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To whom it may concern

**RE: Demand side participation forecast methodology**

We welcome the opportunity to provide feedback on AEMO's Demand Side Participation (DSP) forecast methodology Issues Paper.

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 frequency control ancillary services (FCAS) markets, offers network support to distribution businesses and has developed reserves for AEMO under the RERT framework, including through the ARENA/AEMO demand response trial.

Broadly Enel X agrees with AEMO's approach to forecasting demand side participation. This submission outlines our responses to the questions that were posed in the Issues Paper. In particular, we note:

- Given the establishment of the distributed energy resources (DER) register in addition to the existing Demand Side Participation Information (DSPI) process, it is important that AEMO clearly differentiates between DER and DSP sites in order to avoid double counting as well as to avoid duplicated effort on behalf of participants.
- AEMO has access to data at the NMI level as well as SCADA data which may be used to verify information provided by participants for the purpose of forecasting current levels of DSP.
- It is important to include network service provider programs as these can have a significant effect in reducing demand, particularly on peak demand days.

Should you have any questions about this submission, please do not hesitate to contact me.

Regards

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**Table 1: Comments on the consultation questions**

	Consultation question	Enel X's view
1	<p>Considering the intended purpose of the forecast, are the inclusions and exclusions of the various DSP types appropriate and well explained?</p>	<p>Yes. Given the development of the DER register as well as the DSPI, there is the potential for double counting of resources that may be identified as DER as well as DSP. It will be important for AEMO to clearly differentiate between DER sites and DSP sites to avoid any double-counting, which would incorrectly inflate the DSP forecasts.</p> <p>In addition, as noted by AEMO, it is also important to avoid unnecessary duplication of effort on behalf of participants in providing the same information via two different processes.</p>
2	<p>Given the purpose of the forecast in AEMO's reliability processes, is the approach for estimating the current level of DSP appropriate?</p>	<p>Broadly, yes. Enel X considers there are a number of additional sources of information that AEMO could use to verify data provided by market participants, noting that AEMO already considers some of this information.</p> <p>AEMO has access to NMI level data and potentially SCADA data. This information can be used to assess how a site behaved over the last three years (for example) to events such as:</p> <ul style="list-style-type: none"> <li>• High spot prices</li> <li>• Network peak shaving events (e.g. Ausnet's critical peak demand tariff)</li> <li>• If relevant, zero/negative spot prices (i.e. did they consume more or generate less in response to these low/negative prices)</li> </ul> <p>This will provide AEMO with more relevant information for real-time events, including a greater understanding of how DSP responds.</p> <p>In turn, this will help AEMO manage emergency events such as those experienced this summer, including extreme temperature events, storms knocking down transmission towers, and bushfires causing large customers and interconnector assets to trip.</p>
3	<p>AEMO could ask for a forward-looking MW estimate for existing and future DSP programs for up to three years for all participants.</p>	<p>Requesting information on programs for up to three years will have the obvious benefit of providing additional information to assist</p>

	<ul style="list-style-type: none"> <li>• What are the pros and cons for such as request?</li> <li>• In particular, is it feasible for participants to estimate this with a reasonable level of confidence?</li> <li>• How might AEMO validate the information provided?</li> </ul>	<p>AEMO with forecasting DSP capacity. However, clearly the forecasting will only be as good as the accuracy of the information provided.</p> <p>Scheduled generators have much greater foresight and control of issues such as planned maintenance and other longer-term activities than DSP aggregators. As such, they are better placed to provide longer term forecasts with more confidence than DSP aggregators or providers.</p> <p>Nonetheless, Enel X considers it is worth collecting and that there is some longer-term information that could usefully be provided with some degree of confidence. This includes, for example, where demand response providers have existing customers contracted for a number of years and where any upgrades to capacity are planned.</p>
4	<p>Is the approach for forecasting future levels of DSP appropriate? And if not:</p> <ul style="list-style-type: none"> <li>• What alternative approaches could be considered?</li> <li>• What data should be used for such assessments and where should it be sourced?</li> </ul>	<p>Forecasting future levels of DSP is challenging, particularly as policy and regulatory changes are opening up opportunities for greater use of demand response. This includes, for example, the Australian Energy Market Commission’s wholesale demand response mechanism, currently expected to take effect from October 2021, as well as AEMO and ARENA’s Virtual Power Plant trials.</p> <p>In addition to drawing on information elicited from question 3 above, AEMO could consider demand response that has previously been identified but not necessarily drawn upon. This could include, for example, unsuccessful RERT tenders.</p>
5	<p>Is it appropriate to have an annual update cycle as outlined in Section 2.4?</p> <ul style="list-style-type: none"> <li>• If not, what data should drive more frequent regular updates?</li> <li>• Is the proposed trigger in Section 2.4 appropriate for an out-of-cycle update?</li> </ul>	<p>Enel X agrees that an annual cycle is appropriate. This aligns with AEMO’s ESOO process. Further, most demand response tends to happen over the summer months. There is unlikely to be a significant amount of DSP activity during other months of the year and, as such, it is not clear that there would be any additional value in collecting this information more frequently.</p> <p>The proposed trigger for an out-of-cycle update of <i>observed consistent change in delivered DSP over those forecast for the region of a magnitude of at least 1% of the regional forecast maximum</i></p>

		<p><i>demand</i> is somewhat arbitrary. However, we agree that a trigger is appropriate provided it is likely to occur only on rare occasions.</p>
6	<p>What additional DSP statistics from data collected through the DSPI process should AEMO consider reporting on? Should AEMO seek additional data from participants for reporting purposes only?</p>	<p>We note that network demand management programs are considered to some extent in DSP forecasting. However, we consider a more comprehensive assessment could be conducted with DNSPs/TNSPs to assess the DSP that may be provided under their demand response/demand management programs, and report on these.</p> <p>For example, network-controlled load could include either:</p> <ul style="list-style-type: none"> <li>• loads that are directly controlled by a DNSP; or</li> <li>• a DNSP reducing voltage across its network, which would also provide a demand response.</li> </ul> <p>There are also specific programs that are implemented for limited periods of time (e.g. 1 to 5 years) that are intended to address a specific network constraint. These should also be taken into account and reported on.</p> <p>Finally, we note that DNSPs’ summer peak rewards programs, such as Ausnet’s Critical Peak Demand program, are voluntary. More work could be done to identify who actually reduces demand and by how much, based on past performance.</p>