AEMC

INFORMATION

Improving security frameworks for the energy transition

Ensuring security frameworks are fit for purpose would help AEMO manage power system security

The Commission is proposing improvements to existing security frameworks, rather than an operational security mechanism (OSM), to support the energy transition after carefully considering stakeholder feedback to the OSM. This approach would address system security issues through the transition, reduce the regular and inefficient use of directions, and provide better incentives for participants to invest in providing system security in the longer-term.

The Commission is proposing improvements to existing security frameworks to support the energy transition

Following stakeholder feedback from the 2021 directions paper, the AEMC proposed a draft rule to introduce a mechanism called the OSM. While submissions to the draft determination showed stakeholders broadly supported taking action to ensure a more efficient and transparent approach, other than directions, to manage system security, there were a number of fundamental questions and concerns raised.

After carefully considering the submissions to the draft determination, the Commission determined the OSM would be too costly and complex to develop and implement and would be unlikely to deliver the intended outcomes.

The Commission decided that instead, a simpler solution was required that can be implemented within a shorter timeframe and can meet the needs of the system during the transition.

The Commission considers that it is necessary to establish a greater understanding of the engineering and technical capabilities of the system before introducing complex market changes. In the meantime, we can build on the existing comprehensive security frameworks that procure security services such as system strength, inertia and network support and control ancillary services (NSCAS).

There continues to be an important problem to address

The National Electricity Market's (NEM) transition away from thermal synchronous generation towards more renewables and batteries has resulted in declining security services. Unlike synchronous generators, these new non-synchronous resources do not automatically provide security services.

This means that the Australian Energy Market Operator (AEMO) has increasingly directed synchronous generators online to keep the system secure. Directions were designed as a last resort — reliance on them increases costs to consumers, and also places increased risk on system security.

Therefore, the Commission's directions paper proposes improvements to existing frameworks to address system security issues through the transition, reduce the regular and inefficient use of directions, and provide better incentives

The Commission has revised the name of the rule change

The Commission has revised the name of the rule change to *Improving security frameworks for the energy transition*, to better encapsulate the revised approach. The revised approach focuses on enhancing existing frameworks to provide system security

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needs to support the power system through the transition, rather than through operational procurement and scheduling of security services.

The Commission's proposed improvements to existing security frameworks

The Commission is proposing to improve existing inertia, NSCAS and non-market ancillary services (NMAS) frameworks to create proactive, forward-looking, and enduring arrangements to help ensure system security and reduce the use of directions.

The Commission is proposing three main changes to the existing inertia framework: introducing a NEM-wide inertia floor, aligning procurement timeframes with the system strength framework, and removing restrictions on the procurement of synthetic inertia. The Commission is also proposing to remove the exclusion on inertia network services and system strength under the NSCAS framework to ensure these services can be procured where a shortfall emerges in the near term.

The Commission also proposes to introduce a new NMAS framework for 'transitional services'. This would allow AEMO to procure to meet system security needs that are related to the system transition and not captured in existing planning frameworks. This framework would be transitional, enabling AEMO to procure these configurations until engineering capabilities develop to understand the security capabilities of the new generation mix. The framework could be used by AEMO to trial and conduct experimentation on how these newer technologies could contribute to system security.

To capture the full benefits of the proposed changes, the Commission considers that AEMO should enable (or 'schedule') planning timeframe contracts for system security, to meet security needs at the lowest cost for consumers. AEMO's enablement decisions would support the policy intent of the long-term frameworks for managing system security.

The Commission's proposed improvements to directions

The Commission is proposing improvements to transparency and compensation arrangements for directions. Directions should remain a last-resort mechanism, however as the system transitions, we recognise directions may be used from time to time.

At the time of issuing a direction, AEMO's market notices would be required to identify all directed participants and provide detail about the nature of the direction and the circumstances that have caused the need for a direction. AEMO would be required to prepare a detailed quarterly report that includes trends observed in directions in each quarter, AEMO's view on whether directions may be required in future reporting periods, and a breakdown of compensation amounts payable to each directed or affected participant. This would replace the requirement for AEMO to prepare a report for every direction event.

The Commission is proposing to amend the basis of directions compensation from the 90th percentile energy price to a benchmark-based compensation framework, similar to the framework used during market suspension periods. This would ensure directed participants would be entitled to compensation based on predetermined values that reflect a benchmark short-run marginal cost (SRMC) for the relevant technology type, as determined through ISP data inputs. This would reduce the risk of under or over-compensation and better balance the needs of generators and consumers.

This directions paper is the next step in the rule change process

The directions paper is the next step in the Commission's consideration of two consolidated rule change requests from Hydro Tasmania and Delta Electricity proposing operational procurement mechanisms to value, procure and schedule ESS to help keep the system secure.

Hydro Tasmania's rule change request, received 19 November 2019, proposed an approach where system services would be procured within the spot market and the need for system services would be determined by binding constraints.

Delta Electricity's rule change request, received 4 June 2020, proposed an approach where system services would be scheduled ahead of time outside of the spot market, and

with system needs identified through the short-term projected assessment of system adequacy and pre-dispatch schedule.

The Commission is seeking stakeholder feedback

The Commission welcomes stakeholder feedback on the directions paper and proposed rule drafting. The Commission invites stakeholders to make submissions for a period of five weeks, with submissions due by 5pm, 28 September 2023.

Submissions can be lodged online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function.

The Commission will hold a **public forum** on this directions paper as part of our consultation and engagement with stakeholders on these rule changes. This forum will be held on 14 September 2023. Interested stakeholders are invited to register via the Commission's website.

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24 August 2023