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Australian Energy Market Commission
GPO Box 2603
Sydney, NSW 2001

Submitted via: AEMC website.

Re: National Electricity Amendment (Improving the NEM access standards - Package 2) Rule 2025 – Consultation Paper

Dear Ms Collyer,

Jemena welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) *Consultation Paper on the National Electricity Amendment (Improving the NEM access standards - Package 2) Rule 2025*.

Jemena owns and operates a diverse portfolio of energy assets throughout northern and east coast Australia. With more than $12 billion of major electricity and gas infrastructure, we deliver energy to millions of households, institutions, and industries every day.

Our assets include the Jemena Electricity Network in northwest Melbourne, providing electricity to more than 390 000 customers, and gas transmission pipelines such as the Eastern Gas Pipeline, Darling Downs Pipeline, Queensland Gas Pipeline and the Northern Gas Pipeline, and Jemena Gas Network in New South Wales. In addition, our group includes Zinfra, an energy services business, which provides project management, construction, operations and maintenance services for the electricity and gas sectors.

Jemena welcomes the Commission's early focus on the system security risks that very large, inverter-based loads can pose, and strongly supports proactive learning from international experiences to better Australia's energy system.

We commend the intent to act before system disturbances similar to the one that occurred in North Virginia in 2024 take place in Australia. At the same time, we caution against failing to adapt international solutions to the realities of the National Electricity Market (NEM), as Australian networks differ materially in strength, load diversity and connection frameworks.

Jemena would also like to emphasise the critical economic importance of DCs to Australia's current and future digital economy, innovation ecosystem, and broader capabilities. As Australia pursues its ambitions to become a green energy superpower, the parallel boom in the digital economy, offers an unique twin dividend, namely the opportunity to export low-carbon computing and data services. By exporting bytes instead of electrons, we can leverage our clean energy credentials to sell Australian hosted cloud capacity to the world.

Therefore, any overly burdensome or time consuming connection process risks deterring critical, time sensitive investment or diverting it offshore, undermining national strategic interests and potentially delaying economic growth opportunities tied to critical digital infrastructure.

Currently, there is little visibility into the specific operational settings and ride-through capabilities of Data Centres (DCs) in Australia. It is unknown whether due to the events that occurred in the United States, DCs have independently begun tightening their Uninterrupted Power Supplies (UPS) and inverter settings, in order to mitigate reputational risk in other jurisdictions. Therefore, Jemena believes that a short, structured phase of fact-finding and data collection is necessary before undertaking the significant step of introducing mandatory access standards. Such an exercise could draw on telemetry, protection settings, and event logs from existing DCs, leveraging data available to DNSPs. We believe that this process would ensure any proposed rule changes are based on clear evidence and calibrated to the needs of local networks.

We note that AEMO's proposal does not mandate specific hardware, but there is a possibility that current DCs already possess the necessary hardware that can meet the necessary ride through settings mandated by AEMO. However, reinforcing our previous comments, until a structured fact-finding study is performed, we cannot ascertain the cost of these proposed measures. These are costs that that would sit with the proponent or, where network driven, under user pays. However in Jemena's point of view, there is a greater risk to the industry from the extra modelling cycles and review time required to demonstrate compliance. We therefore strongly urge the consideration that any new standard must be paired with a streamlined study process that keeps pace with investor timeframes and our obligation to connect customers promptly.

However, when considering the other component of this rule change proposal, Jemena does not support a blank rule applying the full Schedule 5.3 work package to every load above 5 MW/MVA. Doing so would run the risk of overwhelming AEMO's and DNSPs resources, leading to slower connections and putting projects at risk, while also increasing resourcing risk which could require additional operating expenditure allowances. Therefore, Jemena proposes a two-tier framework which would ensure that the objectives of the rule change for visibility and system security are met, specifically:

- **Tier 1** – A visibility tier, above 10MVA to 100MVA or below in aggregate:
  Proponents abide by NSP's technical standards including protection, control and testing and commissioning requirement. In this process, the Chapter 5A pathway remains unless the applicant elects Chapter 5 process. Jemena suggest the minimum short circuit requirement of 3.0 for IBL load in this category.
- **Tier 2** – A system critical tier, above 100 MVA aggregate load:
  Proponents required to follow full Schedule 5.3 obligations, Electro-Magnetic Transient (EMT) model, SCADA/PMU feed, the system strength impact assessment and default Chapter 5 pathway. This threshold captures genuinely system critical facilities.

Furthermore, and due to the criticality of larger projects for Australia's future, it is important to ensure that while Tier 2 projects meet security objectives, they must do so without jeopardising schedules. Therefore, Jemena encourages the Commission to consider the following mechanisms:

1. AEMO to publish a composite load EMT template and accept a Dynamic Model Acceptance Test (DMAT) pass log as a first stage validation, thus allowing AEMO to audit the log and not the whole model, saving time.

2. AEMO can maintain a pre-qualified list of UPS and inverter equipment already tested against the NEM's ride through envelope, thus projects using listed equipment can bypass equipment tests.
3. Allow for conditional energisation once site acceptance tests are passed, subject to ongoing Phasor Measurement Unit (PMU) verification window. If performance fails at any point in the process, the DNSP can curtail the load until rectified.
4. AEMO commits to finishing any re-reviews within 30 calendar days, and if only minor formatting items remain, the model is deemed accepted after the Service Level Agreement expires.

In order to avoid imposing sudden, unbudgeted costs on proponents which will lead to delays, it is important to consider a minimum 18-month commencement window to the proposal. We also believe that projects under construction or that have reached the "offer to connect" stage, or earlier if detailed designs are materially complete, should be grandfathered under existing rules. Without these transition measures customers could face insurmountable challenges, which might lead to delayed connections, or even project and investment cancellations. Meanwhile, clear curtailment rights for demonstrably non-compliant Tier 2 loads, and user-pays cost-recovery for any network strengthening required solely by the new standard, will keep obligations aligned with accountability.

Finally, Jemena remains committed to the system security and reliability of our network, though we request that the AEMC provide clear, timebound guidelines that allow DNSPs to process large loads connections quickly, in order to keep critical, time sensitive investments on schedule.

For more information regarding Jemena's submission or to arrange a discussion please contact me via Matthew.Serpell@jemena.com.au.

Yours sincerely,

Matthew Serpell,

Electricity Regulation Manager