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NEM Reform Team  
AEMO

Submitted via email: [NEMReform@aemo.com.au](mailto:NEMReform@aemo.com.au)

20 March 2025

Dear NEM Reform Team

**RE: Development of the Voluntarily Scheduled Resource Guidelines**

Thank you for the opportunity to provide feedback on the *Development of the Voluntarily Scheduled Resource Guidelines*.

Enel X operates Australia's largest dispatchable virtual power plant.<sup>1</sup> We work with commercial and industrial energy users to activate demand-side flexibility and offer it into the National Electricity Market's (NEM's) energy and ancillary services markets, the Wholesale Demand Response Mechanism (WDRM), the Reliability and Emergency Reserve Trader (RERT) mechanism, and to network businesses. Enel X is the first Demand Response Service Provider (DRSP) for wholesale demand response.

Enel X is deeply committed to promoting a vibrant market for flexible demand and have invested considerable resources in building a portfolio to support reliability and security in the NEM. We appreciate AEMO's effort in proposing the building blocks for the Voluntarily Scheduled Resource (VSR) Guidelines.

IPRR, Flexible Trading Arrangements (FTA), and WDRM each play an important role in bringing demand-side resources to market and providing flexible capacity to support the renewable energy transition.

Enel X have attached an Appendix to this letter including our responses to the consultation questions.

We would be happy to further discuss any of our comments with AEMO. If you have any questions or would like to discuss this submission further, please do not hesitate to contact me.

Kind Regards,

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<sup>1</sup> Per AEMO Registrations

# Appendix – Enel X responses to consultation paper questions

## *Question 1.*

*What should be the effective date of the VSR Guidelines and why?*

As the VSR Guidelines include the requirements for nominating and testing qualifying resources our expectations are the guidelines become effective from the time AEMO is expecting to commence onboarding qualifying resources and aggregations.

## *Question 2.*

*Do the proposals in this consultation paper strike the right balance between ease of participation for VSRs in central dispatch and the need to maintain a secure and reliable NEM power system?*

Subject to the comments made in the following questions Enel X believe AEMO has put forward a reasonable balance.

## *Question 3*

*How appropriate is AEMO's proposed structure for the new VSR Guidelines?*

Enel X supports AEMO's proposed structure of the guidelines.

## *Question 4*

*To what extent do you agree with all VSRs, independent of zone, being allocated a loss factor of one?*

Enel X support AEMO's view that the complexity of implementing loss factors for VSRs outweighs any market scheduling efficiency benefits that may arise from applying a notional loss factor to a zone.

## *Question 5*

*Other than the NEM zonal classifications presented, what other zonal classifications could be appropriate to use as the basis of VSR zones? What are these and why would they be suitable?*

No further comment at this time.

## *Question 6*

*What are the key factors to consider when setting VSR zones now and in the future as the industry gains more experience with and information on dispatch mode?*

Enel X suggest that provided the size of VSRs remains small relative to other dispatchable resources, and there is an insignificant influence on transmission network congestion and power system security assessment there is little benefit in VSR zones smaller than NEM regions. To support initial participation by emerging VSRPs Enel X recommend that VSR zones are initially defined by NEM regions and if necessary, congestion modelling zones if there is a material impact on network congestion.

Lowering potential barriers to market entry by new participants is necessary to ensure there are a broad range of potential participants/technologies participating in incentive payment tenders.

#### *Question 7*

*How should VSR zones be set to balance cost and ease of participation for VSR with AEMO's need to manage power system security and reliability?*

*a. What are your views on the potential use of NEM regions as VSR zones in the early years of dispatch mode when VSRs are expected to be small with a transition to VSR zones that better support system security as VSRs grow? In this scenario, what would the transition impacts be?*

Enel X support the use of NEM regions as VSR regions in the early years of IPRR implementation with a transition to zones based on congestion only where necessary. Enel X accept that there is a risk that disaggregating already established portfolios may interact with the need to achieve minimum VSR eligibility aggregate capacity. This consequence would be reduced if the minimum size for VSR eligibility is 1MW. Furthermore, the consequence may be further reduced by providing a 12-month transition period for existing VSR portfolios impacted by the implementation of a congestion based zone.

*b. What are the existing or potential issues with having an inconsistent approach to zonal classifications between VSRs and WDRUs?*

Enel X have not identified any material issues arising from an inconsistent approach in zonal classifications between VSRs and WDRUs. Based on our experience as an aggregator of commercial and industrial flexible demand and a WDRM participant, we expect there will be little overlap between the pools of resources suited to VSR versus WDRM. The two mechanisms are complementary in activating additional flexible demand resources by enabling participation from resources with different characteristics.

*c. What impact/s do DNSPs see from the proposal to use congestion zones as the basis for VSR zones rather than distribution network boundaries?*

On the basis that a shift in the granularity of data between distribution zones and congestion zones provides minimal demonstrable improvement in the ability to determine distribution network power flows the consequences of aligning VSR zones with distribution zones generates little overall benefit at the expense of raising barriers to entry. Enel X has observed the chilling effect of DNSP aggregation approvals on the ability to form WDRUs, and strongly recommend that AEMO prioritise lowering barriers to entry to IPRR otherwise invisible price responsive load will continue to operate outside of the dispatch mechanism.

#### *Question 8*

*Does the selection of VSR zones impact your existing VPP portfolio?*

Selection of zones smaller than NEM regions would impact the feasibility of establishing VSRs in Enel X's VPP. Smaller zones will affect both the ability to achieve scale to meet minimum eligibility requires and reduce portfolio diversity which is essential to delivering predictable dispatch responses. Larger aggregations facilitate lower cost VPP headroom/footroom to be drawn upon to correct transient deviations from dispatch targets.

*Question 9*

*Do you currently have a VPP portfolio that operates across the NEM regions and/or distribution networks?*

Enel X's VPP operates across NEM regions but is capable of coordination at a network area/feeder level if required. Enel X recommend that the VSR Guidelines are VPP technology agnostic and are based on balancing customer and market benefits.

*Question 10*

*To what extent do you agree with the requirements, conditions and processes for VSRPs forming VSR aggregations within the proposed VSR zones?*

Based on Enel X's experience as an aggregator and current resource pool potentially eligible for participation, the proposed minimum nameplate or combined nameplate rating of 5MW will be a material barrier to entry, particularly for aggregations utilising resources smaller than 0.5MW per site. Enel X recommend a 1MW minimum threshold for nameplate rating or combined nameplate rating.

Enel X do not understand the relevance of AEMO's proposed alignment with the standing exemption from registration of 5MW and request AEMO state the benefits of such an alignment.

Enel X appreciate the proposal to add an API as an alternative to a manual CSV upload as is currently required. The availability of both a system-to-system API and a manual CSV upload facilitates aggregators with varying maturity and technology platforms.

*Question 11*

*Do you agree with AEMO's minimum lead time of six months for a change in zones?*

Enel X recommend AEMO's minimum lead time for a change in zones is set at 12-months. A 12-month transition period is better aligned with common end user flexible demand resource contracting terms and tenures.

*Question 12*

*What other factors should be considered in setting the minimum VSR nameplate rating threshold and why?*

Enel X is principally concerned with the time it may take to build a portfolio to 5MW, the impact on achieving commercial operation and meeting conditions for incentive payments. The proposed 5MW threshold is unintendedly biased toward supporting aggregations of larger resources.

*Question 13*

*What are your views on an initial lower VSR nameplate rating threshold that adapts as dispatch mode capability and capacity grows?*

As a general principle for facilitating the uptake of new market mechanisms Enel X endorses more accommodating initial eligibility and performance criteria supported with adequate guardrails and monitoring to protect market integrity. Enel X support an initial lower VSR nameplate rating threshold that adapts as dispatch mode capability and capacity grows.

*Question 14*

*What are the options for aggregations of >1 MW to participate in dispatch mode, given the 1 MW bidding threshold?*

The 1MW bidding threshold has implications for existing WDRUs and aggregated load FCAS resources and aggregators have overcome those challenges. Enel X expect aggregators to face similar challenges with VSRs and there are portfolio management efficiency incentives to build aggregations with greater scale, flexibility and diversity. Enel X expect portfolio management economics will shape the feasible scale of aggregations, and that technology and end user characteristics will have a significant impact.

A 1MW aggregation threshold and 1MW bid size present the most technology/participant agnostic building block option.

*Question 15*

*Do you have any feedback you would like to provide on the nomination process for a VSR?*

No further comment at this time.

*Question 16*

*What issues do you see with AEMO's requirements for qualifying resources within a VSR or for a VSR?*

No further comment at this time.

*Question 17*

*Do you see any issues with AEMO's circumstances where it may request VSRPs that have aggregated qualifying resources to declare individual qualifying resource availability and operating status? What other factors should be considered?*

To avoid unnecessary additional reporting Enel X requests that individual qualifying resource availability and operating status is only collected when AEMO determines that it **must** represent the VSR within the aggregation as two or more dispatchable units in constraints used in central dispatch to maintain power system security. Enel X recommends such a request is accompanied with an explanation setting out the underlying system security concern and relevant constraints.

*Question 18*

*What are your views on the processes and settings AEMO should establish to deal with cases of NMI churn that result in a VSR dropping below the minimum threshold?*

Enel X's response to this question is conditional on the size of the minimum threshold. If the threshold is set at the 1MW minimum bid increment then immediately switching the VSR to inactive mode is important for the integrity of the market. However, if a 5MW threshold is utilised and the market is continuing to build experience Enel X suggest there is room for some tolerance provided the VSR Guidelines set out expectations for returning above the minimum threshold (potentially 3-months) and the shortfall tolerance (15% seems reasonable). For the avoidance of doubt, Enel X recommend that VSRP bids remain consistent with the broader Rules requirements and only genuinely available capacity is made available to the market.

*Question 19*

*Are there any other matters AEMO should consider in relation to the proposed telemetry requirements?*

Enel suggest that AEMO apply a more pragmatic requirement for processing latency. No system processes and communicates data ‘instantaneous’ and suggesting so is not consistent with existing SCADA implementations. Enel X recommend processing latency is reflective of the telemetry systems used for other dispatchable generation systems.

*Question 20*

*To what extent does the proposed approach to telemetry appropriately balance between minimising barriers to VSR development and system security considerations?*

With the exception of our process latency comment in Question 19 Enel X is comfortable that the proposed telemetry approach achieves a reasonable balance between enabling participation and system security considerations.

*21. To what extent do you agree with AEMO’s proposed approach to the:*

*a. Initial capability assessment?*

*b. Periodic capability assessments, including any views you have on the triggers and frequency of such assessments?*

*c. Operational requirements for telemetry and communications equipment for VSR?*

Enel X believe AEMO’s proposed approach is fit for purpose provided our concerns regarding telemetry processing latency (Question 19 response) are addressed.

*Question 22*

*Do you agree with AEMO’s notice periods for switching between VSR participation modes?*

*a. Are you able to provide examples of how the proposed notice periods may impact your participation in IPRR?*

*b. Are there any other considerations AEMO should include in setting its notice periods and information requirements?*

Enel X agrees with AEMO’s notice periods for switching between VSR participation modes.

*Question 23*

*Do you agree that VSR can only switch between modes on a per day basis, rather than per time intervals within the day?*

Setting aside emergency conditions addressed under NER 4.8.1 Enel X support restricting mode switching on a per day basis. Any finer granularity is reasonably address via the normal bidding/rebidding processes.

*Question 24*

*Do you agree with the notice information requirements that AEMO proposes?*

Enel X support AEMO’s proposed notice information requirements.

*Question 25*

*Do you have any suggestions on AEMO's plans to incorporate VSR bidding into its existing BDU bidding processes, or any other comments on AEMO's proposals for bid validation?*

No further comments at this time.

*Question 26*

*What information do you think it would be useful for AEMO to include in the Guidelines on NEMDE processes to support prospective VSRPs?*

No further comments at this time.

*Question 27*

*Do you have any suggestions for how AEMO should update its processes to allow VSR to submit dispatch bids and receive dispatch instructions?*

No further comments at this time.

*Question 28*

*To what extent does AEMO's proposed approach to dispatch conformance appropriately balance ease of participation with the secure operation of the power system?*

Enel X believes that AEMO's proposed approach will provide a suitable operating framework for new VSRPs to mature their technical capabilities.

*Question 29*

*What other factors should AEMO consider in setting dispatch conformance requirements and parameters?*

*a. Do you have any views on what would be a reasonable error trigger to use in the context of the size of VSRs, or in how AEMO should approach setting this trigger?*

Enel X are mindful that portfolios with mixed technologies may present challenges in achieving linear ramping between dispatch targets as coordination technology matures.

As coordination technology matures Enel X suggest a 25% error trigger subject to review after 3 years appropriately balances incentivising participation and market integrity.

*Question 30*

*What are your views on the metering requirements proposed by AEMO for qualifying resources in a VSR?*

Provided AEMO accept that VSR telemetry can be derived from non-pattern approved metering then AEMO's proposed metering approach for settlement and compliance is fit for purpose.

*Question 31*

*Is AEMO's explanation of the settlement and NECR arrangements for VSR across the participation modes useful information to be included in the VSR Guidelines?*

Enel X support assisting potential participants by including information on settlement and non-energy cost recovery information in the Guidelines.

*Question 32*

*Do you have any recommendations on the content or processes by which AEMO will adjust its prudential assessments for VSRPs and their VSR?*

No further comments at this time.

*Question 33*

*What data do DNSPs, and where relevant TNSPs, reasonably believe they will require from VSRPs or AEMO and for what purpose/s?*

Enel X recommend that AEMO balance the operational costs of delivering DNSP/TNSP information requests against a business-as-usual case where a Retailer aggregates and co-ordinates price responsive resources outside of the IPRR framework.

*Question 34*

*Do DNSPs/TNSPs have a preference for which AEMO system or process they receive data from, or are there alternative ways this data could be provided?*

No further comment at this stage.

*Question 35*

*From the prospective VSRP perspective, are there any privacy concerns related to the sharing of NMI's within a VSR with DNSPs and where relevant TNSPs?*

No further comment at this stage.

*Question 36*

*What confidentiality concerns do you have regarding the disclosure of data from VSRPs or AEMO with DNSPs and TNSPs (as applicable)?*

DNSPs and TNSPs are expanded their non-regulated (ring-fenced) activities. Enel X prefers to not provide confidential data to parties where protections rely on the effectiveness of internal ring-fencing arrangements that are difficult to audit and enforce.

*Question 37*

*Do you see any issues with the other processes for the disclosure of data collected by AEMO from VSRPs to DNSPs and TNSPs (as applicable)?*

No further comment at this stage.