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Declan Kelly
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

23 April 2020

Dear Mr. Kelly

RE: Wholesale demand response mechanism, second draft determination

Thank you for the opportunity to provide feedback on the second draft determination for the *Wholesale demand response mechanism* rule change request.

Enel X works with commercial and industrial energy users to develop demand-side flexibility and offer it into wholesale capacity, energy and ancillary services markets worldwide, as well as to network businesses. We have over 50 demand response programs in 20 countries, which involve altering customers' consumption patterns and controlling onsite generation. In the NEM, Enel X participates in the energy and FCAS markets, offers network support to NSPs, and has developed reserves for AEMO under the RERT framework, including through the ARENA/AEMO demand response trial.

Enel X commends the AEMC and AEMO for identifying a way to implement this important reform in a more timely and cost effective way. The revised approach set out in the second draft determination achieves fundamentally the same benefits as under the first approach, but at a lower cost and with an earlier start date. The second draft rule also clarifies a number of important features of the wholesale demand response mechanism.

Much of the second draft determination is consistent with the first draft determination. This submission does not repeat our comments on the aspects that remain the same. Rather, we have focused our feedback on those aspects of the rule that have changed.

The impacts of COVID-19 is putting a strain on the whole industry as well as across the broader community and economy. Enel X agrees with the market bodies' conclusions that despite these effects, the wholesale demand response mechanism is a reform with relatively low costs to industry and important benefits to customers that should be implemented in October 2021. However, we consider the full benefits of this reform will not be seen until the market moves to five minute settlement, and are disappointed in this proposed delay.

If you have any questions relating to this submission, please contact me.

Regards

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1. PARTICIPATION CATEGORY AND REGISTRATION

Enel X supports the following amendments set out in the second draft determination in relation to participation categories and registration:

- Preventing customers on spot-exposed retail contracts from offering wholesale demand response at the same time. This prevents double dipping. Please see our submission to the first draft determination for further comments on why we support this approach.
- Removal of the 5MW minimum aggregation requirement. Enel X agrees that under the first draft determination DRSPs could bid in less than 5MW anyway and, as such, the minimum aggregation requirements is an unnecessary hurdle.
- The approach to classifying qualifying loads as wholesale demand response units.

Enel X provides the following comments in relation to other aspects of the DRSP framework.

1.1. Telemetry requirements

Overview of second draft rule

The second draft rule, second draft determination and AEMO's High Level Design paper provide some further detail on the likely telemetry requirements for WDRUs. Under the second draft rule:

- AEMO will be required to approve the classification of a load as a wholesale demand response unit if it is reasonably satisfied that, amongst other things, "the DRSP has adequate communications and telemetry in place to support the issuing of dispatch instructions".¹
- AEMO will be required to set out in Wholesale Demand Response Guidelines "information about the requirements for telemetry and communications equipment for *wholesale demand response units*".²
- AEMO may determine a threshold for "the total quantity of *wholesale demand response* in a region above which AEMO will impose more onerous telemetry and communications equipment requirements".³

The second draft rule further requires that in determining telemetry requirements and the regional threshold, AEMO have regard to a number of principles.

The second draft determination and a High Level Design paper published by AEMO expand on how AEMO may choose to implement these rules in practice. Enel X notes this approach is yet to be consulted on and confirmed, and these clarifications are not reflected in the second draft rule:

- Any sites that already have SCADA will be required to use SCADA for the purpose of providing wholesale demand response.
- Any load with a maximum responsive component of 5 MW or above would be required to provide SCADA (or an approved equivalent).⁴

¹ Second draft rule 2.3.6(e)(4).

² Second draft rule 3.10.1(a)(2).

³ Second draft rule 3.10.1(c).

⁴ AEMC, Second Draft Determination, p.128.

- Loads with maximum responsive components of less than 5 MW would not automatically be required to provide SCADA, subject to a regional threshold and provided such loads are not aggregated with loads that use SCADA.⁵

AEMO states it “will allow WDRUs with a demand-responsive component under 5 MW to be aggregated without telemetry to more than 5 MW in a region”.⁶

Enel X views

Enel X has three concerns with the discussion and rules on telemetry and communications requirements:

- We continue to consider that, consistent with other markets around the world that facilitate demand response, 4 second data from demand sites is not necessary to operate the system safely, securely and reliably.
- While we welcome the ability of a certain quantity of “non-visible” demand response to participate in the wholesale market, the threshold approach is problematic.
- The AEMC and AEMO appear to view the telemetry options as “all or nothing” – i.e. if something cannot be monitored with 4-second latency via SCADA, then it is equivalent to being invisible – when in practice there is a spectrum of options.

Enel X has set out in some detail in our previous submissions why we do not consider that real time monitoring is essential for the successful participation of demand response in wholesale markets.

We are heartened that AEMO has indicated an intention not to require all demand response to have SCADA capability. Allowing a portion of demand response in each region without more onerous telemetry and communications equipment will help support the initial development of demand response in the wholesale market. However, we have some concerns about the regional threshold approach to telemetry assuming, as implied by the second draft determination, that “more onerous telemetry requirements” means SCADA.

Implementing a threshold at which more onerous telemetry requirements are imposed will penalise customers who are willing to provide demand response but enter the market later. Under the proposal, even the smallest wholesale demand response unit will require more onerous telemetry, which may far outweigh the benefits of entering the market. This will create a two tiered market and may ultimately prevent many potential customers from participating, simply because of bad timing.

While we understand AEMO’s desire to have the greatest possible visibility and control over the grid, this must be tempered by a pragmatic approach that will not present a barrier to entry to demand response above the deemed threshold. If set too low, the threshold could represent an unreasonable and unnecessary cap on the participation of demand response in the wholesale market.

To address these concerns, we suggest the principles to which AEMO must have regard in determining the telemetry and communications requirements as well as the threshold at which more onerous telemetry and communications equipment requirements may be imposed should be expanded to include:

- A need to accommodate the various characteristics and capabilities of the assets providing the service.

⁵ AEMC, *Wholesale Demand Response Mechanism, Second Draft Determination*, March 2020, p.128.

⁶ AEMO, *Wholesale Demand Response: High Level Design*, March 2020, p.26.

- A need to be flexible and adaptable to changing technology.
- The purpose for which the information obtained from the more onerous telemetry and communications equipment will be used.

We also consider that AEMO should be required to demonstrate that the telemetry and communication equipment requirements are proportionate to the service being provided and AEMO's actual requirements.

Finally, Enel X considers there is a middle ground. The second draft determination and draft rule appear to take an "all or nothing" approach to telemetry, either providing AEMO with no information ("non-visible") or near real time information via SCADA (4 second data). In fact, there are a variety of telemetry options that could provide AEMO with the information in a timeframe that would still provide AEMO with sufficient certainty to operate the system in a safe, secure and reliable way.

For example, relaxing the requirement, to permit 60 second data, would significantly reduce participation costs while still providing AEMO with timely information. We consider this would be a more proportional requirement, particularly since the second draft rule does not require real time assessment of compliance with dispatch instructions or data to calculate the contribution factor for FCAS costs.

We are pleased to note that "AEMO is working with industry to develop new, more cost-efficient, forms of telemetry to support visibility of [the demand side]".⁷ Enel X supports work by AEMO to develop and agree alternative forms of telemetry.

In this vein, Enel X also considers in the final determination the AEMC should be clearer that any more onerous telemetry requirements simply must be approved by AEMO, rather than equating to SCADA or its "equivalent". This is also consistent with the second draft rule, which does not explicitly require SCADA, but rather leaves the technology type to be determined by AEMO.

Similarly, these issues should be considered in determining the proportion of demand response in each region that does not require real time information. In setting the threshold, a crucial question will be what AEMO assumes about "non-visible" resources. As noted above, a large portion of load may not be completely invisible, but rather have telemetry with a slightly higher latency (e.g. 60 seconds). The threshold should then be set on the basis of plausible scenarios in which:

- AEMO would take immediate action in response to seeing that demand response resources are not behaving as expected; and
- That behaviour, if not addressed within 60 seconds, would lead to significant deterioration of the system.

We look forward to engaging with AEMO further on these issues.

2. INTEGRATION WITH CENTRAL DISPATCH

Enel X supports the following aspects of the second draft determination:

- The revised approach to submitting bids in a similar manner to scheduled loads, but only for the available capacity of the wholesale demand response unit. Enel X considers this is a pragmatic approach to achieving the desired outcome at a lower cost.

⁷ AEMO, Wholesale Demand Response: High Level Design, March 2020, p.26.

- Where a DRSP receives an instruction to remain at its available capacity, this will not be treated as a dispatch instruction and therefore will not be assessed for compliance.
- Removal of the requirement for regulation FCAS costs to be recovered from DRSPs on the basis of contribution factors. For reasons set out in our previous submission, Enel X agrees that it would be complex and costly to recover these costs from DRSPs. We also agree that DRSPs should not be allocated contingency FCAS costs since they are already paid for on behalf of participating customer.

Enel X provides the following comments in relation to other aspects of the market participation framework.

2.1. Availability

Under the first draft rule, DRSPs were able to elect when they participate in central dispatch. Under the second draft rule if the DRSP has available capacity it must declare it. The second draft determination states that:

“If the DRSP has available capacity but does not wish to provide wholesale demand response, it may adopt a bidding strategy that makes dispatch unlikely but if extreme prices are reached and the wholesale demand unit is dispatched, it must respond.”

The second draft rule provides a number of scenarios where the DRSP must declare its availability as zero during a particular trading interval, including:⁸

- where the wholesaled demand response unit is not baseline compliant during that trading interval; and
- where the wholesale demand response unit is spot price exposed in respect of that trading interval.

The second draft rule also provides flexibility for AEMO to determine in its Wholesale Demand Response Guidelines the factors that a DRSP must consider in determining the availability of a wholesale demand response unit.

It is not clear from the second draft rule whether a DRSP may elect to declare an available capacity of zero for reasons other than those set out in the second draft rule or AEMO’s guidelines or what any penalty would be for doing so may be if it were not permitted.

There are many reasons why an individual participating customer may not wish, or be able, to participate in a particular dispatch period. Further, these times may not necessarily be predictable. For example, there may be equipment outages, on-site safety issues, or a customer may produce a product that at times can be time critical, such as being required for emergency purposes. It is important that the DRSP is able to declare the availability of such sites as zero. Managing availability through the DRSP’s bidding strategy, as suggested in the second draft determination, may present an unacceptable risk to the customer where there is a possibility they will be dispatched if these times happen to coincide with times of extreme prices. This could unnecessarily constrain the types of customers that are able to provide demand response.

Enel X requests this issue be clarified in the final determination and rule.

⁸ Second draft rule clause 3.8.2A.

2.2. Compliance with dispatch instructions

In our submission to the first draft determination, we explain why it will be challenging for most loads to accurately follow a linear dispatch trajectory or provide their full dispatch capability immediately following the receipt of a dispatch instruction, and that the assessment of a DRSP's compliance with dispatch instructions must recognise this.

We welcome AEMO's recognition that "loads cannot necessarily be treated the same as generation" and that "that further considerations of load inflexibility profiles (such as minimum notification times, and capability to execute smaller MW step changes) may be required".⁹ We look forward to working with AEMO on these issues to ensure that unnecessarily restrictive requirements do not restrict participation to a small subset of customer types.

3. INFORMATION PROVISION

Enel X supports the following aspects of the draft determination:

- The decision not to require DRSPs to provide information to AEMO as an input to MT PASA, but rather require DRSPs to utilise the DSP Portal. Enel X considers this is a pragmatic approach that balances the costs and complexities of providing AEMO with sufficient, robust information.
- Not providing retailers with additional real-time information in respect of baselines or dispatch.

Enel X provides the following comments in relation to other aspects of the information provision requirements.

3.1. Requirement for DRSPs to provide information to AEMO as an input to ESOO

As noted in our submission to the first draft determination, as a potential DRSP, Enel X would do its best to provide accurate information to the ESOO in good faith. However, it is likely to be very difficult for a DRSP to provide accurate information for the ESOO timeframes.

Enel X continues to seek assurance that DRSPs would not be penalised if there were legitimate reasons for any information provided turning out to be incorrect. In addition, Enel X seeks clarity on whether a DRSP's inputs to these processes would relate to existing, contracted capacity only, or is expected to also include the DRSP's projections of the amount of additional demand response capacity it expects to contract with over the forecast period.

3.2. Information about which customers are offering wholesale demand response via a DRSP

The second draft rule provides that the relevant retailer will be notified (via MSATS) when a DRSP is assigned to a NMI, the identity of the DRSP, and the baseline methodology that has been assigned to that NMI.

Enel X remains concerned that giving retailers visibility of when a customer enters into an agreement with a DRSP will undermine the success of the framework, for reasons set out in our submission to the first draft determination.

⁹ AEMO, Submission to Wholesale demand response mechanism draft determination, 20 September 2019, p15.

4. DETERMINATION OF BASELINES

Enel X generally supports the approach to baselining set out in the second draft rule, which is largely the same as under the first draft rule. Enel X supports the following amendments:

- Placing the obligation on DRSPs not to make dispatch offers where a wholesale demand response unit is not baseline compliant, rather than requiring AEMO to exclude such offers from dispatch.
- Allowing AEMO to develop a range of baseline settings, which may be applied to a baseline methodology to adjust it in specified ways for particular types of loads. This approach recognises that loads have different characteristics that will need to be accommodated to enable them to participate, and that a “one size fits all” approach is not appropriate.
- Clarity that energy users providing wholesale demand response via a DRSP would be able to value stack, for example by providing network support services to the local DNSP, where the wholesale demand response offer is in addition to those activities.

Enel X provides the following comments in relation to the baseline framework.

4.1. Ability for market participants to propose new baselines

Under the first draft rule, registered participants were able to propose alternative baseline methodologies. AEMO was required to review these and approve them provided they met certain criteria. Under the second draft rule AEMO is no longer required to approve alternative baseline methodologies. There are benefits to this simpler, less costly approach, but these must be balanced against the need to ensure that potential demand response loads are not unnecessarily excluded because the chosen baseline is not appropriate for them.

We note AEMO’s intention to develop a single baseline methodology for the start of the demand response mechanism.¹⁰ While a single initial methodology may assist in implementing the mechanism in a timely and low cost way, Enel X is concerned that there is no onus on AEMO to subsequently consider alternative baseline methodologies. We consider some middle ground is appropriate, such as requiring AEMO to conduct a public consultation process on alternative methodologies on an annual basis and justify any decision not to adopt an alternative methodology.

The ability for AEMO to apply different baseline settings to individual loads will assist in catering for different loads. However, it is likely that ultimately a range of different baseline methodologies will be required to facilitate greater participation by different types of loads.

4.2. Tolerances for baseline compliance

The second draft rule requires that where a wholesale demand response unit is not baseline compliant during a trading interval the DRSP must submit available capacity as zero. Further, where two or more units have been aggregated, if any one of those units is not baseline compliant then the DRSP must submit the aggregated available capacity as zero.

Tolerances catered for within the baseline methodology metrics will be critical for preventing unnecessary volatility and uncertainty in relation to how much demand response capacity is available. If the metrics are too restrictive, this could create significant unpredictability, making demand response a needlessly unreliable resource. The metrics should be determined in such a way so that baseline noncompliance is a rare exception. It should not be something that occurs suddenly and unexpectedly as a

¹⁰ AEMO, Wholesale Demand Response: High Level Design, March 2020, p17.

result of random events, but rather is an indication that a particular load is simply unsuited to the chosen baseline methodology.

We consider that periodic tests – e.g. annual – against tolerances similar to those used in other markets with wholesale demand response is the best approach.¹¹ While the degree of tolerance is to be determined by AEMO, the Commission has stated it “considers the metrics produced by AEMO should require baselines to exceed the levels of accuracy considered 'good' in the AEMO-ARENA demand response RERT trials”.¹² “Good” accuracy was defined as having a Relative Root Mean Square of the Errors (RRMSE) of < 10%.

Enel X is concerned that this represents an unrealistically high level of tolerance and diverges from international practice. For example, PJM requires that the RRMSE is no greater than 20% unless otherwise approved, a tolerance of twice what has been proposed by the Commission. In the South Korean market the RRMSE threshold is 30%, and in some instances may be waived. We strongly suggest that the Commission recommend AEMO look to international best practice to inform the appropriate tolerance for baseline compliance, as well as through stakeholder consultation.

5. SETTLEMENT AND COST RECOVERY

The settlement and cost recovery arrangements remain largely unchanged between the first and second draft determinations. Enel X notes and supports the requirement for AEMO to calculate and publish the retailer reimbursement rate each quarter.

6. IMPLEMENTATION

Enel X supports the AEMC and AEMO bringing forward the commencement date to 24 October 2021. This will allow this important reform to be in place in time for summer 2021/22.

We reiterate the points made in our early submission in respect of implementation; namely, that:

- Work by AEMO and the AER to develop and publish guidelines should commence early to ensure they are given the necessary consideration and appropriate consultation so that all stakeholders are prepared when the mechanism commences. In this respect, we welcome the proposed timeframes set out in AEMO’s High Level Design Paper.
- Retailers will need to amend their contracts to remove clauses that prevent customers from engaging with a third party for the purposes of providing demand response. Such clauses unnecessarily restrict competition. We note the AEMC’s response that this is a commercial consideration for retailers. However, Enel X continues to consider that rules explicitly preventing this behaviour would better promote competition in the provision of demand response.

7. OTHER ISSUES

Enel X strongly supports the ability to have net exports credited as wholesale demand response (for example as a result of having an onsite generator or battery), which has now been made explicit in the second draft rule.

¹¹ PJM undertakes these tests annually, while in South Korea they are conducted every two years.

¹² AEMC, Wholesale Demand Response Mechanism, Second Draft Determination, March 2020, p185.

As raised in our submission to the first draft determination, Enel X continues to seek clarity on what “capacity” AEMO will be required to report on annually in respect of wholesale demand response units. We do not support the publication of detailed information about which individual NMIs are providing wholesale demand response, and thus suggest that clause 3.10.6(c)(2) of the second draft rule is amended to refer to “total” or “average” capacity.