

19 May 2023
Andrea Marinelli
Principal Project Manager – Regulatory Change
Australian Energy Market Operator (AEMO)

Via email: contact.connections@aemo.com.au

Dear Ms Marinelli

Addendum to the draft report on the review of technical requirements for connection

AusNet welcomes the opportunity to make this submission in response to the Addendum to the Draft Report on the review of technical requirements for connection (the Addendum).

AusNet is the largest diversified energy network business in Victoria with over \$11 billion of regulated and contracted assets. It owns and operates three core regulated networks: electricity distribution, gas distribution and the state-wide electricity transmission network, as well as a significant portfolio of contracted energy infrastructure. It also owns and operates energy and technical services businesses (which trade under the name "Mondo").

In recent years the digital transformation has resulted in significant growth in demand for and load size of data centres (i.e. ranging from 80-200 MW). AusNet understands the need for a proactive approach to amending technical requirements related to Schedule 5.3. We agree there are situations where IBL behave differently to traditional loads and that it is important to provide industry with clarity around their modelling requirements before additional large IBL connect.

AusNet supports most of the Schedule 5.3 recommendations proposed in the Addendum as drafted. This view is reflected in the attachment below, along with some suggested amendments. More specifically, AusNet:

- Requests flexibility be retained to negotiate ride through requirements on a case-by-case basis for smaller connections which are more likely to affect the distribution network.
- Suggests further clarity be provided to proponents by including uninterruptible power supplies (UPS) to the defined terms, removing ambiguity as to what constitutes a UPS.
- Identifies potential IBL loads that may not have the assumed ride through requirement and therefore do not agree with the draft position to have an arduous monitoring for instability (MAS) that will inherently exclude them.
- Raises the need for monitoring to be extended to all loads \geq 5MW and requests that MW thresholds for protection requirements be at the NSP's discretion.

If you have any questions regarding this submission, please contact Jason Jina, Energy Policy Lead by email at jason.jina@ausnetservices.com.au.

Sincerely,



Rod Jones
General Manager, Network Strategy & Planning

AusNet

Attachment: Response to Addendum to the draft report on the review of technical requirements for connection

Australian Energy Market Operator (AEMO)

Tuesday, 23 May 2023



Addendum to draft report Stakeholder feedback template:

AEMO Review of technical requirements for connection (NER 5.2.6A)

Stakeholders making a submission on the recommendations set out in the addendum to the draft report may use the below template to provide feedback. Feedback on the **addendum** is due to AEMO by **5:00 pm, 23 May 2023** (please note the earlier submission date for feedback on the primary draft report).

Please consider the confidentiality disclaimer at the end of this document.

Stakeholder: **AusNet**

Schedule 5.3 Conditions for Connection of Customers

Issue	Schedule 5.3 Recommendations
Policy positions	
Recognition of different load technologies	AusNet supports the proposed Option 2.
Size and technology-based thresholds for ride through capability requirements	AusNet supports the proposed Option 2 and Option 3.
Treatment of different load technologies within a load facility	AusNet supports the proposed Option 2.
Continuous uninterrupted operation (CUO) requirements	AusNet supports the proposed Option 2, however queries whether the 20% tolerance or 100MW limit proposed is underpinned by specific analysis on power system impacts of the proposed thresholds. We note the equivalent generation standard does not prescribe tolerances, but states that the active power change is as permitted by relevant access standards.
Treatment of loads with uninterruptible power supplies	AusNet supports the proposed Option 1 and suggests AEMO should also define and add UPS to the new definitions for use with ride through requirements. UPS need to have backup energy sources while IBLs do not. Given the additional requirements that will apply to loads with uninterruptible power supplies, this clarity of terms would be required.
AEMO advisory matters	AusNet agrees with Option 2 given the equivalent ride through requirements under S5.2 which are AEMO advisory matters.
New definitions – for use with ride-through requirements	
Single facility load	AusNet agrees with the definition.
Large single facility load	AusNet agrees with the definition.
Large single facility inverter-based load	AusNet supports the proposed Option 1.
New/amended clauses for ride-through requirements	

Issue	Schedule 5.3 Recommendations
Application of policy for recognition of different load technologies	<p>For large single facility loads, AusNet supports the proposed Option 2.</p> <p>For large single facility IBL, AusNet does not support Option 4, based on the noted barriers to connection for IBL loads without the expected ride through capability. AusNet supports Option 5 to retain flexibility for provisions of a less arduous MAS than the equivalent generator standard, which would ensure the industry can capture the prevalence of such loads.</p>
Operation of large loads during frequency disturbances	AusNet supports the proposed Option 2.
Operation of large loads during contingency events	AusNet supports Option 2 and proposes that provisions for a less arduous MAS should be determined by NSP/AEMO on a case-by-case basis (e.g. smaller plant above 5MW but below 30MW which are likely to connect to distribution networks).
Operation of large loads during voltage disturbances	AusNet supports Option 2.
NER S5.3.3 – protection systems and settings	
Link to ‘ride through’ requirements and maximising protection	AusNet supports Option 2 and agrees that the clause should not be an AEMO advisory matter, as AEMO’s input would be captured under preceding ride through clauses.
NER S5.3.10 – Load shedding facilities	
Emergency Under-frequency ramp down of large loads	AusNet supports the proposed Option 2.
New clause for instability monitoring and prevention	
Stability of IBL – monitoring, protection and performance	<p>AusNet supports the proposed Options 6,7,8.</p> <p>AusNet agrees IBL loads carry increased instability risk which AEMO proposes would be managed through further obligation for protection requirements. However, AusNet does not support Option 3 that limits monitoring to only IBL. We consider that monitoring should be applicable more broadly to all loads as defined in Option 2. This recognises that all large loads are expected to maintain stable performance.</p> <p>AusNet supports Option 5 in principal that protection requirements should apply to single facility loads with IBL but does not support the simple 20MW threshold defined. For smaller plant (above 5 MW), it should be up to the NSP to determine on a case-by-case basis as it is plausible for NSP’s to require implementation of protection for smaller plants looking to connect to weak parts of the distribution network.</p>




Confidentiality disclaimer

Under clause 5.2.6A(d)(2), AEMO is required to publish all submissions received about this Review on its website. Please identify any part of your submission that is confidential, which you do not wish to be published. Please note that if material identified as confidential cannot be shared and validated with other interested persons, then it may be accorded less weight in AEMO’s decision-making process than published material. AEMO prefers that submissions be forwarded in electronic format.

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