



Ms Anna Collyer
Chair, Australian Energy Market Commission
Lodged via the AEMC website, and via email

14 April 2022

Dear Ms Collyer

RE: Rule change request – Expanding eligibility under the WDRM

On behalf of Enel X, I am pleased to submit this rule change request for the AEMC's consideration.

Enel X operates Australia's largest virtual power plant,¹ with over 350 MW of flexible assets under management across more than 150 commercial and industrial sites. We offer this flexibility into the NEM's energy and ancillary services markets, the RERT mechanism, and to network businesses. Enel X is the NEM's first demand response service provider (DRSP) for wholesale demand response.

The AEMC's *Wholesale demand response mechanism* rule, made in June 2020, prevents participation by energy users that are served by multiple, electrically interconnected connection points. While not directly explained, we understand that this restriction was introduced to address a concern that a DRSP might game the mechanism by shifting load between a site's connection points to make it appear as though WDR was provided while keeping total consumption unchanged. However, many commercial and industrial sites are served by multiple connection points. These sites are often large energy users and could be major sources of demand flexibility.

Our proposed rule removes the restriction and introduces two conditions to address the gaming concern and support simple implementation. Making these changes is likely to further the National Electricity Objective, specifically with respect to price and reliability, by:

- supporting competition in the NEM and driving lower prices for all consumers
- supporting consumer choice and creating more opportunities for more energy users to offer their flexibility to the system
- promoting regulatory certainty and thus supporting long term investment decisions in WDR capability
- increasing the amount of demand flexibility at AEMO's disposal.

These outcomes are aligned with the ESB's broader objectives to create a more active demand side.

For the reasons set out in section 5, Enel X recommends that this rule change request be considered non-controversial and progressed on an expedited basis.

Please feel free to contact me if you have any questions relating to this rule change request.

Regards

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Manager, Industry Engagement and Regulatory Affairs
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¹ Bloomberg NEF, December 2019.

1. Nature and scope of the issue

1.1 Background

Clause 2.3.6(m)(1)(i) of the NER states that a load is a qualifying load for the purposes of providing wholesale demand response if it comprises a single connection point. Specifically:

(m) In this clause 2.3.6:

(1) the load is a *qualifying load* if:

(i) the load comprises a single *connection point* or a *parent connection point* in respect of all its associated *child connection points* that are not *market connection points*;

During the development of AEMO's WDR guidelines several stakeholders sought clarification on whether a single customer site with multiple connection points would be eligible for WDR participation. AEMO subsequently set out its understanding of the above clause in its WDR guidelines, which state that AEMO must not approve the classification of a load as a wholesale demand response unit (WDRU) unless it is reasonably satisfied that, among other things, the "load is served through a single connection point and does not comprise electrical equipment that can be switched between multiple connection points."²

While not addressed in the AEMC's final determination or AEMO's WDR guidelines, it is our understanding that this restriction was put in place to address a concern about gaming. The potential for gaming could arise at a site with multiple, electrically interconnected connection points if a DRSP classifies only one of those connection points for participation in the WDRM, and then shifts load to another connection point at the site to make it appear as though WDR was provided at the classified connection point even though the total demand across the site remained unchanged.

When asked whether the NER concept of *common connection point* could be applied to such sites (i.e. to reflect the aggregate response of the site across the connection points) AEMO advised that it has no discretion on the matter and is restricted by clause 2.3.6(m)(1)(i) of the NER.

1.2 Issue and impact

The effect of the above clause is that a load with multiple connection points that are electrically interconnected is not eligible to participate in the WDRM. However, many C&I loads are served by multiple, electrically interconnected connection points. This can be for several reasons:

- To enhance reliability in the event of a grid outage, or when testing/maintenance work is being carried out in the network. Multiple connection points can provide a layer of redundancy not achieved with just one connection point.
- To provide the flexibility to carry out electrical testing or maintenance work at site whilst retaining a reliable supply.

² See clause 2.1(c) of AEMO's [WDR guidelines](#).

- To accommodate the geographical size of the site or the size of the load being served. If the site and/or load is very large, there may be technical reasons for establishing more than one connection point.

Data centres, cold storage facilities, hospitals, airports and very large industrial facilities are good examples of C&I loads that tend to have multiple, electrically interconnected connection points for one or more of the above reasons. In our experience, such loads tend to be good sources of flexibility and many would be ideal candidates for WDR were it not for this restriction.

It is difficult to say with certainty how many C&I loads are affected by this restriction without knowing the technical configuration of every C&I load in the NEM. However, we know that most loads affected by this restriction are large energy users and significant potential sources of energy flexibility. So, while the restriction might only affect a relatively small number of C&I loads overall, it affects a significant proportion of WDR-capable capacity. We estimate more than 300 MW of WDR-capable capacity is affected by this restriction today. In the case of data centres, this MW capacity is only expected to increase as demand for data and digital services continues its exponential growth.³

Each C&I site is unique. Each will be configured in a particular way to accommodate the customer's technical needs, commercial interests and any NSP requirements as determined in the connection process. Our rule change proposal recognises that C&I sites do not have a uniform configuration and should not be restricted from participating in the WDRM on this basis.

Broadening eligibility for the WDRM through this rule change will increase participation from current levels and enhance the mechanism's ability to deliver on its original objectives – that is, to engage the demand side in central dispatch, support reliability and increase competition in the wholesale market.

2. Description of the proposed rule, and how the proposed rule would address the identified issue

Our proposed solution is to allow loads with multiple, electrically interconnected connection points to be eligible for participation in the WDRM, but only if:

- *all* of the load's connection points participate in the WDRM – that is, the entire electrically-interconnected load is classified as a single WDRU, and by the same DRSP; and
- each of those connection points is served by the same Market Customer (retailer).

The purpose of the first condition is to remove any potential for gaming – that is, shifting load between a site's electrically interconnected connection points to make it appear as though WDR was provided while keeping total consumption unchanged. By requiring all connection points to participate, and to do so via the one DRSP, any incentive to game is removed because the entire load must reduce its consumption below the baseline to receive any benefit. The load would participate

³ See <https://www.iea.org/reports/tracking-data-centres-and-data-transmission-networks-2020>

in the WDRM on an aggregate basis – that is, baselines and settlement will be determined using the aggregate of the load’s total connection point data.

The WDRM final determination explained that each WDRU must have its own connection point as it was “important for determining baselines and settling the wholesale demand response provided.”⁴ We agree that there needs to be a connection point associated with WDR load – this ensures there is a metering point at which baselines and settlement can be determined. However, there appears to be no technical or policy reason why this cannot occur on an aggregate basis across the one load.

We propose the second condition for simplicity. While it is very uncommon for C&I loads with multiple connection points to engage multiple retailers, it is theoretically possible. If a load with multiple, electrically interconnected connection points has a different retailer serving each, it may be difficult to accurately allocate the quantity of WDR provided by each for the purposes of settlement and retailer reimbursement. By requiring all connection points associated with a single load to be served by the same retailer, this complication is removed. The customer’s retailer should therefore be indifferent as to which connection point the WDR is provided from, given that settlement and retailer reimbursement will occur based on the aggregate across all connection points.

We propose that the DRSP be required to declare that a load meets the above two conditions when applying to AEMO to classify a WDRU with multiple connection points. Showing evidence of, and verifying, the first condition should be reasonably straightforward using MSATS data and supported by information such as technical diagrams for the load. Any variation to the connection point configuration after that point (e.g. if a new connection point is added, or one is taken out of service) would require AEMO’s re-assessment in order for that load to continue to be a qualifying load.

Verification of the second condition should also be straightforward, using information available to AEMO in MSATS. Theoretically, a customer could choose another retailer to serve one of its connection points after the load has been classified. If this occurs, the DRSP would be required to notify AEMO that the load is no longer a qualifying load, in accordance with clause 2.3.6(k) of the NER (which is a civil penalty provision). The load would then cease to be classified as a WDRU, as per clause 2.3.6(l) of the NER, and the DRSP would be unable to offer that load into the NEM. These rules put strong incentives on the DRSP to make sure that it is made aware of any retailer churn at customer sites with multiple connection points.

3. How the proposed rule will, or is likely to, contribute to the achievement of the National Electricity Objective

In Enel X’s view, the relevant aspects of the NEO are the price and reliability of the supply of electricity, as well as the price and reliability of the national electricity system.

The proposed rule is likely to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to price and reliability by:

⁴ See p120 of WDRM final determination.

- **supporting competition in the energy market and driving lower prices for all energy consumers.** The proposed rule will remove an inefficient barrier to participation and will create a level playing field for the provision of WDR by all large customers. Broadening eligibility under the WDRM is likely to increase participation in the mechanism. Increased participation will drive competition in the spot market, particularly at peak demand times when prices are high and WDR is most likely to be dispatched. This may have the effect of reducing spot prices at critical peak times, the benefits of which are passed on to all electricity consumers.
- **supporting consumer choice and creating more opportunities for more energy users to offer demand flexibility.** Expanded eligibility will enable more energy users to participate in the mechanism and receive the benefits of providing WDR. Further, enabling a broader range of energy users to provide WDR supports value stacking and the provision of other flexibility services, such as frequency response, operating reserves and network support. These outcomes are aligned with the ESB's objectives regarding the activation of the demand side.
- **promoting regulatory certainty.** The proposed rule addresses an inefficient barrier to entry and thus supports long term investment decisions in WDR capability, to the benefit of energy consumers.
- **increasing the amount of demand flexibility at AEMO's disposal.** It is becoming increasingly apparent that reliability can only be assured in a renewables-dominated power system where there is sufficient flexibility. The WDRM provides an incentive for energy users to offer their flexibility to the market. Unlike other forms of wholesale demand response, the WDRM gives AEMO visibility and control over its operation. The proposed rule will increase participation in the mechanism and therefore increase the amount of flexibility at AEMO's disposal to support system reliability.

4 The expected impacts of the proposed rule

Enel X's views of the benefits of the proposed rule for system reliability, energy users providing WDR, and energy consumers more broadly are set out in section 3.

This section sets out the potential implementation and ongoing costs of the proposed rule. Enel X sought the views of AEMO, the AEC and the ENA in preparing this section.

Implementation costs

To implement the proposed rule, AEMO would need to do the following:

1. Update section H of its application form for registration as a DRSP, which sets out the requirements to classify a load as a WDRU, to reflect the new rule. This would be a minor change.
2. Amend clause 2.1(c) of the WDR guidelines. This clause currently sets out AEMO's interpretation of the existing NER regarding sites with multiple connection points, so would

need to change to reflect the proposed rule. However, we believe that this would be a minor change that could be made by AEMO under clause 3.1.10(f) of the NER, without triggering the need for formal consultation under the rules consultation procedures.

3. Verify that both conditions are met when a DRSP applies to classify a load with multiple, electrically interconnected connection points. However, as noted in section 2, the onus will be on the DRSP to provide evidence that it satisfies these conditions alongside all the other declarations it must make to confirm that a load is a qualifying load, so we expect the incremental cost to AEMO of this change will be minimal.
4. Allow for aggregation of data for loads that have registered to participate under the proposed rule for the purposes of baselining and settlement. To do this, AEMO will need a way to associate the load's connection points with each other, as this linking does not currently occur in market systems. AEMO advises that one way to do this is to create a new field in MSATS that allows the connection points of loads registered under the proposed rule to be associated with each other. This is similar to how the embedded network fields in MSATS enable embedded network connection points to be associated with each other.

In Enel X's view, the first three of these implementation requirements are minor and administrative in nature. We therefore expect that the cost to AEMO to implement these changes will be minimal.

The fourth implementation requirement is likely to require more work. Enel X understands that the introduction of a new MSATS field involves a schema change that would need to be adopted by all market participants. Enel X would support this change being packaged together with other schema changes in order to minimise costs and disruption to AEMO and market participants. However, given the proposed rule will not affect all WDR loads, we believe it is worthwhile exploring whether there are simpler implementation options, e.g. manual approaches to the aggregation of baselines and settlement for WDRUs registered in this way. Enel X understands that retailers and DNSPs already have ways to associate a load's multiple connection points with each other. It may be cheaper and simpler to use these existing systems instead.

Ongoing costs

The ongoing costs of the proposed rule are expected to be minimal. DRSPs will need to collect and show evidence of satisfying the conditions of the proposed rule when seeking to classify a load with multiple electrically interconnected connection points, and AEMO will need to process and/or verify this information. As noted in section 2, we propose that the onus be put on the DRSP to show evidence of meeting the two conditions in order to minimise the verification work required by AEMO. Once a load is classified in this way, AEMO will need to calculate baselines and settlement on an aggregate basis, like it does for other WDR loads. However, this calculation is straightforward and again is not expected to be onerous given that not all WDR loads will be registered in this way.

Enel X considers that the broader benefits of the proposed rule, as set out in section 3, will outweigh its implementation and ongoing costs.

5 Recommendation that this rule change request be expedited

Enel X recommends that this rule change request be considered non-controversial and progressed on an expedited basis, for the reasons set out below.

- We cannot think of a policy reason why any party would object to proposed rule, particularly given the gaming concern is fully addressed by the condition outlined in section 2.
- The issue raised in the rule change request is not particularly complex. Similarly, the proposed rule does not have broader impacts on other parts of the NER, so does not involve complex legal drafting.
- The proposed rule does not negatively impact any energy user's or DRSP's ability to participate in the mechanism. On the contrary, it broadens eligibility so that more loads will be able to participate if they want to.
- The costs of implementation, set out in section 4, are expected to be one-off and mostly administrative in nature. Further, there appear to be ways to minimise these costs by bundling the change with other upcoming changes or exploring manual approaches.
- The ongoing costs of the proposed rule will be borne by DRSPs and AEMO, and are expected to be very minor.
- Early and expedited consideration of this rule change request would support expanded eligibility under the WDRM ahead of summer 2022-23, when WDR resources are most valuable to the system.

6 Proposed rule

The proposed rule is set out in tracked changes below.

2.3.6 Wholesale demand response units

...

(m) In this clause 2.3.6:

(1) the *load* is a **qualifying load** if:

(i) the *load* comprises:

(A) a single *connection point* or a *parent connection point* in respect of all its associated *child connection points* that are not *market connection points*; or

(B) *multiple connection points that are all electrically interconnected, and where each of those connection points are served by the same Market Customer*

(ii) if the *connection point* is a *child connection point*, it is also a *market connection point*;