



A market mechanism for inertia

Final determination

The AEMC has determined not to make a final rule relating to the introduction of a market mechanism for additional inertia for market benefit at this time.

Reasons for not making a final rule

The final rule determination has been made with respect to a rule change request received from AGL, which proposes the establishment of an inertia ancillary services market to address the declining supply of inertia in the National Electricity Market (NEM).

On 19 September 2017, the Australian Energy Market Commission (AEMC) made a final rule with respect to a rule change request received from the South Australian Government on *Managing the rate of change of power system frequency*. The final rule places an obligation on transmission network service providers (TNSPs) to make available the minimum level of inertia required to maintain secure operation of the power system. As such it provides confidence that system security can be maintained in all regions of the NEM, while minimising the costs to consumers. The final rule commences on 1 July 2018 with TNSPs required to make the minimum level of inertia available by 1 July 2019.

The Commission supports the development of competitive markets for the provision of system services for achieving the most efficient outcomes for consumers. However, given the current power system operating conditions, the need to understand practical outcomes from new regulatory frameworks recently introduced, and assess outcomes from various programs of work on foot by the Commission and the Australian Energy Market Operator (AEMO), the Commission is not satisfied that the introduction of a market mechanism for additional inertia for market benefit will meet the national electricity objective at this time.

The Commission intends to continue its assessment of the appropriate design of an inertia market mechanism through the *Frequency control frameworks review* currently underway. Recommendations arising from this review will be provided in mid-2018.

Stakeholder feedback

On 7 November 2017, the AEMC published a draft determination relating to AGL's rule change request, which did not make a draft rule to introduce a market mechanism for inertia at this time. Submissions to the draft determination were unanimously in support of the Commission's decision not to make a draft rule to introduce an inertia market.

Feedback from stakeholders received in response to the draft determination reiterated the key points made in response to the consultation paper. While stakeholders are largely in support of the development of markets to value system services, many are not convinced of a clear or compelling need for the development of a market mechanism for inertia at this time. Many stakeholders suggested delaying the introduction of a market for inertia until after the AEMC's *Frequency control frameworks review* is completed in mid-2018.

Four principal factors were raised by stakeholders in favour of not implementing a market mechanism for additional inertia for market benefit at this time:

1. The minimum levels of inertia required to maintain the system in a secure operating state has been addressed through a final rule on the South Australian Government's rule change request. There is now less urgency associated with introducing a complementary mechanism to facilitate the provision of additional inertia for market benefit.

The Commission intends to continue its assessment of the appropriate design of an inertia market through the *Frequency control frameworks review*.

2. The minimum levels of inertia required to maintain the system in a secure operating state will be determined by AEMO in June 2018, this will highlight the extent to which there is any residual market benefits to be obtained from additional inertia.
3. The application of constraints by AEMO to manage low system strength issues in South Australia has had a consequential impact on the alleviation of the inter-regional rate of change of frequency (RoCoF) constraint on the Heywood Interconnector, suggesting limited market benefits could be obtained through the provision of additional inertia at this time.
4. Further consideration needs to be given as to how inertia can be accurately valued with the application of constraints to manage other system security requirements, such as system strength and system stability, and with the provision of alternative frequency control services, such as fast frequency response.

Having considered views expressed by stakeholders, further analysis undertaken, and a need to better understand how new frameworks will be implemented and operate in practice, the Commission has determined not to make a final rule with respect to this rule change request.

Background

AGL's rule change request concerns the introduction of a NEM inertia ancillary services market which AGL consider as an appropriate response to the declining supply of inertia in the NEM.

On 27 June 2017, the AEMC published its final report on the *System security market frameworks review*. Two of the recommendations contained in the final report relate to the provision of power system inertia:

1. Place an obligation on TNSPs to provide minimum required levels of inertia, or alternative equivalent services, to allow the power system to be maintained in a secure operating state.
2. Introduce a market-based mechanism to realise the market benefits that could be obtained through the provision of inertia above the minimum obligation on TNSPs.

Recommendations arising from the *Independent review into the future security of the NEM* (Finkel Panel) are consistent with the first of these recommendations but take a more reserved approach to the second recommendation, suggesting that a future move towards a market-based mechanism should only occur if there is a demonstrated benefit.

The AEMC made a final rule determination with respect to the first recommendation by placing an obligation on TNSPs to make available the minimum level of inertia required to maintain secure operation of the power system by 1 July 2019. The final rule also allows TNSPs to procure other services such as fast frequency response to reduce the minimum level of inertia required, with approval from AEMO.

The final rule does not provide a mechanism to realise the market benefits that could be obtained through the provision of additional inertia above the minimum required level.

However, the Commission considers that a market mechanism has the potential to complement and build on the certainty created through the TNSP obligation by providing the ability to continuously adjust the level of service provision in real time to maximise efficiency.

The Commission intends to continue its assessment of the appropriate design of an inertia market mechanism through the *Frequency control frameworks review*.

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