



## Integrating energy storage systems into the NEM - options paper

The Australian Energy Market Commission has released an options paper on a rule change request from the Australian Energy Market Operator that seeks to better integrate storage and hybrid facilities into the national electricity market. The options paper seeks further engagement on alternative solutions that better align with the Energy Security Board's two-sided market initiative, under the post-2025 market design program. Submissions close on 11 February 2020.

### Context for further consultation

On 20 August 2020, the Commission released a consultation paper on the Australian Energy Market Operator's (AEMO) *Integrating storage into the NEM* (Integrating Storage) rule change. In its rule change request, AEMO outlined several issues with the current registration framework for storage and hybrid facilities that it believes creates barriers for entry for storage and hybrids and may increase costs for consumers. The rule change seeks to make it easier for energy storage systems and hybrid facilities to register and participate in the national electricity market (NEM). This would be done by introducing a new participant category — the bi-directional resource provider.

The Commission received 38 submissions on the consultation paper. A majority of stakeholders were generally supportive of the main objectives of the rule change request, which include:

- removing barriers to storage participation and clarifying how hybrid facilities should register
- creating a level playing field between different technologies and participants in the NEM.

However, stakeholders had mixed views as to the best solutions to resolve the issues AEMO raised. In relation to the fundamental issue of how storage and hybrid facilities register and participate, a number of stakeholders preferred changes that align with other market reforms, in particular the Energy Security Board's (ESB) two-sided market initiative, under the post-2025 market design program. In light of this feedback, the Commission extended the time to make a draft determination to 29 April 2021. This will allow more time to assess issues, options and engage further with stakeholders, including the publication of an options paper.

### Relationship between Integrating storage and a two-sided market

There are strong links between this rule change and the ESB's two-sided market work. In the two-sided market project, the ESB is considering changes to the wholesale market participation framework — the 'trader-services model' — that would:

- Simplify the existing registration process in the NEM by accommodating existing categories (other than network service providers) in a single 'trader' category. This would be one universal registration category covering all commercial parties participating in the NEM (e.g. retailers, aggregators, generators, scheduled loads, ancillary service providers).
- Provide for greater regulatory flexibility that supports innovation by seeking to attach obligations to services at connection points as opposed to attaching them to registration categories and assets.

In the Commission's view, the Integrating Storage rule change provides an opportunity to investigate options to progress towards the ESB's trader-services model and two-sided market more generally.

## Further consultation on how storage and hybrid facilities register and participate in the NEM

The Commission is seeking further engagement with stakeholders on options for how storage and hybrid facility participants register and participate in the NEM. These cover a spectrum of options ranging from no change to more significant changes that attempt to move the market towards the trader-services model.

A fundamental issue the Commission is seeking feedback on is whether the best approach to register and classify services provided by storage and hybrid facilities is to modify existing participant categories, or introduce a new participant category. That is, should we:

1. Keep registering storage as Market Customers and Market Generators, and allow the rules to remain unclear for hybrid facilities (the current arrangements)?
2. Define storage through a new technology-specific category (AEMO's proposed solution)?
3. Modify existing categories to accommodate bi-directional flows?
4. Create a new category which lends itself, in the future, to becoming the 'universal' category as envisaged by the ESB's two-sided market trader-services model?

The four options presented do not go all the way to the full trader-services model. This is because the scope of redefining all participant categories is a substantial change for the market, and the Commission considers it is not within scope of this rule change. The implementation of the trader-services model requires careful sequencing, with new service-based Rules being phased in and co-existing with the 'old NEM' approach for a period. While there is an opportunity to make broader changes in the framework to move towards a two-sided market, the focus of the Commission in this project is on addressing the issues identified by AEMO in its rule change request.

The Commission is also seeking feedback on:

- How should generation and load from storage and hybrid facility participants be scheduled and dispatched into the NEM, and where should performance standards be set, at the connection point or the asset level? This is particularly relevant for hybrid facilities who may have a combination of load, generation or storage units behind the connection point.
- How should non-energy costs be recovered from market participants? The current arrangements treat large batteries differently to other participants as they are registered in two categories (as both a generator and a customer).
- New issues raised by AEMO in its submission to the consultation paper. These include:
  - issues with Network Service Provider connection points, where the owner of a storage system is also the local network service provider
  - simplifying the ancillary services provisions in the NER to better align with a two-sided market
  - clarifying how DC coupled systems (a generator and a storage unit who share an inverter) are to register and participate in the NEM.

Submissions to this options paper will be open for eight weeks and will close on **11 February 2021**.

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