCo, Cooper Energy, Comet Ridge, Cue Energy, Denison Gas, Macquarie Mereenie, Mitsui, Metgasco, New Zealand Oil and Gas, OG Energy, Prize Tri-Star and Vintage Energy.<sup>810</sup>

The suppliers listed above are not impacted by the Proposed Acquisition in any way, and will continue to provide competition.

1553 **Third**, that position is reinforced by the fact that a significant amount of Senex's production and reserves is already committed under long term contracts. Of Senex's 17.3 PJ of natural gas:

<sup>807</sup> Senex, *Annual Report 2021*, page 17 <[https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021\\_FA-WEBVERSION-1.pdf](https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021_FA-WEBVERSION-1.pdf)>.

<sup>808</sup> ACCC, *Gas Inquiry 2017 – 2030: Interim update on east coast gas supply-demand outlook for 2023* (March 2023) page 8 <[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20March%202023%20interim%20report\\_1.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20March%202023%20interim%20report_1.pdf)>.

<sup>809</sup> ACCC, *Gas Inquiry 2017 – 2030: Interim update on east coast gas supply demand outlook for 2023* (January 2023), pages 149-151 <[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL\\_0.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL_0.pdf)>.

<sup>810</sup> ACCC, *Gas Inquiry 2017 – 2030: Interim update on east coast gas supply demand outlook for 2023* (January 2023), page 150 <[https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL\\_0.pdf](https://www.accc.gov.au/system/files/Gas%20Inquiry%20-%20January%202023%20interim%20report%20-%20FINAL_0.pdf)>.

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- (a) around half of Senex's current production from the Atlas asset is supplied to the East Coast wholesale gas market under sales agreements with various domestic commercial and industrial customers,<sup>811</sup> including volume under long term contracts including an 11 PJ 7 year agreement to supply Adbri from 2023-2030,<sup>812</sup> and a 13.2 PJ 8 year agreement to supply Orora from 2020-2027;<sup>813</sup> and
- (b) around half of Senex's current production, and all future production, from the Roma North asset is wholly committed under a long-term sales agreement with GLNG.<sup>814</sup>
- 1554 As the majority of Senex's gas production is committed under long-term sales agreements, Senex has no ability to reprice that supply based on any information it obtains, or divert material current gas production to LNG instead of the East Coast wholesale gas market. As noted above, even if Senex was able to do one of those things, this would not result in any lessening of competition in the East Coast wholesale gas market. This is because Senex's total production represents a very small contribution to the annual production of the East Coast wholesale gas market.
- 1555 To the extent that Senex was to proceed with expansion plans for Roma North or Atlas (which were shelved following the introduction of the domestic price cap), that logic would still apply. The contract for Roma North supply to GLNG captures up to 50 TJ per day of production, such that the expansion of that field that was previously contemplated would all be pre-committed to GLNG if it proceeded. Any expansion of Atlas would be sold domestically, but would practically need to be sold under reasonably long term contracts in order to finance the capital costs involved in such a development (and information about APLNG's principally historical domestic sales portfolio would not be anticipated to changing pricing or competition for that supply).
- 1556 **Fourth**, the current regulatory environment acts as a material constraint on any gas producer from engaging in conduct that would result in any lessening of competition in the East Coast wholesale gas market. The ACCC's ongoing inquiry into the supply and demand for wholesale gas in Australia involves heavy scrutiny of the market on a quarterly basis. Through the inquiry, the ACCC is able to monitor all domestic sales made by Senex, APLNG and QCLNG, and has a strong ability to detect / monitor any concerning correlation in pricing that does not appear to be as a result of selling at market.
- 1557 The Australian Domestic Gas Security Mechanism (**ADGSM**) also enables the Australian Government to intervene to prevent gas supply shortfalls in the East Coast wholesale gas markets. Given the higher prices that can be obtained for spot LNG cargoes relative to domestic gas sales (on a net back basis), the limitations on LNG exports which can be applied to APLNG and QCLNG under the ADGSM, provide very strong economic incentives for MidOcean Energy and the operators of those projects to ensure that nothing occurs in the domestic market which would justify those limitations being imposed.
- 1558 In September 2022, the Australian Government also entered into Heads of Agreement with each of APLNG, QCLNG and GLNG which requires those East Coast LNG exporters to make any uncontracted gas to the domestic market at competitive market terms before it is offered to the

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<sup>811</sup> Senex, *Annual Report 2021 (X)* page 14 <[https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021\\_FA-WEBVERSION-1.pdf](https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021_FA-WEBVERSION-1.pdf)>.

<sup>812</sup> Senex, ASX Announcement, 22 July 2021, *Senex and Adri sign new long-term gas sales agreement to support manufacturing operations* <<https://www.senexenergy.com.au/wp-content/uploads/2021/07/2237889.pdf>>.

<sup>813</sup> Senex, ASX Announcement, 11 December 2019, *Senex and Orora agree long-term gas sales agreement* <<https://www.senexenergy.com.au/wp-content/uploads/2019/12/2010516.pdf>>.

<sup>814</sup> Senex, *Annual Report 2021 (X)* page 27 <[https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021\\_FA-WEBVERSION-1.pdf](https://www.senexenergy.com.au/wp-content/uploads/2021/09/SEE5052-120PP-Annual-Report-2020-2021_FA-WEBVERSION-1.pdf)>.

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international market.<sup>815</sup> This offers further protection against any potential diversion of Senex's current gas production to LNG instead of the East Coast wholesale gas market.

- 1559 This high degree of regulatory scrutiny is anticipated to continue for a significant period into the future, noting the East Coast Gas market inquiry is to continue until 2030. Further, given the role of gas in Australia's energy transition and manufacturing, it is anticipated that the Australian Government is likely to continue.

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<sup>815</sup> Australian Government, *Heads of Agreement – The Australian East Coast Domestic Gas Supply Commitment* (29 September 2022) <[https://www.industry.gov.au/sites/default/files/2022-09/heads\\_of\\_agreement\\_the\\_australian\\_east\\_coast\\_domestic\\_gas\\_supply\\_commitment.pdf](https://www.industry.gov.au/sites/default/files/2022-09/heads_of_agreement_the_australian_east_coast_domestic_gas_supply_commitment.pdf)>.

## 15 Confidentiality

- 1560 This Application includes information and documents that are confidential and commercially sensitive to the Applicants and their affiliates as well as to certain third parties, and could cause commercial harm to them if disclosed.
- 1561 The Applicants request that the ACCC treat the information and documents included in this Application which are highlighted as such.
- 1562 The confidential information relates to the ACCC's core statutory function of administering and enforcing the CCA. As such, the information comprises 'protected information' as defined by section 155AAA(21) of the CCA.
- 1563 Each of the Applicants and other parties named in this Application understand that:
- (a) There will be no restriction on internal use, including future use, that the ACCC may make of the confidential information and documents included as part of this Application consistent with its statutory functions;
  - (b) The confidential information and documents included as part of this Application may be viewed by the ACCC's external advisors and consultants on the condition that each such advisor or consultant will be informed of the obligation to treat the information as confidential; and
  - (c) The ACCC may disclose confidential information and documents included as part of this Application to third parties (in addition to its external advisors and consultants pursuant to the paragraph above) if compelled by law or in accordance with section 89(7) or section 155AAA of the CCA.

## Glossary

**ACCC** means the Australian Competition and Consumer Commission.

**ACEN** means ACEN Corporation (formerly AC Energy).

**Addverb** means Addverb Technologies Pty Limited.

**ADGSM** means Australian Domestic Gas Security Mechanism.

**ADP** means ActewAGL Distribution Partnership.

**AEMC** means the Australian Energy Market Commission.

**AEMO** means the Australian Energy Market Operator.

**AER** means the Australian Energy Regulator.

**Affiliated Entity** means in relation to a NSP, means a legal entity:

- (d) which is a direct or indirect shareholder in the NSP or otherwise has a direct or indirect legal or equitable interest in the NSP;
- (e) in which the NSP is a direct or indirect shareholder or otherwise has a direct or indirect legal or equitable interest; or
- (f) in which a legal entity referred to in paragraph (a) or (b) is a direct or indirect shareholder or otherwise has a direct or indirect legal or equitable interest.

**AGPF** means Atlas Gas Processing Facility.

**AIMCO** means Alberta Investment Management Corporation.

**API** means application programming interface.

**APLNG** means Australia Pacific LNG Project

**APLNG Processing** means Australia Pacific LNG Processing Pty Limited.

**ARENA** means Australian Renewable Energy Agency.

**ART** means Australian Retirement Trust.

**Atlas Gas Pipeline** means Atlas Gas Processing Facility Pipeline.

**AusNet** means AusNet Pty Ltd.

**AusNet Holdings** means Australian Energy Holdings No 1 Pty Ltd.

**BAM** means Brookfield Asset Management ULC.

**BAMPIC** means Brookfield Asset Management PIC Canada, L.P.

**BEP** means Brookfield Renewable Partners L.P.

**BESS** means battery energy storage systems.

**BGTF** means Brookfield Global Transition Fund I.

**BIF IV** means Brookfield Infrastructure Fund IV.

**BIP** means Brookfield Infrastructure Partners L.P.

**Blue Grass SF** means Blue Grass Solar Farm.

**Brookfield LP** means Brookfield

**BSIP** means Brookfield Super-Core Infrastructure Partners.

**BTM** means behind-the-meter.



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**Buckland Investment** means Buckland Investment Pte. Ltd.

**Capital Expenditure Sharing Scheme** or **CESS** means a scheme developed and published by the AER in accordance with clause 6.5.8A or clause 6A.6.5A of the NER, as the case may be.

**CCA** means the *Competition and Consumer Act 2010 (Cth)*.

**CDPQ** means the Canadian Pension Fund, Caisse de dépôt et placement du Québec.

**CEDA** means Committee for Economic Development of Australia.

**CEFC** means Clean Energy Finance Corporation.

**CGT** means Colongra Gas Transmission and Storage Pipeline.

**CJVAA** means Coordinate and Joint Venture Alliance Agreement between Shell, CNOOC and Tokyo Gas.

**Climate Act** means the *Climate Change Act 2022 (Cth)*.

**CM** means capacity mechanism.

**CMM** means congestion management mechanism.

**COD** means commercial operating date.

**ConocoPhillips Australia** means ConocoPhillips Australia Pty Ltd.

**Contestable Electricity Services** means:

- (a) in relation to the TRFG:
  - (i) services for the supply of electricity or that are necessary or incidental to the supply of electricity, other than prescribed transmission services, negotiated transmission services, or Direct Control Services. For the avoidance of doubt, Contestable Electricity Services includes non-regulated transmission services.
- (b) in relation to the DRFG:
  - (i) other Distribution Services; and
  - (ii) other electricity services.

**Corporations Act** means the *Corporations Act 2001 (Cth)*, as modified or varied by ASIC.

**CPA** means Contingent Project Application.

**CPS** means Colongra Power Station.

**CPSP** means covered pipeline service provider.

**CSG** means coal seam gas.

**CTAP** means Climate Transition Action Plan.

**Customer transmission use of system service** means a service provided to a transmission network user for use of the transmission network for the conveyance of electricity that can be reasonably allocated to a transmission network user on a locational basis, but does not include Generator transmission use of system services.

**Davis Investments** means Davis Investments Pte. Ltd

**Dedicated connection asset** or **DCA** means the apparatus, equipment, plant and buildings that:

- (a) are used for the purpose of connecting a person at a connection point to a transmission network and are used exclusively by that person;
- (b) include power lines less than 30 kilometres in route length;

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- (c) can be electrically isolated from the transmission network without affecting the provision of shared transmission services to other persons; and
- (d) are not:
  - (i) network connection assets;
  - (ii) part of a generating system;
  - (iii) part of a distribution system;
  - (iv) part of a transmission system for which a 'Market Network Service Provider' is registered under Chapter 2 of the NEL;
  - (v) part of transmission customer's facility that utilises electrical energy;
  - (vi) part of the declared transmission system of an adoptive jurisdiction; or
  - (vii) designated network assets.

**DER** means distributed energy resources.

**DFN** means AusNet's 'Development and Future Networks' business.

**Direct Control Service** means a Distribution Service that is a direct control network service under section 2B of the NEL.

**Distributed Annual Planning Report** or **DAPR** means a report prepared under chapter 5 of the NEL.

**Distribution Network Service Provider** or **DNSP** means a person who engages in the activity of owning, controlling or operating a distribution system.

**Distribution Ring-fencing Guidelines** or **DRFG** means the distribution ring-fencing guidelines prepared by the AER in accordance with clause 6.17.2 of the NEL.

**Distribution Service** means a service provided by means of, or in connection with, a Distribution System.

**DMO** means default market offer.

**DPP** means Darling Downs Pipeline.

**DTSO** means declared transmission system operator.

**DUOS** means distribution use of system.

**DWGM** means Victoria declared wholesale gas market.

**EBITDA** means earnings before interest, taxes depreciation, and amortization.

**Efficiency Benefit Sharing Scheme** or **EBSS** means a scheme developed and published by the AER under clause 6A.5 (for a TNSP) or clause 6.5.8 (for a DNSP) of the NEL.

**EGP** means Eastern Gas Pipeline.

**EIG** means EIG Management Company, LLC.

**ENM** means Embedded Network Manager.

**EPBC** means *Environment Protection and Biodiversity Conservation Act 1999*.

**EPC** means Engineering, Procurement and Construction.

**Equity IRR** means internal rate of return.

**ESA** means the *Electricity Supply Act 1995* (NSW).

**ESB** means the Energy Security Board.

**ESC** means the Essential Services Commission.

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**ESC Act** means the *Essential Services Commission Act 2001* (Vic).

**ESG** means environmental, social and governance.

**ESMS** means electricity safety management scheme.

**ESV** means Energy Safe Victoria.

**EV** means electric vehicle.

**FATA** means the *Foreign Acquisitions and Takeovers Act 1975* (Cth).

**FCAS** means frequency control ancillary services.

**FIRB** means Foreign Investment Review Board.

**GCO Solar** means GCO Solar Pty Ltd.

**Generator** means a person who engages in the activity of owning, controlling or operating a generating system that is connected to, or who otherwise supplies electricity to, a transmission system or distribution system and who is registered by AEMO as a Generator.

**Generator transmission use of system service** means a service provided to a Generator for use of a transmission investment for the conveyance of electricity that can be reasonably allocated to a Generator on a locational basis.

**GIC** means GIC Private Limited.

**GIC Infra** means GIC Special Investments Private Limited.

**GJ** means gigajoules.

**GLNG** means Gladstone LNG project.

**GRFR** means gas ring-fencing requirement.

**GSC** means Walloons Coal Seam Gas Company.

**GSLs** means guaranteed service levels.

**GW** means gigawatts.

**HOOPP** means Healthcare of Ontario Pension Plan.

**ICCs** means individually calculated customers.

**Identified user shared asset** or **IUSA** means the apparatus, equipment, plant and buildings that:

- (a) are used for the purpose of:
  - (i) connecting a person through a dedicated connection asset to a transmission network, or
  - (ii) expanding the existing transmission network to incorporate a designated network asset (but does not include subsequent components that are incorporated into that designated network asset);
- (b) are not for the exclusive use by that person for a dedicated connection asset or identified user group for a designated network asset;
- (c) if used to connect that person to a transmission network through a dedicated connection asset, under normal operating conditions, cannot be electrically isolated from the transmission network without affecting the provision of shared transmission services to other persons; and
- (d) are not part of the declared transmission system of an adoptive jurisdiction or a designated network asset.

**IMCO** means Investment Management Corporation of Ontario.

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**IMM** means Impact Measurement and Management system.

**Integrated System Plan** or **ISP** means a plan known as the Integrated System Plan developed and published by AEMO under rule 5.22 of the NER as amended by an ISP update from time to time.

**Intellihub** means Intellihub Australia Pty Ltd.

**IRA** means *Inflation Reduction Act*, which is climate legislation passed by the United States Congress in August 2022.

**IRENA** means International Renewable Energy Agency.

**JoAs** means joint operating agreements.

**kVA** means kilovolt-amps.

**kW** means kilowatt.

**kWh** means kilowatt hour.

**LNG** means liquified natural gas.

**LPG** means liquified petroleum gas.

**LTFP** means long-term financial plan.

**Maximum Allowed Revenue** or **MAR** means the amount calculated as such for a regulatory year of a regulatory control period in accordance with rule 6A.3 (for a TNSP) or clause S6A.4.2(c)(4) (for AEMO).

**Marketing Staff** means staff directly involved in sales, sale provision or advertising (whether or not they are also involved in other functions) but does not include:

- (a) staff only involved in technical, administrative, accounting or service functions; or
- (b) an officer of both the TNSP and a Related Electricity Service Provider.

**MHQ** means maximum hourly quantity.

**MidOcean Bidco** means MidOcean Reef Bidco Pty Ltd.

**Mondo** means Mondo Power Pty Ltd.

**MSP** means Moomba to Sydney pipeline.

**MW** means megawatt.

**MWh** means megawatt hour.

**MWp** means megawatt peak.

**National Electricity Objective** is the objective of the NEL under section 7, being to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.

**National Electricity Retail Law** or **Retail Law** means the National Electricity Retail Law set out in the schedule to the *National Energy Retail Law (South Australia) Act 2011*, as applied by a participating jurisdiction and subject to any modification made to the National Electricity Retail Law by that jurisdiction.

**National Energy Retail Rules** or **Retail Rules** means the rules called the National Energy Retail Rules made under Part 10 of the National Electricity Retail Law, subject to any modification made to the National Energy Retail Rules by that jurisdiction.

**National Energy Retail Regulations** means the regulations called the National Energy Retail Regulations under section 12 of the Retail Law.

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**National Electricity Law** or **NEL** means the National Electricity Law set out in the schedule to the *National Electricity (South Australia) Act 1996* (SA), as applied by a participating jurisdiction and subject to any modified made to the National Electricity Law by that jurisdiction.

**National Electricity Rules** or **NER** means the rules called the National Electricity Rules made under Part 7 of the NEL, subject to any modification made to the National Electricity Rules by that jurisdiction.

**National Gas Law** or **NGL** means the National Gas Law set out in the schedule to the *National Gas (South Australia) Act 2008*, as applied by a participating jurisdiction and subject to any modified made to the National Gas Law by that jurisdiction.

**National Gas Rules** or **NGR** mean the rules called the National Gas Rules made by the AEMC under Chapter 9 of the National Gas Law, subject to any modification made to the National Gas Rules by that jurisdiction.

**NCC** means the National Competition Council.

**NDC** means Australia's 'Nationally Determined Contribution' under the Paris Agreement.

**NDSC** means Negotiated Distribution Service Criteria.

**NECF** means National Energy Customer Framework.

**NEM** means the National Electricity Market.

**NEMDE** means NEM dispatch engine.

**Network Service Provider** or **NSP** means a person who engages in the activity of owning, controlling or operating a transmission system or distribution system and who is registered by AEMO as a Network Service Provider under Chapter 2 of the NER.

**NGP** means Northern Gas Pipeline.

**NSP Ring-fencing Guidelines** mean the Transmission Ring-fencing Guidelines and the Distribution Ring-fencing Guidelines.

**NSW** means New South Wales.

**NTP** means Notice to Proceed.

**Oaktree** means Oaktree Capital.

**OEMs** means original equipment manufacturers.

**On-Sale Acquisition** means the division of Origin and its interests into two separate businesses, being the Origin Energy Markets business and the Origin Integrated Gas Business, which will be implemented by MidOcean BidCo procuring the sale of the various Origin subsidiaries and assets comprising the Origin Energy Markets business to various entities wholly owned by Brookfield LP.

**Optimal Development Path** or **ODP** means a development path identified by AEMO as the optimal development path in the most recent Integrated System Plan in accordance with rule 5.22 of the NER.

**Origin** means Origin Energy Limited.

**Origin Energy Upstream** means Origin Energy Upstream Operator Pty Ltd.

**Other Services** means:

- (a) in respect of the TRFG, services other than Transmission Services; and
- (b) in respect of the DRFG, services other than Transmission Services or Distribution Services.

**PCA** means Port Campbell Adelaide pipeline.

**PCCD** means Project Construction and Coordination Deed.

**PEP** means Pacific Equity Partners.

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**PEP SMF** means PEP Smart Metering Fund.

**PKET** means Port Kembla Energy Terminal.

**PPA** means power purchase agreement.

**PPM** means Private Placement Memorandum.

**Prescribed Transmission Services** means any of the following services:

- (a) a shared transmission service that:
  - (i) does not exceed such network performance requirements (whether as to quality or quantity) as that shared transmission service is required to meet under any jurisdictional electricity legislation;
  - (ii) except to the extent that the network performance requirements which that shared transmission service is required to meet are prescribed under any jurisdictional electricity legislation, does not exceed such network performance requirements (whether as to quality or quantity) as are set out in schedule 5.1a or 5.1 of the NER; or
  - (iii) is an above-standard system shared transmission service;
- (b) services that are required to be provided by a Transmission Network Service Provider under the NER, or in accordance with jurisdictional electricity legislation, to the extent such services relate to the provision of the services referred to in paragraph (a), including such of those services as are:
  - (i) required by AEMO to be provided under the Rules, but excluding those acquired by AEMO under rule 3.11; and
  - (ii) necessary to ensure the integrity of a transmission network, including through the maintenance of power system security and assisting in the planning of the power system; or
- (c) connection services that are provided by a Transmission Network Service Provider to another Network Service Provider to connect their networks where neither of the Network Service Providers is a 'Market Network Service Provider',

but does not include a negotiated transmission service or a market network service.

**PSG** means public securities group.

**PSP** means Canada's Public Sector Pension Investment Board.

**PV** means photovoltaic.

**QCLNG** means the Queensland Curtis LNG project.

**QGP** means Queensland gas pipeline.

**QIC** means QIC Private Capital Pty Limited.

**RAB** means regulatory asset base.

**Registered Participant** means a person who is registered by AEMO in any one or more of the categories listed in rules 2.2 to 2.7 of the NER.

**Regulated Stand-alone Power System** means a Stand-alone Power System which is regulated under section 6B of the NEL.

**Related Electricity Service Provider** in relation to a DNSP or TNSP (each as applicable under the TRFG or DRFG), includes:

- (a) an Affiliated Entity of the TNSP / DNSP; or

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(b) the part of the TNSP / DNSP,

that provides Contestable Electricity Services, but excludes a part of an Affiliated Entity that provides prescribed transmission services, negotiated transmission services or Direct Control Services (in relation to a TNSP) or Direct Control Services (in relation to a DNSP).

**Reliability and Emergency Reserve Trader** refers to the actions taken by AEMO as referred to in Chapter 3 of the NER to ensure reliability of supply.

**Reliability Standard** means the standard specified in clause 3.9.3C(a) of the NER.

**Reliance** means Reliance Industries.

**Retail Pricing Information Guidelines** or **RPIG** mean the Retail Pricing Information Guidelines released by the AER under the National Electricity Retail Law.

**REZ** means Renewable Energy Zone.

**Ring-fenced Information** means electricity information, acquired or generated by a NSP in connection with its provision of Prescribed Transmission Services or Direct Control Services (as applicable), that is not already publicly available, and includes electricity information:

- (a) that the NSP derives from that information; or
- (b) provided to the NSP by or in relation to a customer or prospective customer of Direct Control Services or Prescribed Transmission Services (as applicable),

but does not include aggregated financial information, or other service performance information, that does not relate to an identifiable customer, or class of customer.

**RIT-T** means a Regulatory Investment Test for Transmission developed and published by the AER in accordance with clauses 5.15A.1 and 5.16.2 of the NER as in force from time to time, and includes amendments made in accordance with clause 5.16.2 of the NER.

**RNP** means Roma North Gas Processing Facility Pipeline.

**Scheme** means the scheme of arrangement under Part 5.1 of the *Corporations Act* between Origin and the Scheme Consortium.

**Scheme Consortium** means a consortium comprising of Brookfield and MidOcean Bidco.

**Senex** means Senex Energy Limited.

**Service Provider** means in relation to a DNSP or TNSP, a provider of services to the DNSP or TNSP (as relevant under the FTRG or DRFG).

**Service Target Performance Investment Scheme** or **STPIS** means a scheme developed and published by the AER in accordance with clause 6A.7.4 (for a TNSP) or clause 6.6.2 (for a DNSP).

**SGSPAA** means SGSP (Australia) Assets Pty Ltd.

**SP Group** means Singapore Power Limited.

**SRA** means Settlement Residue Auction.

**Stand-alone Power System** or **SAPS** means a system that generates and distributes electricity, and does not form part of the interconnected national electricity system.

**State Grid** means State Grid International Development Australia Investment Company Limited.

**Sterling and Wilson** means Sterling and Wilson Solar Australia Pty Ltd and GCO Solar.

**STTM** means Short Term Trading Market.

**Temasek** means Temasek Holdings (Private) Limited.

**TNU** means Transmission Network User.

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**Transmission Annual Planning Report** or **TAPR** means a report prepared by a Transmission Network Service Provider under clause 5.12.2 of the NER.

**Transmission Network Service Provider** or **TNSP** means a person who engages in the activity of owning, controlling or operating a transmission system.

**Transmission Ring-fencing Guidelines** or **TRFG** means the transmission ring-fencing guidelines prepared by the AER in accordance with clause 6A.21.2 of the NER.

**Transmission Service** means the services provided by means of, or in connection with, a transmission system.

**Transmission use of system** or **TUOS** means a generator transmission use of system service or a customer transmission use of system service.

**TWh** means terawatt-hour.

**UNGI Program** means the Commonwealth Government's Underwriting New Generation Investments Program.

**United Energy** means United Energy Distribution Holdings Pty Ltd.

**Unserviced Energy** means the amount of energy demanded, but not supplied, in a region, as determined in accordance with rule 3 of the NER.

**UoSA** means Use of System Agreement.

**VAS** means valued added services.

**Victorian Annual Planning Report** or **VAPR** means the report known as the Victorian Annual Planning Report published by the AEMO in accordance with clause 5.12 of the NER.

**VNI** means Victoria Northern Interconnect.

**VPP** means a Virtual Power Plant.

**VRE** means variable renewable energy.

**VTIF Consultation Paper** means Victoria Transmission Investment Framework Consultation Paper.

**VTS** means Victorian Transmission System.

**WACC** means weighted average cost of capital.

**WGSB** means Wallumbilla Gas Supply Hub.