22/05/2019

Suzanne Falvi
Executive General Manager
Australian Energy Market Commission (AEMC)
Level 6, 201 Elizabeth Street
NSW,2000

Via electronic lodgement

Dear Suzanne,

Re - Investigation into Intervention Mechanisms and System Strength in the NEM (AEMC reference: EPR0070)

Mondo appreciates the opportunity to comment on the AEMC's investigation into intervention mechanisms and system strength in the NEM. In this submission, Mondo has mainly focused on the issues that relate to minimum system strength and inertia.

Mondo provides a range of contracted transmission and distribution assets, including grid connections for new generators. In addition, Mondo provides a range of energy services, including metering and platform based DER services that aggregate DER into community mini-grids. Mondo strongly supports a renewable energy future and the need to integrate renewables into strong and stable electricity system.

Issues with managing system strength through direction

The intervention mechanisms of the NEM were developed to ensure that the reliability and security of the power system could be maintained in the event that market arrangements failed to achieve the desired outcomes. It was expected that such interventions would be relatively infrequent and indeed, this was the experience in the NEM up until recently.

The energy transformation towards non-synchronous generation has introduced new challenges which the current NEM design doesn't handle well. This has resulted in an increasing reliance on AEMO's powers of direction, which has been particularly prevalent in South Australia.

Mondo supports the initiative of the COAG Energy Council in requesting the Energy Security Board to develop recommendations for a post 2025 market design. This provides the opportunity to design a NEM that leverages non-synchronous technology and distributed generation.

In the meantime, Mondo believes that the existing NEM framework should be updated to ensure that system strength and inertia are managed safely, economically and in a timely manner.

As noted by the AEMC, the recent high number of directions for system strength has resulted in a ten percent increase in the South Australian wholesale price, and an estimated intervention cost of $270 million up to September 2018[1]. These high cost impacts suggest that managing system strength through AEMO directions is unlikely to be the most economically efficient way forward. Also, Mondo concurs with the AEMC's comments on the likely market distortions and unintended consequences of relying on direction for system strength, and that intervention pricing could encourage new capacity that has no system strength capability.

Mondo believes there is unlikely to be a perfect answer to this problem in the current energy only design of the NEM, but suggests that the impact of directions for system strength would diminish if they occurred only rarely. For this reason, Mondo supports any measures that seek to place less reliance on AEMO's power of direction for managing system strength and inertia.

Minimum levels of system strength and inertia

With synchronous generators changing their operating patterns and, in the longer term, retiring from the power system, Mondo believes it is appropriate to review frameworks for forecasting and managing system strength and inertia.

If reliance on AEMO direction is to be avoided as the primary means of managing system strength and inertia issues, it will be critical that TNSPs have timely information about potential shortfalls to allow them sufficient time to respond appropriately and efficiently.

To this end, Mondo encourages AEMO to establish a pragmatic approach to the system strength modelling exercise, which seeks to identify with a *reasonable* degree of certainty, when and where system strength shortfalls are likely to arise. Such an approach might for example, evaluate scenarios based on various demand and renewable energy combinations.

TNSPs meeting the shortfall

The AEMC highlights that, if a TNSP chooses to contract with synchronous generators to provide system strength services, it would need to contract for the full minimum level required (not just the shortfall) plus

[1] ElectraNet, Addressing the system strength gap in SA: Economic evaluation report, February 2019

a margin to cover unplanned outages. The full level would need to be contracted to overcome the problem of uncontracted synchronous generators being 'pushed off' by the dispatch merit order effect.

Mondo agrees with the AEMC's view that contracting for the full requirement plus a margin is unlikely to achieve an economically efficient solution for addressing system strength issues. Further, the limited role that TNSPs play in the coordination of generators means they are not well equipped to manage this issue without support from AEMO.

Another difficulty that TNSPs face when seeking to contract with synchronous generators is that the generator may prefer to be directed for system strength service as it is compensated against any market loss. It is difficult for the generator to predict what market loss may arise under a contract with the TNSP, and it is probably even more difficult for the TNSP to estimate.

In seeking to overcome these challenges to TNSP contracting, the AEMC could consider arrangements that encompass the compensation principles of market intervention while providing contract certainty. For example, where a region has been identified as having a system strength shortfall for a certain period of time, that region could be declared to be in a "low system strength condition", which would then require the TNSP, AEMO and all synchronous generators to adhere with specific arrangements. Such arrangements might include the following elements:

- All synchronous generators in a region are included under the arrangements
- When a generator is required to synchronise, it receives compensation to cover its operating costs (AEMO to assist with this calculation)
- Generators that were already online would be reduced by the amount of displacement caused by the new generator, with the aim of restoring the regional spot price
- Generators that are asked to reduce output would receive revenue compensation for the lost volume (AEMO to assist with this calculation)

The above arrangements would have some similarities to the intervention framework, except that it would not trigger intervention pricing. The decision to invoke / revoke the arrangements, and the calculation of the compensation payments would require substantial input from AEMO.

Mondo would emphasise that any arrangements along the lines of those laid out above would only be used as interim arrangements to provide sufficient time for long term solutions to be provided. In the current framework, the long-term solutions are likely to be TNSPs installing synchronous compensators.

Mondo would ultimately prefer a new framework that provides commercial incentives to market participants as well as networks to provide system strength and inertia services. It seems clear that the existing NEM framework is not delivering the necessary commercial signals, nor does it provide a suitable mechanism to pay for these services. Mondo would expect that these deficiencies of the current NEM framework will be considered and addressed in the Post 2025 Market Design project under the Energy Security Board.

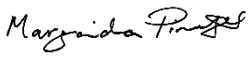
Providing more than minimum levels of system strength and inertia

Section 7.5 of the AEMC consultation paper describes the recent increase in curtailments of non-synchronous generation during high wind generator output coupled with relatively few synchronous generators on-line. As noted in the consultation paper, curtailment of low-cost wind and solar generation has a negative impact on the economic benefits to the energy market and is also detrimental to the value of existing and future interconnectors. As non-synchronous forms of generation become more prevalent, these economic inefficiencies are likely to become worse.

Mondo strongly supports the AEMC proposal to explore options to value and pay for additional system strength and inertia. Such mechanisms would ideally allow various technologies to compete in such a way that yields the lower cost solution, including both network and non-network options.

Mondo hope that the comments contained in this submission are of assistance to the AEMC in its deliberations on this investigation. Please do not hesitate to contact me either by email or on 03 9695 6061 if you have any further inquiries.

Yours sincerely



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