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1 September 2023

Attention: David Hatfield
Australian Competition and Consumer Commission
23 Marcus Clarke Street
Canberra ACT 2601

By Email: Penny.Bigham@accc.gov.au

Dear Mr Hatfield

Australian Energy Market Operator Limited - Application for authorisation AA1000643 - Request for information

We confirm we act for the Australian Energy Market Operator Limited (**AEMO**).

We refer to the application for authorisation lodged with the Australian Competition and Consumer Commission (**ACCC**) by AEMO on 7 June 2023 (the **Application**) and the ACCC's request for further information dated 18 August 2023 (the **Request for Information**).

AEMO's response to the Request for Information is provided in **Annexure A** to this letter.

Where this response uses terms defined in the Application, the terms have the same meaning as the defined terms in the Application (unless otherwise stated).

Please contact us if you have any questions in relation to this letter.

Yours sincerely



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Partner
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Our Ref EJHM:121102609:121102609

Your Ref AA1000649

Annexure A

Response to request for further information

- 1 We note that the first round of meetings under the interim authorisation granted on 13 July 2023 took place on 4 August 2023 and that ACCC staff observed these meetings. The Proposed Conduct for which authorisation is sought appears to be broader than the coordination actually engaged in at these meetings. Please explain the circumstances in which broader conduct might be engaged in or consider whether the definition of the Proposed Conduct can be narrowed.**

The first round of meetings under the interim authorisation took place on 4 August 2023.

We agree that the Proposed Conduct for which authorisation is sought is broader than the coordination actually engaged in at this first round of meetings. In particular, AEMO and Industry Participants did not:

- share information in relation to essential employees and contractors to ensure there are sufficient personnel to undertake System Works; or
- share information about the availability of parts, equipment or specialised resources necessary for System Works.

AEMO envisages that any coordination at an industry meeting be as narrow as possible. In particular, and in accordance with the Application and the interim authorisation, coordination will not occur except where the purpose for doing so is either to:

- ensure the safe, secure and reliable operation of Australia's electricity systems, and minimise the risk of any energy outages, during the period of the authorisation; and/or
- ensure the continued operation and integrity of the NEM during the period of the authorisation.

During an industry meeting, AEMO generally asks Industry Participants whether there are any issues related to the availability of employees and contractors or the availability of parts, equipment or specialised resources that could impact a planned outage. Often, and as occurred at the first round of meetings, Industry Participants do not raise any such issues. In these circumstances, there is no need to share information about essential employees and contractors or the availability of parts, equipment or specialised resources.

However, circumstances could well arise where there is a need for the sharing of such information. For example, a situation could arise where an outage is being prolonged because the generator in question does not have a particular spare part. Sharing information at a meeting may identify an Industry Participant with the spare part who can sell that part to the affected generator and address the outage earlier than would otherwise be the case. Such circumstances have arisen in past industry meetings conducted under authorisation. During meetings held under the Energy Crisis Authorisation, electricity generators shared information about long lead times for new generator transformers. Facilitating this cooperation would reduce the risk of extended outages arising from a generator being unable to obtain parts, equipment or resources necessary for System Works.

For the reasons above, we consider the current scope of the Proposed Conduct appropriate.

- 2 Please explain why AEMO considers that the existing measures contained in the *National Electricity Rules* and the proposed measures under consideration by the Australian Energy Market Commission are not (or would not be) sufficient for AEMO to address issues arising from the energy transition. In particular:**
- (a) Identify what information and/or coordination (even on a bilateral basis) is not available from the existing and proposed new arrangements that AEMO considers is necessary to address these issues.**
 - (b) Provide greater detail as to the benefits of the Proposed Conduct in better managing System Works overall as distinct from and/or in addition to what AEMO can do using its existing powers, as well as those soon to be implemented.**

2.1 Policy and/or rules-based approaches do not address physical system challenges

As described in the Application, the challenges to system security and reliability arise from:

- increasing reliance on a smaller number of significant baseload generators;
- an aging fleet of remaining coal-fired generators that are more susceptible to forced outages leading to more frequent and extended repairs and maintenance;
- long lead times for planning System Works as a result of global supply chain issues relating to parts and equipment and ongoing labour shortages;
- replacement renewable generation and firming capacity still developing; and
- the large volume of new connections of renewable energy generators and other transmission projects requiring extensive transmission outages.

The existing measures contained in the *National Electricity Rules* (the **NER**) and the proposed measures under consideration by the AEMC cannot by themselves overcome these physical challenges. Addressing these physical challenges requires close to real-time sharing of information and multilateral coordination as contemplated by the Proposed Conduct.

Where there are potential risks and issues across the entire electricity system, relying on a series of bilateral discussions is likely to be much more time consuming and inefficient than multilateral discussions. It is also unlikely to provide industry participants with the necessary visibility of key risks that will be required to navigate the energy transition. In the past, the greater simplicity and predictability of the electricity system, and the availability of many large synchronous generators providing redundancy, meant that slower bilateral discussions may have been adequate. However, there is now not enough surplus capacity in the system to accommodate the inefficiencies of AEMO seeking to use existing, unilateral or bilateral measures under the NER to address these challenges. The system is so finely balanced and the threats to security and reliability of supply are so significant and ever-present that seeking to rely on bilateral discussions is wholly inadequate.

2.2 Existing measures give AEMO limited powers in relation to outages

AEMO has the following existing powers and measures in relation to outages:

- **Approving transmission outages:** AEMO has powers under the NER to assess and approve (or not approve) outages affecting transmission networks. Transmission network service providers (**TNSPs**), and some distribution network service providers, enter proposed outages into the Network Outage Schedule (**NOS**). In the medium term, AEMO conducts an analysis to determine the effect of the outage under various conditions. AEMO communicates to the TNSP that an outage will not be approved if specified conditions exist (such as in the event of particular weather conditions or an unplanned generator outage). In the short term, AEMO makes a decision, generally on the day of the network outage, about whether the outage can proceed based on whether the specified conditions have in fact occurred. The cancellation of an outage on the day can cause significant costs to be wasted if resources have already been deployed in readiness for the System Works.
- **Issuing directions to generators:** Unlike transmission outages, AEMO's approval is not required for generator outages. The short-term and medium-term Projected Assessment of System Adequacy (**ST PASA** and **MT PASA**) provide AEMO with information about generator availability. Where AEMO determines that there is unlikely to be adequate supply or system strength, AEMO can hold bilateral discussions with the relevant generator. If the issue is not resolved through bilateral discussion, AEMO can, in some circumstances, direct a generator to operate. However, a generator can refuse to comply with a direction if there is a safety risk or a risk of damage to equipment in operating the unit. Further, AEMO cannot direct a generator to operate if it is listed as not available for direction in PASA. As such, the only direction available to AEMO may be rotational load shedding.
- **Obtaining outage-related information:** AEMO obtains outage-related information through ST PASA and MT PASA, bidding systems, NOS and through bilateral discussions with relevant market participants. The recent amendments to ST PASA are designed to better reflect the topology of the network, assess energy limitations of plants such as batteries and hydro, and incorporate generator recall times. The rule change associated with MT PASA requires participants to outline the unit state and recall time to allow AEMO to understand the extent of the outage reported in PASA. This is designed to improve how AEMO understands whether a plant is unavailable for commercial reasons (and can be returned to service quickly) or is unavailable in a state of disrepair. These measures ensure AEMO has information to assess the impact of outages, and can influence short-term opportunistic maintenance outages, unit scheduling and the management of energy-limited resources. As outlined above, this information can lead to some large planned outages being cancelled or deferred at short notice, or generating units recalled. However, AEMO does not consider it to be a substitute for proactive coordination of outages. Moreover, PASA does not always adequately reflect delays with respect to planned outages (for example, in circumstances where a generator has not updated PASA because they do not yet know when the unit will be available). PASA also does not provide AEMO and market participants with contextual information about outages (for example, issues that have arisen during planned maintenance), which can assist with planning for System Works.

In summary, these existing measures are not of themselves effective to allow AEMO to manage outages efficiently by relying on unilateral directions and bilateral discussions. The information is imperfect; last minute cancellations of network outages impose significant costs; and directions to generators to cancel an outage do not always have to be followed. Only through the Proposed Conduct can the necessary exchange of information and coordination and planning occur.

2.3 Proposed measures do not address physical system challenges and their implementation and effect is uncertain

Proposed measures do not address physical system challenges

The proposed measures under consideration by the AEMC do not address the physical challenges arising from the energy transition as described above. As we understand it, the key measures under consideration being referred to in the question are as follows:

- **Operating Security Mechanism:** The proposed Operating Security Mechanism (**OSM**) rule change, is intended to make better provision for sufficiency/adequacy of security-related services, particularly with increasing penetration of inverter-based resources and retirement of synchronous baseload generators. AEMO notes the AEMC is presently consulting on a second directions paper after changing direction following release of its draft determination in September 2022. It's currently considering changes to address planning timeframe requirements and refinement to AEMO direction reporting and compensation arrangements.
- **Operating reserve market:** An operating reserve (**OR**) market in its simplest form is an extension to energy and the existing market ancillary services known as frequency control ancillary services (**FCAS**). An OR market would be designed to assist the market and AEMO in managing forecast uncertainty by revealing reserves through a market mechanism in the very short term (i.e. less than one hour). AEMO notes the AEMC is presently consulting on a directions paper not to implement an OR market. AEMO does not consider the alternative 'incremental improvements' the AEMC is now consulting on an effective substitute for the Proposed Conduct.

These mechanisms are intended to establish mechanisms and markets that will encourage the provision of services to improve the reliability of the electricity system. They provide an opportunity for generators and others to supply additional security-related services. These mechanisms can only be effective, however, if generators and other Industry Participants are operating and not impacted by outages. For example, these mechanisms could not overcome the fact that there is increasing dependence on an aging fleet of remaining coal-fired generators that are more susceptible to forced outages. Addressing the issues this creates requires coordination and exchange of information between Industry Participants about planned and unplanned outages. The proposed mechanisms also cannot deal with shortages of critical spare parts which may prolong outages. Again, exchange of information as contemplated by the Proposed Conduct is the only efficient mechanism to deal with this physical issue.

Implementation and effect of proposed measures is uncertain

Even if the proposed measures could address the physical issues arising from the energy transition, which they clearly cannot, whether (and when) the proposed measures will be implemented, and the practical impact of the proposed measures remains unclear.

The proposed measures are still under consideration and have either not yet or have very recently been presented for consultation. By way of illustration, the OSM rule change is a response to a request first submitted back in July 2020. Following stakeholder feedback on a 2021 directions paper, the AEMC proposed a draft rule in 2022. Following further stakeholder feedback, the AEMC decided in April 2023 to explore a different approach and has only now published a further directions paper in the last week. AEMO expects that even in a best case scenario, it will take time for the arrangements to be finalised and networks to invest in the provision of security services.

Meanwhile, AEMO considers there is an urgent need to manage threats to reliable electricity supply across the NEM, and plan over the medium term. In AEMO's view, it cannot rely on proposed measures, which are uncertain, subject to change (including in response to stakeholder feedback),

and will take time to implement, in meeting its responsibilities to ensure the secure and reliable operation of Australia's energy systems during the energy transition.

3 Please outline whether AEMO has considered any further policy and/or rules-based approaches to address system reliability issues arising from the transition with respect to System Works instead of the level of industry collaboration contemplated by the Proposed Conduct, particularly noting that the energy transition will continue to occur well beyond the period of authorisation sought.

AEMO has proposed several policy and/or rule-based approaches to improve its capability to manage the energy transition, including the recent ST PASA and MT PASA rule changes referred to above.

As outlined in response to question 2 above, AEMO does not consider that policy and/or rules-based approaches by themselves can address the physical challenges arising from the energy transition. In AEMO's view, the only policy and/or rules-based approach which could adequately of themselves address these physical challenges is one which authorises multilateral coordination.

AEMO notes that the New South Wales Chief Scientist and Engineer recently recommended:

That [the NSW Energy and Utilities Functional Area (EUSFA)] advocate for jurisdictions and the market bodies to explore the suitability of legislative arrangements to allow AEMO and Industry Participants to coordinate efforts to address issues that may impact the security, reliability and resilience of Australia's energy supply during a period when the energy system is facing significant challenges and risks.¹

Other policy and/or rule-based approaches (including the proposed OSM and OR market rule changes) are likely to only alleviate system security and reliability issues to the extent assets are in service and operational, and conditions are relatively predictable. Policy and/or rule-based approaches are unlikely to adequately address the array and scale of impact of unplanned issues with aging plant that threaten system security and reliability, such as unplanned outages or extreme and/or unusual weather conditions that place pressure on a delicately balanced system. AEMO considers that the challenges described above require a flexible approach and short of legislative arrangements that authorise coordination efforts between AEMO and Industry Participants, would be best addressed by authorisation of the Proposed Conduct.

4 Given the reforms that have either recently been completed or are currently under consideration by the Australian Energy Market Commission, would a shorter period of authorisation be sufficient to enable AEMO to address system reliability issues until these reforms are all in place?

As described in response to question 2 above, AEMO does not consider that the existing measures contained in the NER or the proposed measures under consideration by the AEMC are capable of allowing AEMO to address issues arising from the energy transition.

AEMO considers that a period of three years of authorisation (until 30 June 2026) is appropriate for the reasons articulated in the Application.

¹ New South Wales, Chief Scientist and Engineer, *Assessment of preparedness of the NSW Energy Market: 2022/23* (7 November 2022), page vi.

5 Please provide details of whether, and if so how, the Proposed Conduct would help AEMO to better manage critical incidents in the event they were to occur, compared with what AEMO can do:

- (a) under the current regulatory framework; and**
- (b) under the future regulatory framework if the proposed reforms identified above were to be adopted.**

The limitations of AEMO's current powers to approve (or not approve) network outages for System Works purposes and give relevant instructions or directions to market participants are described in our response to question 2 above. Under the current regulatory framework, AEMO is only able to give directions and otherwise intervene in the market after taking a series of steps and at the latest possible time in order to give the market the opportunity to respond. Overreliance on directions places increased risk on the security of the system and reduces transparency. AEMO's resources are already stretched by the increasing frequency of the use of directions. The market suspension last year demonstrated the challenges of operating a complex interconnected system with an overly heavy reliance on directions powers.

Under the future regulatory framework if the proposed reforms were to be adopted, AEMO's ability to respond to critical incidents in the event they were to occur would still be similarly constrained. While the future regulatory framework may provide increased information transparency, it does not address physical system security and reliability issues or provide the benefits of coordination of System Works on a multilateral basis.

The Proposed Conduct would help AEMO to better manage critical incidents compared with AEMO's powers for the reasons given in previous responses, and further because where there are flow-on effects across the electricity system, AEMO may not have the time or resources to hold bilateral discussions (or a series of bilateral discussions) to gather the necessary information, consider the information and give the relevant directions to produce the best result. Relying on bilateral discussion when dealing with critical incidents (or a series of critical incidents) is often not efficient, is unlikely to achieve the necessary visibility of key risks across critical infrastructure and increases the possibility that a sufficient and reliable supply of energy is not achieved.

Further, once a critical incident arises, AEMO's options in refusing permission for network outages, issuing directions or otherwise intervening in the market can be limited. For example and as described in our response to question 2 above, a generator can refuse to comply with a direction if there is a safety risk or a risk to the asset in commencing or continuing to operate the unit. In these circumstances, AEMO's only option may be rotational load shedding.

AEMO's powers to intervene at or around the time of a critical incident cannot solely be depended upon to resolve system security and reliability issues. It is imperative to also seek to prevent critical incidents arising in the first place, particularly while the likelihood of incidents occurring is greater due to the structural changes occurring during the transition and an ongoing reliance on aging large generators to support the system while that transition occurs. AEMO considers the Proposed Conduct enables AEMO to more effectively plan for the medium term and thereby both reduce the likelihood of critical issues occurring and ensure the remainder of the system is better prepared and more resilient to ride through those issues when they do occur.