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15 November 2023

Terry Niemeier  
Director – Program and Market Development – Safeguard  
NSW Office of Energy and Climate Change

Dear Mr. Niemeier

**RE: Peak demand reduction scheme – Rule change 2 consultation paper**

Thank you for the opportunity to provide feedback on the consultation paper for rule change 2 of the peak demand reduction scheme (PDRS).

Enel X operates Australia's largest virtual power plant.<sup>1</sup> We work with commercial and industrial energy users to develop demand-side flexibility and offer it into the NEM's energy and ancillary services markets, the wholesale demand response mechanism (WDRM), the RERT mechanism and to network businesses.

This submission sets out Enel X's views on the draft rule, specifically the new activity for commercial and industrial demand response (WARM). The key points are:

- We strongly support the introduction of the WARM activity to incentivise large energy users to make their demand response capacity available to the spot market.
- We strongly support the proposal to use the WDRM as the means by which that capacity is dispatched and proven for the purposes of certificate creation.
- We have made a few recommendations on ways to improve rule clarity, and maximise uptake of the WARM activity.

I look forward to continued engagement with the OECC on the development of the PDRS rule. If you have any questions or would like to discuss this submission further, please do not hesitate to contact me.

Regards

Claire Richards  
Head of Reserves Demand Response, ANZ

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<sup>1</sup> Based on MW registered in the market. See: <https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/participate-in-the-market/registration>

## Response to specific consultation questions

**Consultation question 7:** *Do you agree with the requirement to verify demand response capacity through dispatch data?*

Yes. It makes sense to use WDRM data to verify demand response capacity. We propose two clarifications/improvements for the OECC to consider.

First, it may be worth clarifying that the verification will be based on dispatch achieved – that is, the kW/h response the WDRU actually delivered when dispatched, not what it was dispatched by AEMO for. This clarification will also align with the fact that DRSPs are dispatched by AEMO on a DUID basis. A DUID can be an aggregation of loads, so may be comprised of any number of WDRUs. Baselines and settlement are determined on an individual WDRU level, so metering data can be used to determine the response delivered by each individual WDRU within a DUID, and therefore its verified PDRS capacity.

Second, as currently drafted, demand response capacity is determined using data from the longest contiguous WDRM dispatch between 2:30–8:30pm in the compliance period. This approach will enable a good portion of loads and asset types to capture value, however may limit participation by assets that are capable of delivering multiple non-contiguous dispatches within the window, for example commercial refrigeration and HVAC. To enable these asset types to capture value and deliver desired peak demand reductions, we recommend that the rule instead base the capacity assessment on the total dispatch delivered across that 6 hour window in one day. Take, for example, a refrigeration load that can switch off for 2 hours, on for 1 hour, back on for 2 hours, and off for 1 hour, between 2:30–8:30pm. Under the draft rule, this load would only capture 1/3 of certificate value (2 hours is the longest contiguous dispatch). If the rule were amended to allow for total dispatch across the window, it would be able to capture 2/3 of certificate value (4 hours total dispatch). Such an approach also aligns better with WDRM market dynamics, where spot prices are likely to rise and fall over a six hour window. For example, a site might curtail at the start of the window, then restore for a period when the clearing price drops below its bid price, and then curtail again when the clearing price rises above its bid price again. We do not foresee any additional administrative complexity in determining capacity this way, and so this change would only serve to increase the incentive for these load types to offer their full capability across the six hours.

**Consultation question 8 :** *Do you agree with the proposal to leverage data from the Wholesale Demand Response Mechanism to validate PDRS capacity?*

Yes. We strongly support the proposal to use the WDRM as the means by which large energy users' demand response capacity is proven for the purposes of PDRS certificate creation, and dispatched to deliver peak demand reductions.

Our understanding of the NSW Government's intention is to use the PDRS to incentivise greater uptake of the WDRM so that C&I demand response is more visible and controllable, and therefore more useful in meeting its peak demand reduction objectives. All capacity in the WDRM is scheduled and must participate in forecasting processes. As a result, all WDRM capacity is visible to the market and dispatchable by AEMO. Further, loads that participate in the WDRM are subject to a suite of rules and compliance obligations to ensure the integrity of

market information, and the reliability of their dispatch. As a result, utilisation of the WDRM ensures that all MW capacity creating PRCs through the WARM method is real and verifiable.

We support the consideration of other C&I demand response activities for inclusion in the PDRS, but there are a few things that the NSW Government will need to consider:

1. Relative value of response delivered. For any future activity, consideration would need to be given to the relative value of schedulable demand response resources through the WDRM and other forms of C&I demand response, and whether it's appropriate for each activity to access the same PRC value.
2. Additionality. In considering the introduction of new activities, it's important to determine whether the activity would have occurred anyway. We understand that the purpose of the WARM activity is to encourage the bulk of C&I energy users on fixed-price, variable volume retail contracts to be flexible, because the current incentives for these customers to be flexible aren't strong enough, and because these customers don't otherwise have the risk appetite or capability to be spot exposed. In our view, any new activity should target these energy users, not those that are already indicating their capability to be flexible through spot exposure, for example.
3. Potential to game. Loads that participate in the WDRM are subject to a suite of rules and compliance obligations to ensure the integrity of market information, and the reliability of their dispatch. The design of a future C&I demand response activity outside of the WDRM will need to consider how to deliver that same level of integrity and protect against any incentive to game.

As above, we support the consideration of new activities for C&I demand response. However, in our view, the best way to maximise C&I demand response in the PDRS is to expand eligibility under the WDRM. We have provided some comments on this further below.

<i>Consultation question 9: Do you agree with the exclusion of RERT and LTESA loads from the PDRS?</i>
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We support the exclusion of RERT loads from the PDRS. This is consistent with WDRM rules that prevent a RERT load from being offered into the WDRM, and RERT rules that prevent a load entering into a RERT contract when it is participating in the WDRM.

We agree with the OECC's decision to allow loads providing FCAS to also participate in the PDRS.

## Other comments

### Clarification on the policy intent of clause 9.2.1(b)

Clause 9.2.1(b) of the draft rule states that "Wholesale Demand Response is an Implementation only to the extent that it involves reducing the consumption of electricity." We seek OECC's clarification on what policy issue this clause is attempting to address.

There are two methods that C&I energy users apply to provide demand response. The first is through pure load curtailment (i.e. switching off equipment, or turning it down). The second method is through switching from grid supply to the supply of an onsite generator or battery. In both cases, the grid sees a reduction in the consumption of electricity at that site. Both methods therefore contribute to the objective of reducing peak demand.

Energy users who apply the second method of demand response use their onsite generator or battery to maintain supply during a DR event, for example if they have critical operations or a very high cost of pure load curtailment. Allowing energy users to participate in DR programs in this way increases the number of DR participants, and enables them to provide a larger and longer response than pure load curtailment. If the policy intent of clause 9.2.1(b) is to prevent these types of energy users from participating in the PDRS, there does not appear to be a clear reason to do so.

Some energy users who apply the second method of demand response will have generator/battery capacity that is greater than their site demand. If that energy user has export approval (granted by the LNSP), it can provide even more demand response capacity by fully supplying its site load and then exporting the excess into the grid. This activity is permitted and incentivised through the WDRM, allowing the energy user to earn extra revenue for the net generation it supplies to the grid, as well as total load reduction at its grid connection point. Again, there does not appear to be a clear policy reason to prevent energy users who can deliver this extra demand response capacity from participating in the PDRS.

Some energy users who apply the second method of demand response use diesel backup generators. These generators exist for the primary purpose of providing reliability in the event of a grid outage, but can be used for the secondary purpose of providing demand response. We understand that the OECC may be looking to prohibit energy users from using diesel backup generators to participate in the WARM activity, due to concerns about emissions. While a source of emissions, the cumulative emissions from onsite diesel generators are low. This is because these assets tend to be small and are rarely used outside of testing and demand response events. Further, demand response is generally dispatched in critical grid events when the majority of the fossil fuel fleet is in operation. Activating these sources of demand response reduces overall grid demand, reduces the amount of highly emissions-intensive, large-scale sources of generation that need to be built and dispatched, and thus supports the transition to a highly renewable power system. To drive uptake of this activity in its initial phase, we recommend that the WARM activity allow such C&I energy users to participate, on the condition that any emissions created by use of the backup generators are offset, for example through the purchase and surrender of ACCUs. This rule could then be tightened in future as the grid transition to renewables accelerates.

As currently written, the rule would also appear to prohibit the use of onsite batteries, which may be powered by onsite or grid renewables. Regardless of the OECC policy decision here, we recommend that clause 9.2.1(b) of the rule be amended so that it is clear which energy users can and cannot participate in the PDRS.

### Timing of certificate creation

It's not clear from the draft rule when certificates can be created for the verified capacity – i.e. immediately after the WDRU's longest dispatch, or only at the end of the compliance period? In our view, it's simpler and much more attractive for scheme participants if certificates can be

created immediately after the capacity verification dispatch. We recommend that the rule be amended to provide clarity here.

### **Broader WDRM eligibility criteria**

We strongly support the use of the WDRM as the mechanism for C&I demand response in the PDRS. However, we are well aware that the eligibility criteria for the WDRM are strict and a lot of load types are not currently eligible.

Enel X has been working with the AEMC and AEMO since WDRM implementation to push rule and procedure changes that expand eligibility. Uptake of the WARM activity will be strong if the WDRM is available to a wide range of loads. We encourage the NSW Government to work with the AEMC and AEMO to drive rule and procedure changes that will deliver this expanded eligibility, and catalyse the success of both the PDRS and the WDRM.

We are happy to provide more information on the current eligibility challenges and the range of potential solutions.