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Ms Lyndal Bubke
Director, Energy Innovation Toolkit
Australian Energy Regulator

Submitted via email: regulatorysandbox@aer.gov.au

10 April 2026

Dear Ms Bubke,

VIOTAS: Sandbox trial waiver application (AER212772)

Enel X appreciates the opportunity to provide feedback on the Australian Energy Regulator's (AER's) consultation regarding VIOTAS's trial waiver application.

As the operator of Australia's largest dispatchable virtual power plant, Enel X is committed to promoting competition in the National Electricity Market (NEM) through better utilisation of demand side resources to maximise the value of customers' assets and lower overall costs to customers.

We recognise that demand flexibility will play a crucial role in a successful transition to a net zero grid and work with commercial and industrial (C&I) energy users to best utilise demand-side response. As a service provider to customers, we aggregate flexible demand resources and offer energy, market ancillary services, wholesale demand response, firming capacity, and reserve and emergency trader (RERT) to the NEM. Additionally, we can offer an energy response as non-network solutions to network service providers (NSPs) to address identified network needs and to ensure the least cost solutions for network customers.

Enel X supports the regulatory sandboxing objectives that allow new ideas and innovations to be tested, and benefits identified for customers. It is important that we explore CER and DER integration into the market to ensure customer assets are better utilised, valued and can meet the NEM's needs.

Enel X has invested heavily in the Wholesale Demand Response Mechanism (WDRM). We've worked closely with the Australian Energy Markets Commission (AEMC) and the Australian Energy Market Operator (AEMO) to review the WDRM and advance reforms to WDRM settings, baseline methodologies, guidelines, and Rules. Current and future WDRM participants benefit from these reforms. After 12-months of development internally and with AEMO, we have recently commissioned a SCADA-lite implementation to provide AEMO real-time visibility of our WDRM portfolio to improve dispatch process accuracy and power system security monitoring.

While Enel X acknowledges VIOTAS's application seeks to further support market participation of flexible demand resources the proposed options and benefits can readily be assessed by desktop analysis of existing data.

Enel X does not support the waiver of National Electricity Rules (NER) clause 2.3.6(m)(1)(i).

In our opinion the proposal fails to meet the Innovation Trial principles under the National Electricity Law (NEL), Electricity Regulations, and the NER, specifically:

1. The trial project materially impacts on competition in a competitive sector of a national energy market, harming both end-user participants and other aggregators.

2. The trial project would only yield a minor contribution to the development of regulatory and industry experience as the proposed timing of the trial is poorly aligned with the AEMC's Rule change programme.
3. The trial proposal is a refinement of a mature, commercially ready and deployed activity rather than an innovative or novel opportunity. The trail proposal makes no fundamental change to existing processes.

Competition and Consumer harms

Exclusive, anti-competitive access, harming end users and competitors

The VIOTAS trail proposal is egregiously anti-competitive and grants VIOTAS exclusive access for up to 5-years to a pipeline of large flexible demand resources with multiple connection points.

The proposal facilitates VIOTAS front running the AEMC Rule Change process with commercial arrangements that lock-in end-user commitments for 5-years. Even if the proposed Rule change commences the competitive harm is already done.

In its recent review of the WDRM, the AEMC accepted that there's at least 300MW of existing flexible demand resources located at sites served via multiple connection points. Based on data centre load grow forecasts this resource is expected to expand in multiples over the next 5-years.

Multiple connection points are typically associated with large, sophisticated loads such as datacentres which have the scale and resources to participate in demand-side programmes. In NSW alone, the government has provided IDA-endorsement for 14 datacentre projects.

Based on publicly available planning documents, datacentre development trackers, and proponent websites the total peak demand for the 14 IDA-endorsed projects is expected to exceed 3GW. If only 10% of this demand is flexible, then over 300MW of WDRM capacity could be recruited without exceeding the proposed limit of 20 sites.

With such large opportunities at stake the Innovation Sandbox should not be used to pick winners.

Impact on end-user choice

Competition between aggregators delivers fairer demand response revenue sharing arrangements between aggregators and the end-user loads. The VIOTAS proposal to be the exclusive WDRM agent for multiple connection points harms an end-user's ability to negotiate a fair revenue split.

Serving customer needs is not only about revenue splits. End-users choose their aggregator partner on a broad range of attributes including technical capabilities and platforms, commercial terms and risk sharing arrangements, process design guidance, real-time market operations capability, forecasting skills, and established relationships.

The VIOTAS proposal strips away end-user choice as a monopoly provider of solutions for multiple connection point sites.

Trial scale limits not effective at limiting end-user and competitor harm

Multiple connection points are typically associated with large sensitive loads that cannot be served by a single connection due to equipment ratings and/or need to maintain security of supply. Data centres are a good example of multiple connection points where the loads range from 10's to 100's MW per site.

VIOTAS proposed limit of 20 sites could capture 100's of MW in the trial at the detriment of competitors and beyond the capacity required to reasonably inform AEMC/AEMO analysis. VIOTAS may also be incentivised to ration access to the trial to only those sites with the most favourable revenue splits.

If the trial proceeds, Enel X recommend that the AER apply a maximum capacity limit and resource diversity requirement.

Limited contribution

Too late to be useful

VIOTAS posits contributing to the 'Expanding eligibility under the WDRM' Rule Change request (ERC0345) process which is currently scheduled in the AEMC work programme for May to October 2026.

It is unlikely that a meaningful quantity of data can be accumulated in time to inform the AEMC's Rule Change process.

In Enel X's experience it takes 6 to 18 months to convert a potential flexible demand resource into a registered WDRU. This includes technical, commercial, and qualify load data analysis, commercial negotiations and legal review, technical solution development and implementation, and AEMO onboarding and commissioning processes.

Furthermore, the capacity of WDRM resources has grown to be a material consideration for the real time operation of the NEM. Enel X currently has 329MW of WDRM capacity registered. Where the regional limits on the WDRM telemetry exemption have been exceeded, provision must be made for delivery of data to AEMO's real-time market systems. Over the last 12-months Enel X has worked with AEMO to implement the first SCADA-lite connection to AEMO's market systems which has gone live in March 2026.

Given at the time of writing the VIOTAS WDRU has never dispatched, it's difficult for Enel X to comment on VIOTAS's systems readiness to integrate large flexible demand resources into AEMO's real-time market and power system security monitoring systems. Enel X WDRUs are typically more active in winter and summer system stress events, and not often outside of that so it seems optimistic that VIOTAS could scale a portfolio to generate meaningful data to inform the AEMC's Rule change review without operational bidding and SCADA-lite systems.

No exit if the AEMC reject multiple connection points participation

VIOTAS propose to continue to operate the trail even when the rationale for the trial is no longer present;

> "The project will close after five years or when WDRM rules evolve to permit sites with multiple connection point to participate in WDRM."

Should the AEMC not support Rule changes to accommodate multiple connection points the proposed waiver will continue to operate in contravention of the AEMC's determination.

Inadequate guardrails to prevent aberrant outcomes

VIOTAS proposed risk management framework is disconcertingly vague, and the proposed detailed management plan has not been shared by the AER for broader scrutiny. The guardrails essential to ensure the trail WDRU's response represents a genuine 'net position' have not been included in the trial application.

To reduce the risk of an NMI being excluded from netting it is essential that the following condition is added to the trial design:

> A site with two or more multiple electrically-connected connection points can participate in the WDR on the following condition:
>
> - If any NMI at a specific trial site is made unavailable in AEMO's Portfolio Management System all other NMIs at that site are to be made unavailable.

This is necessary as AEMO's Portfolio Management System (PMS) facilitates a DRSP temporarily making an NMI unavailable and is typically used if the load becomes non-compliant to NER requirements such as NER clause 3.8.2A(c)(2). This functionality in PMS exists to allow a DRSP to operate an aggregated DUID with any non-compliant resource (NMI) temporarily excluded and does not link NMIs at a site level.

Additional AEMO resources and processes required to implement the trial

A robust solution to the risk of an NMI being made unavailable would require changes to AEMO's PMS tool to link the availability status of NMIs at a site.

The VIOTAS proposal does not outline any changes to AEMO systems, processes or compliance monitoring needed to ensure that all NMIs at a site participate during a dispatch event.

Enel X understand that AEMO development resources are in high demand, and already approved enhancements to the WDRM are awaiting implementation. Enel X question why a trial would be given priority development status over already approved enhancements.

Enel X's responses to the AER's consultation questions are in Attachment 1. If you have any questions or would like to discuss this submission further, please do not hesitate to contact me.

Kind Regards,

[redacted]

Attachment: Enel X response to Consultation Notice questions

Enel X's detailed response to the AER's consultation paper questions.

1. Are there any views or comments on how this trial contributes to the development of regulatory and industry experience?

The proposed trail is unnecessary, poorly timed to contribute to the development of regulatory and industry experience, and harms both end-users and competitor aggregators.

Global experience of baseline demand response programmes (PJM, CAISO etc.), dispatch and compliance data from WDRU's currently operating in the NEM, and scenario modelling tools are sufficient to inform robust desktop analysis of options to incorporate multiple connection point sites in the NEM.

2. As explored in section 2.1, do stakeholders consider this trial could support the AEMC's consideration of Enel X's proposed rule change?

The proposed trial is too late to make a meaningful contribution to the 'Expanding eligibility under the WDRM' Rule Change request (ERC0345) which is currently scheduled in the AEMC work programme for May to October 2026.

It is unlikely that a meaningful quantity of data could be accumulated in time to contribute to the AEMC's Rule Change process. In Enel X's experience it takes 6 to 18 months to convert a potential flexible demand resource into a registered WDRU. This includes technical, commercial, and qualify load data analysis, commercial negotiations and legal review, technical solution development and implementation, and AEMO onboarding and commissioning processes.

Where the regional limits on the WDRM telemetry exemption have been exceeded, provision must be made for delivery of data to AEMO's real-time market systems. Enel X are currently the only participant utilising AEMO's new SCADA-lite interface and Enel X is using custom software developed 'in-house' as third-party solutions are not available.

Enel X WDRUs are typically more active in winter and summer system stress events, and not often outside of that, so it seems optimistic that VIOTAS could assemble a portfolio integrated with AEMO's systems quickly enough to generate meaningful data to inform the AEMC's Rule change.

3. How do stakeholders consider this trial may impact competition?

The VIOTAS trail proposal is egregiously anti-competitive and harms both end-users and competitor aggregators. The trial grants VIOTAS exclusive access for up to 5-years to a pipeline of large flexible demand resources with multiple connection points.

The proposal facilitates VIOTAS front running the AEMC Rule Change process with commercial arrangements that lock-in end-user commitments for 5-years even if the proposed Rule change commences allowing competitors back into the market.

Competition between aggregators delivers fairer revenue sharing arrangements between aggregators and the end-user loads. The VIOTAS proposal to be the exclusive WDRM agent for multiple connection points harms an end-user's ability to negotiate a fair revenue split.

Serving customer needs is not only about revenue splits. End-users choose their aggregator partner on a broad range of attributes including technical capabilities and platforms, commercial terms and risk sharing arrangements, process design guidance, real-time market operations capability, forecasting skills, and established relationships.

The VIOTAS proposal strips away end-user choice as a monopoly provider of solutions for multiple connection point sites.

The scale of this potential harm is not effectively limited by the proposal to restrict the trail to 20 sites.

Multiple connection points are typically associated with large, sophisticated loads such as datacentres which have the scale and resources to participate in demand-side programmes. In NSW alone, the government has provided IDA-endorsement for 14 datacentre projects.

Based on publicly available planning documents, datacentre development trackers, and proponent websites the total peak demand for the 14 IDA-endorsed projects is expected to exceed 3GW. If only 10% of this demand is flexible, then over 300MW of WDRM capacity could be recruited without exceeding the proposed limit of 20 sites.

With such large opportunities at stake the Innovation Sandbox should not be used to pick winners.

4. Which sites do stakeholders consider are or are not appropriate to trial under this proposal?

Enel X remain wary of applying the trial framework to any sites that require different baseline methods applied to the separate NMIs to pass Predictability of Load accuracy requirements.

Enel X is concerned that a basis risk in forecasting errors arising from application of different lookback windows, reference days, and day of adjustment parameters could yield an opportunity for the aggregator or load to game baseline method performance differences.

5. What do stakeholders consider is the most appropriate way to appropriately capture all connection points by WDRM, to ensure there's no risk of gaming?

Multiple connection point sites often include complex internal electrical configurations. AEMO's registration analysts onboarding WDRM facilities do not typically have the engineering or technical backgrounds needed to assess the connection arrangements from the site Single Line electrical diagrams. Enel X recommend a review by a suitably qualified party of the site Single Line diagrams and the associated Network Service Provider connection agreements to determine if all connection points have been captured. This could be an external independent engineer or AEMO engineering resources typically engaged on large resource registration applications.

6. Are there any other risks with this trial, or any other conditions that may need to be included to mitigate any risks to third parties (e.g. retailers) or the system operator?

VIOTAS proposed risk management framework is disconcertingly vague, and the proposed detailed management plan has not been shared by the AER for broader scrutiny. The guardrails essential to ensure the trail WDRU's response represents a genuine 'net position' have not been included in the trial application.

To reduce the risk of an NMI being excluded from netting it is essential that the following condition be added to the trial design:

> A site with two or more multiple electrically-connected connection points can participate in the WDR on the following condition:
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This is necessary as AEMO's Portfolio Management System (PMS) facilitates a DRSP temporarily making an NMI unavailable and is typically used if the load becomes non-compliant to NER requirements such as NER clause 3.8.2A(c)(2). This functionality in PMS exists to allow a DRSP to operate an aggregated DUID with any non-compliant resource (NMI) temporarily excluded and does not link NMIs at a site level.

Enel X are not aware of any functionality in the PMS that could be used to prevent inadvertent or deliberate exclusion of an NMI from the set of site NMIs.

A robust solution to the risk of an NMI being made unavailable would require changes to AEMO's PMS tool to link the availability status of NMIs at a site. Enel X understand that AEMO development resources are in high demand, and already approved enhancements to the WDRM are awaiting implementation. Enel X question why a trial would be given priority development status over already approved enhancements.

The VIOTAS proposal does not outline any changes to AEMO systems, processes or compliance monitoring needed to ensure that all NMIs at a site participate during a dispatch event.