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WDR team
AEMO

Submitted by email: WDR@aemo.com.au

19 February 2021

Dear WDR team

RE: Wholesale demand response guidelines – draft guidelines and determination

Thank you for the opportunity to provide feedback on the draft wholesale demand response guidelines.

Enel X operates Australia's largest virtual power plant.¹ 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 RERT mechanism, and to network businesses.

We appreciate the early development of the guidelines and the time that has been allocated between guideline finalisation and market start. We also appreciate the strong engagement that AEMO personnel are providing through the consultative group, technical working group and one-on-one discussions.

This submission provides Enel X's views on the questions raised in the issues paper. The key points are:

- We do not support the rationale for requiring a system security assessment for demand response, given many forms of demand response already occur in the system without such an assessment. If there is to be an assessment, the 5MW thresholds proposed are very low.
- It is unclear whether the DNSP endorsement is intended to complement, or replace, AEMO's system security assessment. The framework needs to establish a clear delineation of responsibility between DNSPs and AEMO to ensure there is no confusion or costly delays.
- The DNSP endorsement needs further specification. We are keen to help develop a robust and nationally consistent framework with DNSPs, the ENA, AEMO and other industry participants.
- The communications and telemetry requirements remain unclear. It may be better to revisit this part of the guideline when the communications standard review is finalised, or at least its proposed direction is better known.

I look forward to continued engagement with AEMO in the development of the guidelines and other aspects of WDR implementation. If you have any questions or would like to discuss this submission further, please do not hesitate to contact me.

Regards

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¹ Bloomberg NEF, December 2019.

4.3: Requirements for classification of a load as a WDRU

We appreciate the clarification provided regarding loads with multiple connection points. However, many C&I sites are served by multiple connection points to enhance site reliability in the event of a grid outage or provide flexibility when testing or maintenance is conducted at the site or in the network. In our experience, such sites tend to be good sources of flexibility. It may be worth considering the concept of “common connection point” to reflect the aggregate response of the site across the connection points. This approach would allow participation by C&I loads with multiple connection points and would remove the potential for gaming that this policy is intended to target.

We also seek clarification on what information the DRSP would need to provide to AEMO to satisfy each of the load classification requirements. It would be helpful to workshop this with AEMO.

And, while noting that AEMO has chosen not to include a deadline for assessing an application to classify a load, we still believe that one should be included to provide greater certainty to DRSPs and their customers about the process and the timing of an outcome.

Specific comments on draft guideline:

- Section 2.1 – It would be helpful if this section listed the requirements in NER 2.3.6(e) to provide readers with the full set of requirements in one place. Doing so would also help make it clearer which parts of the guideline add detail to the NER clause and which are separate obligations.
- Section 2.1(b) – Should this not also read “or WDRU”?
- Section 2.1(e) – We seek AEMO’s clarification on how the DRSP will provide an available capacity of zero for a single WDRU in an aggregated portfolio – through the suspension process or some other means?
- It would also be helpful if the guidelines set out the NER requirements in relation to the timing of the load classification application process, i.e. NER 2.3.6(c) and (d).

4.4: Requirements for aggregation of WDRUs

Specific comments on draft guideline:

- Section 2.2 – As above, it would be helpful if this section listed the requirements in NER 3.8.3(b2) to provide readers with the full set of requirements in one place.
- Section 2.2.1(b)(i) – We seek AEMO’s clarification on the drafting in this clause. Does this mean that DNSP endorsement is only required for *existing aggregations* (i.e. those already approved and established under a DUID), where (ii) is also met?
- 2.2.2(a) – This clause seems more like an outcome of the aggregation application process than a term/condition.
- It would be helpful if this section included the NER requirements in relation to the timing of the aggregation approval processes, i.e. NER 3.8.3(e).
- Section 2.2.2(b)(i) – Isn’t this a prerequisite for aggregation? That is, why/how would AEMO require disaggregation of loads on either side of a load forecasting area when section 2.2.1(a) only permits the aggregation of loads within a single forecasting area?

4.5: Assessment of power system security impacts of WDRU aggregation

Fundamentally, it is unclear why such assessments are being proposed for WDR aggregations when demand response can and does occur now without an AEMO assessment or DNSP endorsement.

If an assessment is to be included, 5MW is a very low threshold. We imagine most DRSPs would seek to build a portfolio in excess of this to justify the costs of participating in the mechanism. While 5MW aligns with the threshold for standing generator exemptions, AEMO has acknowledged in the past that this threshold has “no technical or economic basis.”

As noted in our submission to the issues paper, power system security assessments for small aggregations of wholesale demand response are likely to deter participation as a scheduled demand response resource and push customers toward spot exposure instead, over which AEMO has no visibility or control. Any limitations on potential aggregations should be proportionate to the portfolio’s actual potential to materially affect power system security when the demand response is likely to be provided. Limitations that are disproportionate to the risk will only introduce market distortions and create barriers to entry.

We encourage AEMO to work with DNSPs and other stakeholders to determine whether 5MW is an efficient threshold, weighing up the actual expected power system security impacts of aggregated WDR, and the cost/time involved for all parties.

In the WDR Q&A session on 8 February 2021, AEMO noted that while its power system responsibilities cover transmission and distribution systems, DNSPs are better able to assess power system security impacts in distribution systems. The DNSP endorsement appears to have been proposed to allow DNSPs to assess the power system security impact of the proposed aggregation. However, this is not clear. Section 2.2.3 of the draft guideline does not make it clear whether:

- the DNSP endorsement *is* the power system security assessment, and AEMO’s role is to confirm it from a process perspective (regarding consistency with the aggregation application and validity of the endorsement, as suggested by paragraph 2.2.3(b)(ii)), or
- AEMO will conduct an assessment in addition to the DNSP endorsement, as suggested by 2.2.3(a), (b)(iii) and (d).

Given DNSPs are better placed to assess power system security impacts in distribution systems, it would make sense for the endorsement to be the assessment, and for AEMO to confirm that endorsement from a process perspective as part of the aggregation application. It would be confusing and inefficient for both AEMO and DNSPs to conduct an assessment. If there are matters that AEMO will need to consider in addition to the endorsement, it would be helpful if the guideline set these out, as well as the process.

We are supportive of DNSPs conducting the assessment and providing their decision to AEMO. However, in our experience carrying out similar processes for our other demand response programs, the split of responsibility between DNSPs and AEMO is not clear. This has created confusion for all parties and significant delays. If DNSPs are to conduct the assessment, they should have clear autonomy to do so and AEMO should not have the right to reject their endorsement, given that DNSPs are best placed to assess the power system security risks of WDR in distribution systems.

Specific comments on draft guideline:

- Section 2.2.3(a) – As above, it’s not clear what this assessment is intended to achieve or involve. Also, regarding (ii):
 - Is there any way for proponents to determine this before they submit the application and pay the fee?
 - Does “per year” mean calendar year? Or the 12 months preceding the application?
 - How is “area” defined?
- Section 2.2.3(b) – This section is confusing as currently drafted, but may reflect our confusion about whether there is a separate AEMO assessment, or the DNSP endorsement is the assessment. Also:
 - (b)(i) is already specified in section 2.2.1(a) as a requirement of aggregation, and does not seem to relate to the power system security assessment as the heading of 2.2.3 suggests.
 - (b)(ii)(B) needs further specification. What does “current” mean?

4.5: DNSP endorsement

As noted above, our key questions about the DNSPs endorsement are:

- What authority does it have? Can AEMO reject an endorsement?
- Will AEMO conduct its own assessment in addition to the endorsement?

There is not much guidance on what the endorsement is meant to involve, in what timeframe, and at what cost. We note that the questions in the draft determination are intended to draw some of this out, which we support.

If the DNSP endorsement framework is not further specified, there is a risk that:

- DNSPs will be unclear on what they are meant to be assessing and for what purpose
- DRSPs will have no transparency of the timing or cost of such assessments
- The process will vary between DNSPs, resulting in inefficiency and inconsistency of approach.

If there is to be a DNSP endorsement, we support the development of a nationally consistent framework that:

- articulates the split of responsibilities between AEMO and DNSPs in relation to the network and system impacts of WDR, so it is clear what “authority” the endorsement has
- provides upfront transparency about the process for DRSPs, in terms of who to talk to, how to submit an endorsement application, what information will need to be provided, how long the process is expected to take, and what costs are involved
- gives DNSPs the right tools and data to make the assessment and provide clear advice to AEMO
- avoids making withholding endorsement the easy option, by providing a clear framework based on the *actual* likelihood of a material system security impact (for example a problem that would arise if the aggregation was dispatched at a time of minimum demand and high wind/solar output), not just a theoretical possibility

- doesn’t discriminate against first mover DRSPs and their customers, for example by imposing stricter requirements on first movers on the expectation that others will follow
- recognises that WDR assets will almost universally be switched loads, so it is difficult to impose technical restrictions like ramp rates.

Other matters to consider:

- Would there be a time period within which an aggregation needs to be in the market after the endorsement is received?
- Would the endorsement expire after a period of time? Or would there be other triggers to require a re-endorsement?
- What happens if a DRSP wants to add a NMI/NMIs to an aggregation that already has DNSP endorsement, or if the capability of a load in the aggregation changes? Must the aggregation be re-endorsed, or could the endorsement specify an upper limit of additions to the aggregation before a new endorsement is required? Aggregations of WDRUs are likely to be quite dynamic. If the objective is to support a vibrant market of competing DRSPs, the friction involved in moving customers between portfolios should be minimised.
- How should we approach the endorsement of aggregations involving more than one DNSP? Will each DNSP conduct an endorsement, or coordinate the endorsement?

We are keen to work with the ENA, DNSPs and AEMO to develop a framework that is cost effective and fit for purpose for all parties.

Regarding the process for DNSP endorsement, we do not support option 3 on the basis that this presents a significant risk for DRSPs and their customers.

Option 1 is likely to provide greater flexibility to DRSPs in how they recruit customers for participation, allowing them to proceed to an aggregation application and finalise arrangements with customers only when they have certainty that the proposed aggregation has the DNSP’s endorsement. We support the ability for DRSPs to apply to aggregate without a DNSP endorsement under option 1 where that endorsement is still being assessed.

However, there are risks with option 1 that will need to be worked through:

- Will DNSPs need any information from AEMO to conduct the assessment? If so, option 2 may make more sense.
- As above, will AEMO be able to reject a DNSP’s endorsement? If, as AEMO has stated, DNSPs are better able to assess the power system security impacts of WDR in distribution systems, then AEMO should not be able to reject a DNSP’s endorsement. However, we are concerned that this may not play out in practice, in which case option 2 would be the better approach.

Specific comments on draft guideline:

- As noted above, it would be helpful if the guideline contained more detail about the DNSP endorsement.

4.6: WDRU telemetry and communications requirements

We appreciate the additional information that AEMO has provided to explain its rationale for real-time telemetry data, and the circumstances in which this will be required. However, without knowing what

the exact telemetry requirements are, it is difficult to comment on whether this framework strikes the right balance between cost / barriers to entry and AEMO’s needs. We note that the communications standard is due to be reviewed shortly. It may be appropriate to revisit this part of the WDR guideline once the communications standard review is finalised, or at least its direction better understood.

Enel X has asked AEMO some specific questions on the draft telemetry data channels in Appendix A, so we will continue to engage separately on that.

More generally, we seek clarification on when this data will need to be provided to AEMO. At all times, or just when the DUID is dispatched? As noted in our submission to the issues paper, the telemetry requirements should, to the extent possible, reflect that DRSPs will not seek to be dispatched anywhere near as often as scheduled generators are.

4.7: Regional thresholds for increased visibility of WDRUs

As set out in our submission to the issues paper, we do not support the imposition of thresholds on the assumption that DRSPs will be poor dispatch performers. While we support the ability for these thresholds to be adjusted over time to reflect observed dispatch performance, this does not provide prospective DRSPs with much certainty about what requirements will apply to them when they choose to enter.

The more equitable and efficient approach would be to determine appropriate telemetry requirements for DRSPs in line with how they are expected to participate in the market, and then apply these across the board. This approach will also enable a smoother transition to the inclusion of small customers in the mechanism, and the longer-term move to a two-sided market.

4.8: Baseline methodology development process

The proposed process for assessing new baseline methodologies appears sensible. While 110 business days is a long time for AEMO to provide a final decision on the inclusion of a baseline methodology, we are supportive of the guideline including a deadline.

We agree with VIOTAS’s comment that AEMO should allow for the development of new baseline methodologies to commence as early as possible. While the baseline methodology to apply at the commencement of the WDRM is still unknown, we are concerned that what is being proposed (in combination with the proposed eligibility metrics) will rule out a significant number of loads.

Noting that AEMO’s draft decision is to not include a maximum timeframe for implementing a baseline methodology after approval, we still believe there is value in one being specified, otherwise there is nothing holding AEMO to that methodology’s implementation.

4.9: Applying a baseline methodology and settings to a WDRU

The proposed approach to applying a baseline methodology and settings to a WDRU appears sensible. We support the ability for DRSPs to do this via the Portfolio Manager system.

4.10: Maximum responsive component

The proposed approach to setting and amending the NMI-level MRC appears sensible. However, the proposed process for amending a DUID-level MRC is lengthy. As noted above, the development of a vibrant and competitive WDR market relies on DRSPs being able to add new loads to their DUIDs, and WDRUs being able to switch between DRSPs, quickly and cost-effectively.

4.11: Access to baseline data

No comment.