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22 March 2019

Australian Competition and Consumer Commission – data access models for energy data

AGL Energy Limited (**AGL**) welcomes the opportunity to provide comment on the Australian Competition and Consumer Commission's (**ACCC's**) Consultation paper: data access models for energy data (**Consultation Paper**), in relation to the *Treasury Laws Amendment (Consumer Data Right) Bill 2019 (CDR Bill)*.

AGL supports the development of a Consumer Data Right (**CDR**) and believes that individual consumers should have access to, and control over data that directly relates to them.

The CDR Bill represents a world-leading initiative in driving data portability and disclosure. However, given that the CDR represents a significant change to the Australian data economy, we note that without proper care in drafting and decision-making, the introduction of a CDR may lead to unintended consequences. These consequences include increased privacy and data security risks for consumers and higher costs for market participants in the energy sector, which may translate to higher barriers to entry into the retail energy market. As we have expressed throughout submission regarding the CDR through the Treasury, ACCC and CSIRO Data61 consultation processes, appropriate time needs to be taken to ensure that drafting and consultation has occurred to properly analyse and mitigate against unintended consequences.

Limitations with the centralised model

AGL does not support introducing a centralised data access model (model 1 in the Consultation Paper) through the Australian Energy Market Operator (**AEMO**) or any other body for energy CDR. In AGL's view there has been insufficient analysis and consultation to date, either by Houston Kemp or the ACCC, to mitigate the potential risks under the AEMO centralised model function. Most importantly, the centralised model is likely to bring with it an increase in privacy and data security risks and limitations on the control that consumers are able to have over their data. Indeed, the possibility of a centralised data holder or gateway model was only first introduced and considered by Treasury in the legislative drafting for the final version of the CDR Bill, and did not form a significant part of the previous exposure drafts of the CDR Bill produced by and consulted upon by Treasury in mid to late 2018.

Further, AGL notes that Houston Kemp's recommendation of a centralised model for metering data provision relied on existing data collections through AEMO and did not consider the wide scope of the definition of CDR data under the CDR Bill.

A centralised model managed by AEMO or another body also faces the following limitations:

- (1) the centralised model creates a single point of failure and increases the risk of security breaches for the CDR regime in energy and at the same time does not reduce any existing security risk that exists in the current market structure (where market participants continue to hold this data to perform their services);
- (2) AEMO or other body are not consumer facing and are unlikely to support information access or revocation for non-digital consumers. The centralised system would also require all customer information to be provided to a body irrespective of a consumer's consent;



- (3) a centralised model lacks the scalability of the other two models from a data storage perspective, and will therefore be costlier as the controlling body must house and manage significantly greater volumes of data (increasing operating costs and complexity over time);
- (4) the potential costs and technical complexity of the body managing the central database setting up new or modified systems that capture and store categories of CDR data that it does not currently possess. This will only increase over time as the ACCC expands the scope through future versions of energy CDR.

Gateway and economy-wide models

While AGL strongly opposes the possibility of a centralised model, it believes that both the gateway model (model 2 in the Consultation Paper) and economy-wide model (model 3 in the Consultation Paper) require further analysis before it can take a firm position on which model AGL considers would be most beneficial for consumers and market participants.

For example, this analysis should address how either model will provide for efficient consent and user authorisation procedures. As is evident from the current results of the Data61 consumer experience workstream, which we expand upon in this submission, there are further consent and user authorisation aspects of these models that will need to be addressed in more detail prior to fully implementing a CDR in the energy sector.

Other issues ACCC needs to consider

In addition to the above points, this submission also addresses the following key points, which AGL considers that the ACCC should take into account in its assessment of the proposed data access models and further design of a CDR in the energy sector:

- (1) the proposed timeframe for implementing the CDR in the energy sector;
- (2) consumer expectations and how these can be fulfilled under the proposed models, taking into account the results of the Data61 consumer experience workstream;
- (3) the limitations of the Houston Kemp Report (**HK Report**) as a substitute for energy consultation;
- (4) AGL's assessment of the proposed models, in particular:
 - (a) the possible benefits and challenges of the different models; and
 - (b) particular comments regarding security, user verification and consumer trust; and
- (5) case studies of other IT-driven programmes of work in Australia and elsewhere, as an indication of the possible challenges (including costs and timeframes).

We look forward to working with the ACCC further on the development of an efficient, fair and effective CDR in the energy sector.

Should you have any questions please contact Kat Burela on 0498 001 328 or kburela@agl.com.au.

Yours sincerely,

[Signed]

Elizabeth Molyneux

General Manager Energy Market Regulation

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Our response

General comments

AGL has been at the forefront of the energy industry in our support for the development of a Consumer Data Right (CDR) and believe that consumers should have access to and control over data that directly relates to them.

We support the recommendation expressed in the ACCC Retail Electricity Pricing Inquiry (recommendation 31) that the Consumer Data Right be applied to the electricity sector as a priority.

There is no doubt that the Treasury Consumer Data Right Bill (2019) (CDR Bill) represents a positive initiative in driving data portability and disclosure across the economy and specifically in the energy sector. The CDR Bill will bring about significant changes on how consumers interact with their service providers. Therefore, getting the framework right, will drive benefits through competition and innovation in service delivery.

AGL has a number of concerns with the current approach that has been adopted to roll out the CDR in the energy sector. These include the proposed implementation timeframe, the limited engagement and consultation with the energy sector, the exclusion of consumers and consumer viewpoints from many of the consultation papers, and the lack of funding for AEMO to establish and operate such a significant regime.

As will be expressed in the following sections, these concerns are exacerbated by a potential centralised model, which we believe provides the lowest level of likely benefits, alongside the greatest likely costs, to both consumers and market participants, out of the three data access models proposed by the ACCC in its Consultation Paper.

General concerns with the current proposals

The proposed implementation timing is not sufficient

AGL continues to remain concerned with the proposed timeframes for the CDR regime and whether these compressed timeframes will ultimately facilitate consumer trust and engagement with the system.

We actively support initiatives designed to rapidly move the industry toward enhanced transparency and comparability of energy offers and agree that the energy sector should be pursued as a matter of priority in line with the ACCC's Retail Electricity Pricing Inquiry.¹ However, we also consider that changes to the competitive framework, including significant changes to consumer interfaces with the energy sector, should be done under an appropriately established framework with sufficient time allowed for full consultation and a staged implementation.

There remain several outstanding issues that cause significant concern with the pace that is being followed with respect to implementing the CDR in the energy industry, including the following:

- the legislation is yet to be finalised and fundamental concerns have not been addressed by decision-makers (including the definition and scope of CDR data, the scope of derived data and the application of privacy safeguards);

¹ Australian Government: Australian Consumer and Competition Commission, *Restoring electricity affordability and Australia's competitive advantage Retail Electricity Pricing Inquiry—Final Report* (June 2018) <https://www.accc.gov.au/system/files/Retail%20Electricity%20Pricing%20Inquiry%E2%80%94Final%20Report%20June%202018_Exec%20summary.pdf>.

- the CDR rules for banking sector have not been released. These were intended for release in December 2018, but instead only a Rules Outline was released at this time.² These rules will provide important insights for other sectors on how the ACCC will set requirements on businesses, particularly due to the focus on economy-wide interoperability of the CDR (an aspect that would require particular review in light of the proposed data access models and data standards that relate to those data access models) and the extent to which the legislation has deferred key aspects of the CDR regime to the CDR rules;
- the consumer experience (CX) work stream being conducted by the interim data standards body Data61 has proposed a November 2019 focus for energy and telecommunications consumer mapping requirements, which leaves little time to implement and test changes that may result from that data mapping process; and
- the time required for a complex system overhaul and upgrade for both industry and AEMO systems, including integration, testing and management does not appear to have been fully considered in the context of an early 2020 implementation date.

AGL remains concerned with the ACCC's continued commitment to an early 2020 implementation date despite the slow movement of critical pieces of work along the way, such as the CDR Bill which is currently before the House of Representatives,³ and may not be passed into law before the government goes into caretaker mode before the federal election. Our experience with other large-scale changes to the energy sector, such as the "Power of Choice" rule changes,⁴ is that significant time is required to ensure that the structures are set up correctly and both market participants and consumers have been consulted appropriately. We strongly believe that taking the time to achieve a working and stable CDR regime is far more important than moving at a rapid pace without full appreciation of the consequences. We envisage that this timeframe will be even more difficult to achieve under a centralised model, which is likely to require a significant information technology infrastructure overhaul for AEMO's systems.

We encourage the ACCC, and other decision makers, to take adequate time to assess the potential consequences of such a significant structural change and therefore encourage a reconsideration of the implementation date.

Need for greater consultation with the energy sector is required

Further consultation with the energy sector is required before the scope of, and mechanisms for, the application of the CDR in the energy sector are confirmed.

While we note there have been multiple papers assessing the high-level policy concepts of the CDR regime, legislative changes and specific rules and standards for implementation, the majority of these workstreams have focused on facilitating open banking, to meet a 1 July 2019 implementation of a CDR for the banking sector. This is an important matter to note, as the CDR Bill tabled in Parliament introduced a new provision to exempt the Minister from substantive consultation obligations before designating the energy sector for the CDR, reasoning that consultation has already occurred to date.⁵

We do not believe that this is an accurate interpretation of the process to date and we strongly believe that further consultation with the energy sector and consumers is required before introducing a CDR for the energy sector.

² Australian Government: Australian Consumer and Competition Commission, *Consumer data right – rules outline* (December 2018) <<https://www.accc.gov.au/focus-areas/consumer-data-right-cdr-0/rules-outline>>.

³ Parliament of Australia, *Treasury Laws Amendment (Consumer Data Right) Bill 2019* (13 February 2019) <https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bld=r6281>.

⁴ As the ACCC will be aware, Power of Choice is a recent change to the National Electricity Market that introduced, among other things, a roll-out of smart meters to the broader National Electricity Market (outside of Victoria), competition to the smart metering sector and additional measures for consumer access to data. See

Case Study 3 in Attachment 2 to this submission.

⁵ Note that AGL has provided more commentary on this aspect in its response to the CDR Bill.

The HK Report⁶ was initially developed to assess the existing CDR data access requirements under the National Energy Retail Laws and Rules.

Houston Kemp's assessment focused on ways to improve data access, including through AEMO facilitation. Following the open banking report and announcement of the introduction of a broader CDR, the HK Report was amended to provide recommendations on how to facilitate the implementation of a CDR in the energy sector. Given the groundwork that had already been done in the draft HK Report,⁷ the final HK Report recommends a centralised model as a cost-effective way of implementing the CDR regime in the energy sector. However, it is important to note that this report was not originally developed with the CDR as the access framework and was not prepared with the benefit of knowledge of the regulatory structure of the CDR, as appears in the CDR Bill.

Importantly, the HK Report also provides limited and highly constrained cost assessments of a centralised model that focuses on data sets that are already captured by AEMO. This financial assessment is heavily qualified by Houston Kemp as being based on "*high-level assumptions to estimate ballpark figures...*" of a narrow set of data already collected by AEMO.⁸ At no point has a considered financial assessment occurred under the CDR Bill, including how the HK Report figures may be affected by the broader range of data that would be held by AEMO, or the additional costs associated with providing necessary security for a centralised database of all consumer energy data in Australia.⁹

Further, the HK Report makes recommendations as to the data sets that should be captured under a CDR regime. This does not include an assessment or discussion of the risks of expanding the definition of CDR data (as proposed under the CDR Bill), as broadly as is set out in the CDR Bill or the Consultation Paper. While it is possible the initial data sets designated under a CDR regime may be limited to those suggested by the ACCC in this Consultation Paper, there is a real discretion and ability to expand this in future iterations. AEMO's ability to manage these growing data sets and even capture and store existing proposed data sets which it is currently not responsible for, has not been considered under the HK Report or Consultation Paper.

Issues with consumer experience and expectations

One of the driving principles of the CDR Bill is that consumers are put in control of accessing and directing the use of their data (that is, CDR data). The Consultation Paper does not consider how consumers might access their own data through the proposed models, but rather how data holders (however defined) and accredited data recipients are able to access and share the consumer's CDR data (with the consumer's consent).

With this lens, we note that the proposed centralised model does not consider the consumer experience in detail and does not appear to be designed to meet this driving principle of consumer access. We recognise that the focus is currently on digitally-stored data, but this will (and should) evolve over time so that more diverse consumer groups can utilise the benefits of the CDR regime. By way of comparison, in its equivalent consultations regarding the introduction of the "Midata" data portability scheme to the domestic energy sector in the United Kingdom, we note that the United Kingdom's Department for Business, Energy & Industrial Strategy considered in particular the costs and practicality

⁶ HoustonKemp Economists, *Open Consumer Energy Data Final Report* (June 2018), p i (**HK Report**).

⁷ HoustonKemp Economists, *Facilitating access to consumer electricity data – A draft report for the Department of Environment and Energy* (February 2018) (**Draft HK Report**)
<<http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/Facilitating%20Access%20to%20Consumer%20Energy%20Data%20-%20Consultation%20Paper.pdf>>.

⁸ HK Report p 29.

⁹ We note high level financial assessment information in the CDR Bill's Explanatory Memorandum but this is based on the HK Report assessment that we do not consider is fit-for-purpose.

of implementing a process for data access through non-digital methods, noting that many vulnerable or low-income consumers have low engagement with digital platforms.¹⁰

In February 2019, the interim data standards body, Data61, released a consumer experience report (**CX Report**) that undertook consumer research and tested language, access and trust under the proposed CDR regime. We note that this piece of work is integral to the ACCC's consideration of what data access model should be implemented in the energy sector, and should be closely considered alongside decisions regarding a data access model.

In particular, we consider that the following key learnings outlined in the CX Report are relevant to the choice of data access models by the ACCC:

- consumers need multi-channel access to data and revocation of consents, including non-digital mechanisms for access;¹¹
- the source of data must be trusted and consumers should feel in control of their data;¹² and
- support and education should be provided to consumers to help them understand how their data may be used.¹³

In our view, under a centralised model, AEMO would not be appropriately equipped nor expected be equipped to manage consumer concerns, complaints or queries in a manner to addresses these findings under the CX Report (for example, by providing contact centres and dispute resolution mechanisms).¹⁴

On this basis, AGL considers that AEMO does not currently have the infrastructure or the experience to manage a consumer-facing CDR. In our view, AEMO should not be placed in the middle of retailer relationships with their consumer base. This intermediary role would likely create confusion for consumers and difficulties for retailers attempting to resolve CDR-related matters. Given that AEMO does not (and is not required to) maintain a substantive and meaningful relationship with consumers in its current role, a centralised model would likely represent the steepest learning curve for consumers who would be required to familiarise themselves with AEMO as the key data holder in a centralised model.

We also note the following additional matters raised in the CX Report, which AGL considers relevant to the design of a data access model:

- **Digital-only channels** would fail to meet consumer expectations and reduce trust in the CDR.¹⁵ In relation to this, we note that a centralised model would not be capable of facilitating non-digital channels, in particular for revocation of consents.
- **Multi-channel revocation** must be available to consumers and be available through the accredited data recipient and the data holder.¹⁶ In the CX Report, testing found that most participants would use a non-digital means of revocation first (especially by phone and in person). As noted, AEMO currently does not have the infrastructure to support this mechanism, let alone implementing the recommendation in the CX Report that consumers receive education on how to engage with the digital revocation journey.

¹⁰ See Case Study 6.

¹¹ Data61, *Consumer Data Standards – Phase 1: CX Report* (February 2019) (**CX Report**) <https://consumerdatastandards.org.au/wp-content/uploads/2019/02/Consumer-Data-Standards-Phase-1_-CX-Report.pdf> p 49, 60-61.

¹² CX Report p 42 (52% of surveyed participants ranked 'who their data will be shared with' as the most important thing), 48.

¹³ Ibid p 50.

¹⁴ See Case study 6.

¹⁵ Ibid p 49.

¹⁶ Ibid p 61.

- **Authentication sign-on pages** should have the branding of the relevant data holder (that is, the energy retailer). The CX Report observed that generic landing pages made consumers feel unsure as to which entity they were actually providing their login credentials to.¹⁷
- **Security** was a critical concern for almost two thirds of participants in the CX Report studies,¹⁸ with only 27% of participants confident that their information would be stored securely.¹⁹ Consumers noted that trusted source endorsements (for example, government agency endorsements of AEMO or other data holder or gateway as the "trusted gateway") would assist in building trust.
- **Consumer control** of their data is important to ensuring trust in the system. The CX Report notes that "...if sharing data means losing control of the data... we expect consumers to be more apprehensive about CDR participation".²⁰

These issues are critical to the discussion of the most appropriate data sharing model. In particular, by requiring a centralised data store, the ACCC may actually undermine the integrity and legitimacy of the entire CDR regime in the energy sector. We also note that centralised storage of CDR data could even be said to remove consumer control, if consumers have not actively consented for their data to be shared with a centralised body. This is because, in order to provide CDR data under the centralised data model, all relevant CDR data would need to be provided to AEMO, irrespective of whether a consumer consents or even is aware that this is occurring.

Consumer concern with the loss of control and security of their data has been demonstrated in the recent backlash to the introduction of an opt-out process for the My Health Record regime. The impact of this must be assessed further by the ACCC if a centralised model is pursued, especially since the greatest benefits of a CDR would only be realised if there is substantial consumer adoption.

We also note that, if there is a lack of customer trust with AEMO (or knowledge of AEMO's role) in a centralised model, there are potential concerns for other market participants in the event of a cyber-security incident in relation to that data. Even if the market participant (such as a retailer) were not involved in the incident, given that the consumer's pre-existing relationship exists with a retailer, consumers may be unable to distinguish which entity is responsible for their CDR data.

AEMO funding

AEMO operates under a user-pay model and is incentivised to keep these costs as efficient as possible, especially given that market participants may recover these costs from consumers. In effect, an increase in AEMO's operating costs (for example, to maintain a centralised data access model or to provide a consumer-facing support function) may result in an increase in costs to consumers, especially when no alternative funding is provided.

In the 2018-19 budget, the Government provided AEMO with funding to allow it to update its technology to prepare for its role as a data holder under the CDR. This funding was broadly drawn and allocates approximately \$7 million to various energy measures, including implementation of the CDR in the energy sector.²¹

As demonstrated with case studies on the Hydrological Monitoring Systems Program, 5-minute settlement and Midata (set out in Attachment 2 of this submission), in AGL's view this allocation of funding would be insufficient for a centralised model. Additional funding would need to be sourced from

¹⁷ Ibid p 66.

¹⁸ Ibid p 82.

¹⁹ Ibid p 57.

²⁰ Ibid p 48.

²¹ Australian Government: Department of the Environment and Energy (Web Site, accessed 20 March 2019) <<https://www.energy.gov.au/government-priorities/energy-budget-package-2018-19>>.

market participants or provided by the government, thereby reducing the cost efficiency and affordability goals of implementing the CDR regime in the energy sector.

Assessment of the proposed models

This section assesses the general cost considerations under the three proposed data access models in the Consultation Paper, taking into account the ACCC's experience in the operation of energy data collection and monitoring services as well as providing data access to consumers.

As previously indicated, AGL does not support the adoption of a centralised data access model (model 1). We note that further analysis is required to determine whether a gateway model (model 2) or economy-wide model (model 3) would be the most appropriate for the energy sector.²²

Centralised model (model 1)

It is our position that the centralised model would weaken the integrity of the CDR regime and should not be pursued by the ACCC as an option for the data access model under an energy CDR.

We have set out in the first part of this submission several concerns that we have with the CDR roll out more generally, how these may be worsened by a centralised model and why we do not believe a centralised model aligns with the underpinning ideology of the CDR. In addition to these earlier points, we note the following reasons why a centralised model would be detrimental to the CDR regime in the energy sector:

- AEMO does not operate across the whole of the energy market (as it only operates in National Electricity Market, in the eastern and southern States) and would be unable to represent the full range of market participants in its necessary interactions with consumers;
- the centralised model creates a single point of failure and increases the risk of security breaches for the CDR regime in energy and at the same time does not reduce any existing security risk that exists in the current market structure (where market participants continue to hold this data to perform their services);
- the centralised model does not facilitate the recommendations in the CX Report for a non-digital means of access for consumers;
- a centralised model will only grow in complexity and cost as the CDR evolves and the ACCC expands the scope through future versions of the rules, amended designation instruments, or expansion of the scope of CDR data;
- a centralised model lacks the scalability of the other two models from a data storage perspective, and will therefore be costlier as AEMO must house and manage significantly greater volumes of data (increasing operating costs and complexity over time);
- the centralised model would not be able to address data verification and alignment requirements and introduces the risk of market participants losing track of their data, or having inconsistencies in their own data; and

²² For example, under a gateway model, it is not clear who would be responsible for building the logic for acquiring 12 months of customer energy usage information if that customer has been with more than 1 retailer in that time. Under a centralised or gateway model, AGL would like to understand if AEMO would also be responsible for handling and managing customer queries about their requests.

- if derived data (or value-added data) is added to the scope of CDR data under the energy CDR, the non-standard nature of these data sets would increase costs and complexity under a centralised model. Additionally, requiring energy market participants to share their derived or value-added data with AEMO would reduce incentives for data innovation, by removing that derived data from the protection of the creators of those data sets.

We refer to Case Study 1 in Attachment 2 below, on the centralisation of limited water data sets as an example of difficulties in implementing and managing a centralised body. It is worth noting that the allocation of funding in this case was for a significantly more limited data set that did not need to conform to specific CDR rules for access or readability, and did not extend to the same scope of data sets that the CDR may extend to. Even in this case, the complexity of the project, and significant costs incurred, far outweigh the costs estimates that have been provided so far (for example, under the HK Report, as noted below). Under this case study, the need to manage consumer consents and authorisations was not required. Addition of these factors would likely add additional complexity and costs to a centralised data access model.

Cost estimate under the HK report

We note that the HK Report considered that if AEMO is designated as the centralised data provider that only system storage and verification requirements need to be factored into costing (approximately \$138,000 to \$432,000).²³ This was on the assumption that there would be minimal need to clean or transform data, and relevant data sets were already captured by AEMO. In the case of the CDR as currently envisioned, the scope of data would likely be significantly greater.

Data verification and alignment

In the energy sector, there may be multiple holders of particular data sets, such as metering data. Where there are multiple data holders, it will be important to manage version control of the data to ensure that it aligns with the data received by the consumer from a data holder under the CDR. This is to ensure the consumer does not receive inconsistent sets of data. Additionally, different versions or iterations of the same data may be held by different data holders for different purposes. In particular, metering data (held in raw form) will be different to, and held by a different data holder than, final billing data that is provided to consumers.

For example, metering data (used by metering data providers or distributors) and the information that is provided by retailers to a customer on a bill is not always aligned. If AEMO is obtaining metering data from the distributor this can create unnecessary confusion and complexity for consumers seeking to understand this data against their bill. One example of this is the recent Australian Energy Market Commission (**AEMC**) rule change that requires retailers to accept consumer meter reads in the place of an estimate (which are predominantly from distributors), and to adjust the consumer's bill accordingly.²⁴

There is currently no mandated validation or confirmation requirement on distributors to ensure their records match the updated consumer read, an issue that AGL raised in its submission to the AEMC for the relevant rule change.²⁵ Without understanding the hierarchy or structure of CDR data requests, it is unclear how AEMO will validate or deliver this type of data to the consumer or to an accredited data recipient. If a consumer or accredited data recipient was provided with both sets of data it may cause mistrust or confusion which will increase call-volumes. Retailers would not have sufficient oversight of CDR disclosures under a centralised model to resolve these matters for consumers.

²³ HK Report p 30.

²⁴ Australian Energy Market Commission, *Estimated Meter Reads* (25 October 2018) <<https://www.aemc.gov.au/rule-changes/estimated-meter-reads>>.

²⁵ AGL, *AEMC Consultation – National Energy Retail Amendment (Estimated meter reads) Rule 2018* (14 June 2018) <<https://www.aemc.gov.au/sites/default/files/2018-09/AGL.pdf>>.

Security

AGL agree with the ACCC's assessment of potential additional security risks posed from creating a single-source data store under a centralised model.²⁶ In the CX Report, nearly 63% of respondents mentioned security as a critical concern and 37% were worried about who would have access to their data. In the CX Report, data storage security was considered critical to the success of the CDR regime.²⁷

In our view, there are a number of reasons why security risks will be heightened by use of a centralised system, including the following:

- AEMO does not currently have the ability to store consumer billing or product data, and a rigorous risk assessment would need to be undertaken to ensure that appropriate considerations and new measures were considered in the system build requirements;
- the CDR data would be duplicated on the original data holder's systems and AEMO's systems; and
- the consolidation of all CDR data in one location would make it an attractive target for cyber-attacks.

We also note that measures for de-identification or deletion of CDR data held by AEMO would require further analysis. In particular consideration should be given to the storage of significant data sets that would be considered personal information (for example, by reference to identifiable details of CDR data sets held by AEMO as the centralised data holder). There are significant risks with the possible re-identification of this data as well. This de-identification risk may arise, for example, where multiple data sets containing information about the same individual can be compared, and with big data analytics, cross-referenced and matched.

Gateway model (model 2) or Economy-wide model (model 3)

At this time, AGL does not have a strong preference between a gateway or economy-wide model. AGL believes that both of these models would need to be worked through in more detail to come to a firm view on which model would be better for consumers and energy market participants. We have set out below some of the competing concerns with these models and the various challenges and benefits to each, that we consider are relevant.

User verification and authentication

The gateway model has the potential to streamline the verification process, as verification of the accredited data recipient's accreditation and consumer consent could be managed at the gateway (rather than with each data holder). This has benefits of:

- potentially creating a more efficient and user-friendly process for sharing CDR data; and
- decreasing the regulatory burden on market participants, which may reduce barriers to entry for new entrants into the energy sector.

However, if a single gateway verification process is to be used, an industry-wide standard should be developed to ensure that the data holders can quickly (or even automatically) approve data requests from the gateway. We believe that this is a problem which can be overcome, but is integral to the gateway model and therefore may result in a slower rollout of the CDR in the energy sector if this model is chosen. This single gateway verification would also have to be a standard that data holders can rely upon for compliance with their own obligations under the CDR regime and other regulatory regime,

²⁶ ACCC Consultation Paper p 25.

²⁷ CX Report p 57.

without the risk of non-compliance arising because the verification process at the gateway has failed. It would be unreasonable to have the data holders bear this risk under the gateway model, as they will be reliant on AEMO to verify the request and complete the authentication process. The energy sector CDR rules (developed by AEMO) should reflect this position.

If a single gateway was to have separate verification processes, it would undermine significantly the benefits that the gateway model has over the economy-wide model from consumer interaction and simplicity perspectives. The use of separate verification processes would likely cause delays as each market participant would have to separately verify the identity of the user, which could lead to additional nuisance for the consumer and lower overall satisfaction with the CDR regime.

By contrast, user verification under the economy-wide model could be implemented faster, as it would be able to leverage existing internal processes that market participants already have in place, as a starting point for verifying requests from consumers. We acknowledge that this may be viewed as a less user-friendly process, where the consumer is required to seek separate verifications from multiple data holders. However, if the consumer's interactions are primarily with accredited data recipients (who can manage the multiple interactions with data holders on behalf of a consumer), this issue of multiple verification processes is less likely to be detrimental to uptake of the CDR regime (particularly if the gateway model requires separate identity verification in any case).

Security

From a security perspective, in AGL's view both the gateway model and the economy-wide model are superior to the centralised model. As previously noted in this submission, a single source of data is likely to be a security weak point for multiple reasons. Although the use of the gateway or economy-wide model will result in CDR data being dispersed to multiple locations (and therefore with more data storage points to be targeted), a single source of all energy data in Australia is likely to become a significant target of cyber-attacks. AEMO is not currently set up to control and manage comprehensive CDR data, and a centralised database of energy data would likely be one of the largest collections of CDR data in Australia.

An economy-wide model has some security advantages over the gateway model as well. This includes that many market participants that would likely be data holders, including retailers such as AGL, already have the IT security systems in place to secure and manage CDR data. Thus, removing a gateway or central data source as a point of attack risk would enable data holders to better monitor and control access to CDR data within their purview.

Further, in relation to the gateway model, while data holders would be able to monitor and control access to data while it is under the control of that data holder, that data holder would have less control over, and less ability to prevent interceptions of that data occurring at the gateway. These risks can be reduced by AEMO investing in additional information technology security measures and embedding in its practice learnings from other market participants in the energy sector to help securely manage the gateway. However, we do note that these measures would likely lead to greater costs operational costs for AEMO.

Consumer trust and control

As noted previously in this submission, one of the key issues identified in the CX Report was the necessity of consumer trust in the system, and consumers' ability to feel "in control" of their data. As noted in relation to the centralised model, we consider that this model would likely undermine these objectives. Similarly, an additional risk with the gateway model is that, like the centralised model, there may be issues with trust and control from a consumers' perspective.

As mentioned in relation to the centralised model, consumers currently do not have any meaningful relationship with AEMO, and it is possible that participation in the CDR regime would find slower uptake as consumers take time to build trust with AEMO. While AEMO is not the primary data holder under the gateway model (although it may well be considered a data holder for some of the data sets that it currently retains), consumer education would be key to overcoming potential concerns and to position AEMO as a trusted gateway for requests under the CDR regime. Consumers would need to understand that:

- AEMO will not be holding any CDR data that it does not already hold;
- the data is only being shared with their chosen accredited data recipient; and
- the consumer may be required to contact the relevant data holder (such as the relevant retailer) in relation to complaints about use of their CDR data.

This risk will be lower if the accredited data recipient is primarily interacting with the data holders under the data access regime, rather than the consumer participating directly.

An advantage of the economy-wide model is that consumers already have a relationship with data holders, such as AGL, and there is already a degree of trust in the relationship. It is likely that adoption of the CDR would be improved by an economy-wide model initially because of that relationship. This model also provides the consumer with a greater understanding of who has access to their data and they have the benefit of interacting with the data holders directly so that any potential issues can be quickly resolved through a single source.

Data verification and alignment

The gateway model would (in effect) allow for the energy sector to choose who provides which CDR data, so that each data set can be consistent across the sector.²⁸ This will likely be beneficial in ensuring that the consumer only receives one version of each data set, however we note that the gateway model may result in consumer confusion where the data received by the consumer does not align with their billing data.²⁹ To overcome this, the industry will have to consider who is best placed to provide the data from a consumer experience perspective.

The economy-wide model would avoid this potential source of confusion but could add its own complexities by providing consumers with multiple sets of the same data which may not be entirely consistent. In that event, differences between those data sets may result in similar confusion.

²⁸ Noting, of course, our comments regarding data orchestration and standardisation on page 9.

²⁹ See our example of this issue in relation to the centralised model on page 11.

Case Studies

In preparing this submission, AGL has collated case studies of industry investments and proposed regimes, in Australia and abroad, that we consider include learnings relevant to the ACCC's assessment of data access models for a CDR in the energy sector.

This section includes a summary of the relevant case study, along with key learnings that AGL consider may have some applicability to the ACCC's assessment.

Similar industry investments

Case Study 1

CASE STUDY – CENTRALISED WATER DATA: MODERNISATION AND EXTENSION OF HYDROLOGICAL MONITORING SYSTEMS PROGRAM

In 2007, the Bureau of Meteorology (**BOM**) was given responsibility for the administration of the Improving Water Information Program, with funding of \$450 million over ten years.³⁰ This included an allocation of \$80 million to establish a centralised data repository for catchments and streamflow data.

This program was called the Modernisation and Extension of Hydrological Monitoring Systems Program.³¹ While this program did not extend to consumer data, it was an industry wide effort to centralise data through a single entity. Broadly, this required water organisations and authorities to provide data in a specific modelled format (XML) through to a central repository.³²

In 2014, the Australian National Audit Office (**ANAO**) undertook an assessment of the effectiveness of the BOM's implementation of the Improving Water Information Program. ANAO found that in the six years that the program has been in place, the BOM has expended \$186 million and collected more than 21 million water data files containing more than four billion time-series observations.

The most relevant finding from this audit was that a key constraint on the effectiveness of the program implementation and the capacity of the BOM to meet expectations was the limited functionality available through the centralised data system. In addition, the ANAO found that:

- overall, the development of the central data system was characterised by technical and governance shortcomings, changes in design and approach, unanticipated cost increases and delays; and
- further, the level of expenditure was not proportional with the level of functionality obtained.

KEY LEARNINGS – APPLICATION TO THE CDR REGIME

In its report, the ANAO found that BOM did not achieve its vision for a central system as a reliable, national repository for water information. The ANAO concluded that the issues encountered by BOM in this program implementation emphasise the importance of agencies understanding the relevant business environment and the likely operational risks and challenges they will be facing when developing new systems, from a technical and operational perspective.

³⁰ Australian Government: Bureau of Meteorology, *Improving Water Information Program Progress Report* (2010) <http://www.bom.gov.au/water/about/publications/document/progress_report2010.pdf>.

³¹ Australian Government: Australian National Audit Office, *Administration of the Improving Water Information Program – Bureau of Meteorology* (Audit Report No.18 of 2013–14) <<https://www.anao.gov.au/work/performance-audit/administration-improving-water-information-program>>.

³² Australian Government: Bureau of Meteorology, *Modernisation and Extension of Hydrologic Monitoring Systems Program* (2010) <<http://www.bom.gov.au/water/about/publications/document/modexfund-01.pdf>>; Australian Government – Bureau of Meteorology, *\$20 million funding allocated* (Web Page, accessed 19 March 2019) <<http://www.bom.gov.au/water/news/article.php?id=12>>.

In particular, it was noted that clarity as to the requirements of users is important, along with the recognition that these may evolve or change over time requiring enhancements to functionality over and above planned business as usual processes.³³

In the context of a centralised data access model for the CDR, it is clear that these learnings from the ANAO, along with the expenditure required for the development of this centralised system are particularly applicable to the implementation of a CDR regime in the energy sector.

Case Study 2

CASE STUDY – FIVE-MINUTE SETTLEMENT IN THE NATIONAL ELECTRICITY MARKET

5-minute settlement is a technical change to the operation of the settlement processes used in the National Electricity Market (**NEM**), moving towards a more granular update to the relevant data sets. It was introduced to enable a much more responsive price-setting and transaction settlement mechanism in the NEM, and will require changes to the systems of a range of market participants and AEMO to take effect in mid 2020.

Typically, integrated retail and wholesale energy businesses will require changes to:

- wholesale market trading systems;
- retail customer management systems; and
- risk management and reporting systems.

The total transition cost for participants based on this is approximately \$150 million. In addition to this there would be an increase in ongoing costs of operating business systems as result of increased licence fees, maintenance costs and storage costs. This additional cost is estimated to be approximately \$7 million per annum.³⁴

From November 2017, the industry has been given 3.5 years to implement the changes necessary to facilitate 5-minute settlement. For context, in AGL's experience as a market participant, this 3.5 year period is considered short for implementation of a significant change to data collection process in the NEM.

KEY LEARNINGS – APPLICATION TO CDR REGIME

The Energy Council (**EC**) has identified a number of associated costs with this short transition period. First, this transition period was described as potentially being:

"...manifestly inadequate for the anticipated unbudgeted IT system changes, since many market participants may be reliant on the same IT expertise and external service providers to conduct the necessary changes".

The EC also noted that IT providers would be facing concurrent demands on their services.³⁵ We expect that similar demands would be required in the context of the consumer data right.

Additionally, the EC analysis noted that:

"...metering systems, bidding systems, trading systems, risk management systems and settlement systems, are deeply interrelated, and changes will be complex and carry a high risk of failure."

Whilst this is in the context of moving to 5-minute settlement (from the previous 30 minute settlement), parallels may be drawn to the current proposal to quickly move to an energy CDR without sufficient time to ensure that the many, interrelated systems can securely and reliably provide the requested data.

³³ Australian Government: Australian National Audit Office, above n 31.

³⁴ Russ Skelton & Associates, *5-Minute Settlement – Assessing the Impacts Report Prepared for Australian Energy Council* (March 2017) <<https://www.aemc.gov.au/sites/default/files/content/ef348de3-3f5b-4a7e-8992-4158120fd93a/31-RuleChange-Submission-ERC0201-Australian-Energy-Council-170523-consultant-report.pdf>> p 22.

³⁵ Australian Energy Council, *Five minute settlement: Market improvement or market upheaval?* (Duncan MacKinnon, Web Site, 30 June 2017) <<https://www.energycouncil.com.au/analysis/five-minute-settlement-market-improvement-or-market-upheaval/>>.

Case Study 3

CASE STUDY – POWER OF CHOICE

Power of Choice (**POC**) is a package of National Electricity Market (**NEM**) reforms that were designed to give consumers more options and control of the way they use their electricity and manage their electricity expenditure. These reforms stemmed from a 2012 review run by the Australian Energy Market Commission (**AEMC**), and subsequent implementation process run by the Australian Energy Market Operator (**AEMO**).

Under POC, new rules under the National Electricity Rules were designed to create greater market competition and increase innovation in product and service design. The changes were focused on the introduction of competition in the smart metering space, changes to rules regarding embedded networks and new rules regarding access to energy data.

A range of learnings from the Advanced Metering Infrastructure (**AMI**) program in Victoria, which commenced in 2006, were relied upon in the development of the POC program.

KEY LEARNING – APPLICATION TO CDR REGIME

These reforms resulted in the introduction and rollout of smart meters in NEM jurisdictions outside Victoria, which enabled the availability of near real-time electricity consumption data. This metering data is one of the core elements of the CCDR data set.

The initial review and consultation period commenced in 2012, which then required the development of new rules and capabilities, updates to technical standards and considerable preparation for the roll-out of smart meters across the NEM. The core POC rule changes took effect in December 2017, after 5+ years of preparation, consultation and implementation amongst a range of market participants and other stakeholder groups.

Similar to 5 minute settlement, one of the key learnings from the POC changes is that the complexity of these undertaking should not be underestimated. We do note that the POC program would likely be considered a greater undertaking than the implementation of a CDR in the energy sector, however many of the same challenges would apply, from the development of new data standards, assessment of the rights to use and access a significant new data set and the co-ordination of a range of market participants in the implementation of the regime.

Case Study 5

CASE STUDY – STRONGER SUPER

In September 2011, the Gillard Federal Government introduced changes to the superannuation system designed to make Australia's superannuation system stronger and more efficient. The reforms are called Stronger Super. At the heart of the changes to the system were new and improved data and payment standards. Essentially, employers were required to adopt a common data and e-commerce standard to simplify business processes, and to send employee information and payment data to funds electronically, thereby reducing the need for manual processing for many funds.

These reforms followed a Government review of the superannuation system in 2009 (**Super System Review**). The first tranche of legislative changes occurred in late 2011 and 2012, with first round implementation requirements for 2013. This major reform piece has been ongoing for over 9 years now, with the implementation of some aspects of this reform delayed to 2019.

These reforms were initially costed (in the bill) at \$467 million over 7 years (with an additional \$121 million in 2012-13 drawn from a levy increase).³⁶ This increased to over \$1.5 billion over the 2012 to 2018 financial years, with the cost largely being borne by APRA-regulated funds and employers or

³⁶ Australian Government: Australian Taxation Office, *SuperStream benefits report* (Web Site, last updated 14 March 2019) <<https://www.ato.gov.au/super/superstream/in-detail/superstream-benefits-report>>.

their agents.³⁷ The ATO states that many benefits and savings have flowed from this process, but we note that this has occurred in relation to the implementation of a system alongside an appropriate review, consultation and implementation process.

One relevant reform is SuperStream, a package of measures in the super system review designed to enhance the 'back office' of superannuation.³⁸ Under SuperStream, super contributions and identifying data were to be processed electronically, eliminating the need for manual processes. The SuperStream measures required a managed rollout and consultation period, for a mechanism that was intended to provide similar results as under the CDR.

KEY LEARNINGS – APPLICATION TO THE CDR REGIME

The consultation and rollout period included the following elements over a 3.5 year time-period, from early 2012 to mid-2015:

- consultation for, and the preparation of, data standards;
- the mandatory rollout of data standards for APRA-regulated funds and SMSF entities;
- the mandatory rollout of data standards for employers (large, medium and small businesses over a staged process).

Additionally, as noted above, the estimated costs of implementing the regime have steadily increased over the 2012 to 2018 periods, from \$467 million to \$1.5 billion. While there are key differences between a CDR regime in the energy sector and the Stronger Super reforms, the adoption of common data standards and development of SuperStream bear stark similarities with the CDR regime. Similar to other case studies, both the cost estimations and the time required for proper consultation and implementation of the regime are salient points.

Similar programs outside Australia

Case Study 6

CASE STUDY – MIDATA IN THE ENERGY SECTOR (UK)

In 2012, the UK Government introduced the midata programme to give consumers access to their personal data in a portable and electronic format. This data may be used to allow consumers to better understand their own consumption, and therefore make more appropriate purchasing decisions.³⁹ Similar to the CDR, midata was expected to be rolled out across banking, energy and telecommunications sectors, starting with a voluntary regime.

Given that it was initially a voluntary program, implementation of the midata program in the energy sector stalled. During the intervening years, the General Data Protection Regulation (**GDPR**) privacy reforms were introduced in the European Union (and brought into effect in the United Kingdom under the *Data Protection Act 1998*). The GDPR includes a right to “data portability” which, although broadly drawn, is a similar right of access to, and transfer of, an individual’s data.

In July 2018, the Department for Business, Energy & Industrial Strategy (**DBEIS**) released a response entitled "Implementing midata in the domestic energy sector: government response to the Call for Evidence" (the **Government Response**).⁴⁰ More recently, the United Kingdom Office of Gas and

³⁷ Ibid.

³⁸ Australian Government: The Treasury, *MySuper Key Points* <http://strongersuper.treasury.gov.au/content/Content.aspx?doc=publications/government_response/key_points.htm>; Canstar, What is SuperStream? <<https://www.canstar.com.au/superannuation/superstream-guide/>> (Web Site, last updated 17 April 2018).

³⁹ UK Department for Business Innovation & Skills, *Midata company briefing pack* (July 2012) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/34747/12-983-midata-company-briefing-pack.pdf> p 2.

⁴⁰ UK Department for Business, Energy & Industrial Strategy, *Implementing Midata in the domestic energy sector – Government response to the Call for Evidence* (July 2018) <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729908/midata-energy-sector-government-response.pdf> (**Government Response**).

Electricity Markets (**Ofgem**) published a "strawman" document requesting feedback on high-level design attributes of the midata framework.⁴¹ In December 2018, Ofgem published "response to October Strawman feedback" setting out its key learnings (**Ofgem Response**).⁴²

As the ACCC would be aware, the Productivity Commission report on Data Availability and Use made a number of references to the midata regime and this recent "restart" of midata in the energy sector is an important aspect that should be given particular attention in the ACCC's design of the data access models for a CDR in the energy sector.

KEY LEARNINGS – APPLICATION TO THE CDR REGIME

Key Learnings from the Government Response

The Government Response included various submissions from industry, and in its response, DBIS made the following salient observations:

- regarding handling consumers' data with discretion, there was an issue about the absence of a properly resourced regulator to deal with the volumes of claims about personal data misuse – one stakeholder suggested that accredited data recipients need to meet transparency and audit requirements before being granted access to data;⁴³
- with more players in the data market, it becomes increasingly difficult to establish responsibility in data breach events; and
- it is also difficult to maintain quality customer service interactions – consumer bodies suggested establishing an independent alternative dispute resolution process to cover disputes arising from midata transactions;

With respect to the timing of the project, industry response summarised some of the key challenges, in particular implementation time for the regime:

"One supplier stated that midata was an innovative and complex programme involving multiple stakeholders that had few precedents to draw upon, so it was difficult to estimate precisely how long implementation would take. Another suggested that industry would need at least 18 months to design, build and test their solutions, to ensure the cost effective delivery of a secure and robust solution."

Another question raised was an estimate of the cost likely to be incurred by suppliers in maintaining individual responsibility for monitoring and providing third party access to their customer's data.⁴⁴ Cost estimates provided varied significantly and there was no consensus on whether costs would increase if consumer data was required to be provided to consumers who did not currently already have an online account, as providing access would require additional offline verification of identity (such as over the phone).⁴⁵

Key Learnings from the Ofgem Response

In relation to the Ofgem strawman, some of the concerns that Ofgem highlighted in the Ofgem Response include the following:

- *"Suppliers would find it difficult to implement the standards' requirements within three months of the final specification being determined, especially when considered alongside wider sector developments. Additionally, suppliers would not feel comfortable starting their build phase until the design baseline is clear and stable."*
- *"Tight [post-consultation] timescales [of one month between the end of the statutory consultation period and the publication of the final standard] might not allow Ofgem to give due consideration*

⁴¹ Ofgem, *Who we are* (Web Site, accessed 19 March 2019) <<https://www.ofgem.gov.uk/about-us/who-we-are>>.

⁴² Ofgem, *Midata in the energy sector – Response to October Strawman feedback* (December 2018) <<http://qlsr.it/c463b680>> (**Ofgem Response**).

⁴³ *Ibid* p 20.

⁴⁴ *Ibid* p 28.

⁴⁵ *Ibid* p 32.

to stakeholder feedback in the period between the end of the statutory consultation and the publication of the final standard."

While in relation to a different regime, in a different market, we consider that the same learnings would apply in the context of a CDR in the energy sector.

Case Study 7

CASE STUDY – GREEN BUTTON (USA)

In the USA, the Green Button initiative is an industry-led effort to respond to a 2011 White House call-to-action to provide electricity consumers with easy access to their energy usage data in a consumer-friendly and computer-friendly format.

The Green Button now also supports natural gas and water-use data in-addition to electricity.⁴⁶

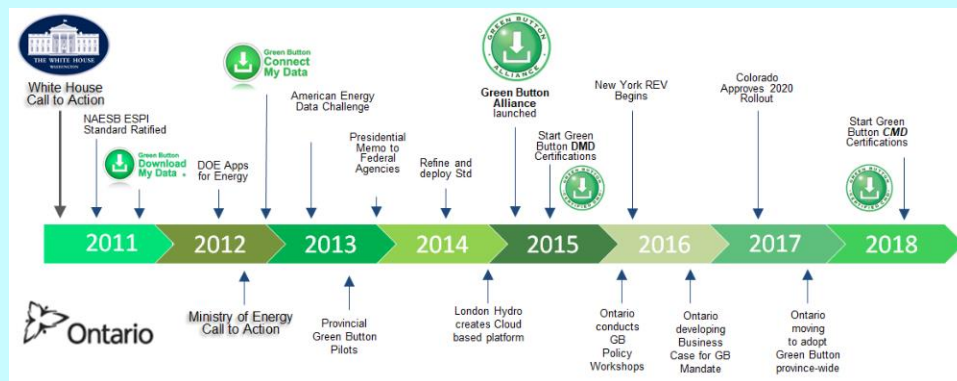
"The Green Button Download My Data (DMD) standard enables utility customers (residential, commercial, energy managers, etc.) to manually download their electricity-, natural gas-, or water-usage data from an energy or water provider's website in an industry-standard XML data file format that can be opened by software applications of their choosing. Customers can utilize these data to view their historical and present energy usage, analyze trends, and make informed choices about their consumption. Utilities ("data custodians") can apply to have their Green Button DMD solution tested."⁴⁷

The Green Button is a voluntary regime, but has

KEY LEARNINGS – APPLICATION TO THE CDR REGIME

It is evident from the following timeline that the rollout has taken a significant amount of time. However, much of this may be a result of the industry-led voluntary nature of the regime, as opposed to a mandated consumer data sharing regime such as the CDR or midata.

Starting from the White House call to action in 2012,⁴⁸ it took six years to finally start the Green Button CMD (securely sharing data) certifications.



Other reports that have analysed the Green Button note that further analysis is not a simple task, because Green Button usage is not currently monitored and there is little data on consumer benefits.⁴⁹

⁴⁶ Green Button Alliance, *About Green Button and the Alliance* (Web Site, accessed 19 March 2019) <<https://www.greenbuttonalliance.org/about>>.

⁴⁷ Green Button Alliance, *Green Button Testing & Verification Program* (Web Site, accessed 19 March 2019) <<https://www.greenbuttonalliance.org/testing>>.

⁴⁸ The White House, *Remarks by the President on American-Made Energy* <<https://obamawhitehouse.archives.gov/the-press-office/2012/03/22/remarks-president-american-made-energy-0>> (22 March 2012).

⁴⁹ Government Response above n 43, p 25.