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Integrating price-responsive resources into the NEM – consultation paper

Flow Power submission

September 2023

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About Flow Power

Flow Power is an electricity retailer that works with energy customers throughout the National Electricity Market (NEM). Together with our customers, Flow Power is committed to our vision of creating Australia's renewable future.

We empower customers to take meaningful action. By providing energy knowledge and innovative technology, we are delivering smarter ways to connect customers to clean energy to make our renewable future a reality. We provide our customers with:

- Engineering support, access to live data and transparent retail tariffs that reward demand flexibility and encourage electricity usage at times of plentiful renewable output.
- Hardware solutions that equip customers with greater information, visibility and control over energy use.
- Access to renewable energy, either through distributed solar and storage installed on site, or through a power purchase agreement with utility-scale wind and solar farms

We believe that by equipping customers with these tools, we can lower costs for all energy users and support the transition to a renewable future.

Overview of submission

The key points we would like to make regarding the AEMC's consultation paper are:

- **We support the underlying intent of the rule change request.** Greater visibility of demand flexibility will be important for legitimising it as a firm, dependable resource. However, the methods for increasing this flexibility need to be reflective of the differences between existing scheduled resources and demand side resources.
- **The Commission should seek to minimise any new barriers to growth in demand flexibility.** This is only going to be more important over the course of the energy transition. In assessing models to increase information provided from retailers and traders about price-responsive demand, the Commission should consider the scale of any administrative and operational costs.
- **There are intermediate steps that could be taken before introducing the visibility and dispatch model.** We think AEMO's demand side participation portal could be evolved to capture the information raised in the consultation paper.

We've provided some additional comments on various aspects of the consultation paper below.

Impact of price-responsive demand

Price-responsive demand will be increasingly important for managing the energy transition. As investments in transmission infrastructure and generation are impacted by supply chain constraints and global competition for resources, creating flexibility on the demand side will help to provide for system reliability and integrate renewable energy.

For these reasons, the Commission should take care to balance the design of any scheduling mechanisms against the potential barriers these models put on the development of future demand flexibility.

There should also be greater consideration of the types of demand flexibility. For example, demand response programs that typically operate to reduce industrial demand in peaks will have very different operational characteristics to an aggregation of batteries in residential properties. The paper generally assumes most demand side resources participate through a trader. However, a significant proportion of the demand-side flexibility in the NEM is due to retail contracts that provide a level of price exposure and incentivise customers to shift energy use. Of the DSP programs reported to AEMO through their DSP portal, the category with the largest number of programs (including those that provide a firm response) were market exposed connections.[1]

The models set out in the paper do not appear to provide clear pathways for how this information could be communicated to the market. For example, a trader could provide information to AEMO of *expected* price sensitivity in the visibility model, without having control over the resources. While the quality of the information may be reduced, it is worth considering whether this warrants further exploration.

Visibility mode

The visibility mode described in the consultation paper would likely receive greater participation than the dispatch mode. However, our concern is that there may still be low take-up of this model without a clear case for why end-users and retailers would participate.

A range of potential incentives are flagged in the consultation paper. Our comments on the effectiveness of these incentives are:

- **Pre-dispatch schedule**: this unlikely to provide participants with material value as most of this information is readily available in AEMO's pre-dispatch forecasts.
- **Reducing costs**: this could encourage some participation; however, any reduction in ancillary services, NSCAS and SRAS costs for scheduled light participants should be aligned with a reduction in the need for, or cost of, these services.
- **Direct payment:** depending on the amount, this could also drive participation. However, there isn't a clear basis for how this payment would be structured or recovered. There should be more

[1] AEMO, *Electricity Statement of Opportunities 2022*, p. 168.

analysis undertaken to substantiate the benefits to consumers of increased participation necessary to justify recovering these costs from end-users.

- **FCAS eligibility**: Demand response has been a successful participant in contingency FCAS markets to date. By requiring participation in a visibility model, it could reduce that participation, pushing up FCAS costs. Also, given the nature of FCAS participation (i.e., rapid reductions in load in response to frequency deviations), it is not clear that FCAS demand response is well suited to being scheduled.
- **Mandatory participation**: there are two significant challenges with mandatory participation. Firstly, it would impose costs on the parties trying to develop demand flexibility capacity. These costs would create a barrier to more demand flexibility at a time when it is increasingly important to the power system. Secondly, it will be difficult to define the resources captured by mandatory participation. This would likely lead to some end-users being impacted who are otherwise unsuited to participation.

In addition to incentives, the Commission should explore how to minimise costs of participation. This includes the administrative costs of becoming registered and the process for interfacing with AEMO. Reducing costs and complexity associated with these processes are likely to increase participation.

There should also be consideration of how commercially sensitive information would be represented through this model. For example, a single site might have its own DUID under the proposed model. Because the consumption profile of large customers is sensitive, there should be some anonymisation of data before it is published in AEMO's MMS.

Dispatch model

Noting the additional operational complexity of the dispatch mode, the opportunities for participation are not very compelling.

The consultation paper flags the ability to set the clearing price as a motivation for signing up; however, this is unlikely to appeal directly to end users. Lowering the spot price by having loads being included in central dispatch is most likely to increase *overall* consumer surplus. This surplus is shared across all customers. Unless a customer was able to change the spot price materially and regularly, this customer would not receive benefits much greater than they would get as an unscheduled load adjusting their exposure to the spot price through demand management.

Other considerations

Barriers to entry

There are a range of barriers to participation that were not flagged in AEMO's proposal that should be considered by the Commission. These include:[2]

- The minimum size of bids. This is currently set at 1MW. This creates obvious challenges for demand-side participants, who will change consumption in much smaller increments. The bidding increment limits the types of participants as well as the flexibility available to those participating.
- Administrative costs. Registering and submitting information needed to participate in the NEM is an onerous and relatively expensive process. To reduce barriers to entry, AEMO could assess the process for becoming a market participant and explore options for increasing simplicity and reducing costs.

Using the DSP portal

The consultation paper flags the potential to address the intention of AEMO's proposal through other approaches. The demand side participation portal is an obvious starting point. The DSP portal currently collects static information that is used mostly for long-term planning purposes. The information submitted to the DSP needs to be sorted into clunky, specifically formatted spreadsheet and uploaded to an AEMO portal.

As noted in AEMO's ESOO, while there was a significant number of DSP programs flagged through the DSP portal, AEMO flagged that it did not have much information on the firm response represented by these programs. It could be possible that, through more engagement, AEMO could elucidate more detail on these programs and the expected size of the response.

If AEMO would like to collect more operational data and insights, it could reform the DSP portal process to make it more user-friendly and more effective for AEMO's purposes. We would be open to working with AEMO to explore options for improving the usefulness and dynamism of the DSP portal.

If you have any queries about this submission, please contact me on (02) 9161 9068 or at Declan.Kelly@flowpower.com.au.

Yours sincerely,

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[2] Some of these barriers were flagged in Grids submission to this rule change.