



3 July 2025

Australian Energy Market Commission

Submitted online at: www.aemc.gov.au

Dear Sir / Madam,

Clarifying Registration for Non-Generating units Providing Systems Security Consultation

Stanwell Corporation Limited (Stanwell) appreciates the opportunity to provide feedback to the Australian Energy Market Commission (AEMC) on their *Clarifying Registration for Non-Generating units proving systems security consultation paper* (the Consultation Paper).

Stanwell is Queensland's leading provider of electricity and energy solutions to the National Electricity Market (NEM), and large energy users along the eastern seaboard of Australia. With over 40 years of continuous operations, Stanwell maintains a reliable supply of power from two of the most efficient and reliable coal-fired power stations in Australia – the Tarong power stations near Kingaroy and Stanwell Power Station near Rockhampton.

Stanwell's experience in working with communities to build, operate and maintain reliable energy generation assets is being applied to the shift to renewable energy, as we work on a pipeline of renewable energy and storage projects throughout Queensland.

This submission contains the views of Stanwell only and should not be construed as indicative or representative of the views or policy of the Queensland Government.

Stanwell supports CS Energy's rule change request and believes it should be made as submitted. We believe CS Energy's proposal to create a new registration category under the *National Electricity Rules* (NER) for non-generating units such as stand-alone synchronous condensers would resolve regulatory ambiguity around the registration category of non-generating units, allow for greater flexibility for future innovation, and promote cost-effective reuse of existing infrastructure.

Procurement of essential system services

The Australian Energy Market Operator (AEMO), under the National Electricity Rules (NER) has the responsibility of determining the required service levels for system strength and inertia.

These Essential System Services (ESS) are required to support the stable and reliable operation of the NEM and are currently provided as a by-product of synchronous generation (i.e. thermal generators), with no compensation under normal operating conditions. Any shortfalls in system strength and inertia are then procured as a contracted service by Transmission Network Service Providers (TNSPs) in the time and locations specified by AEMO.

TNPSs can only procure these services from registered Market Participants through Service Agreements.

There is an increasing need for synchronous condensers in the NEM

As thermal generation retires from the NEM, AEMO will need to find new ways of maintaining system stability and security. Synchronous condensers can provide system security services, and retiring thermal generators can be converted to stand-alone synchronous condensers.

AEMO's Electricity Statement of Opportunities (ESOO) identified reliability gaps in NSW and Victoria post-2025 and 2028 respectively. With a forecast loss of over 4,300 MWh in the NEM prior to 2030,¹ this will have a significant impact on system reliability unless offset by new generation or storage projects.

Transgrid have estimated up to 21 new synchronous condensers, each rated at 200 MVA, will be required in NSW within the next 10 years to provide system security services at a cost \$2.2 Billion.² Whereas the potential savings by converting existing retiring thermal generating units into synchronous condensers in this scenario could be as much as \$.88 Billion.

Conversion of existing Thermal Generators at end of life

The potential benefits of converting retiring thermal generating units to stand-alone synchronous generators rather than installing new synchronous condensers may be significant with:

- Conversion costs anticipated to be at least 60 per cent less than the construction costs of new synchronous generators.³
- Build times are around 18 to 24 months to convert thermal generating units, whereas construction of new assets is around 36 months.
- Improved use of existing resources by using already available and built infrastructure.⁴

In our view, where options can be utilised to support more efficient solutions at least cost, the market should provide settings to promote this.

Rule change proposal

CS Energy have identified a regulatory gap under the National Electricity Rules (NER), where there is no appropriate market registration category for non-generating units such as stand-alone synchronous condensers, or converted thermal generators.

In their Rule change request, CS Energy propose to include a registration category in the NER for this type of synchronous condenser. In their view, converting thermal units into synchronous condensers is potentially a more cost-effective way to provide security services than investing in new synchronous condensers.⁵

The Consultation Paper proposes three alternatives for consideration:

Option 1: Implement CS Energy's proposal to establish a new participant registration category.

¹ [AEMO | Generation information.](#)

² [Consultation Paper National Electricity Amendment \(Clarifying Registration for Non-Generating Units Providing System Security Services\) Rule p.3.](#)

³ [Consultation Paper National Electricity Amendment \(Clarifying Registration for Non-Generating Units Providing System Security Services\) Rule p.7.](#)

⁵ [Consultation Paper National Electricity Amendment \(Clarifying Registration for Non-Generating Units Providing System Security Services\) Rule p i.](#)

Options 2a and 2b: Use the existing Integrated Resource Provider (IRP) registration category:

- Without amendment, by providing clarification in the final determination on the application of the NER to stand alone synchronous condensers with no accompanying final rule.
- With minimal amendments, to address any gaps in the NER, and specify its application to stand-alone synchronous condensers.

Option 1

The new registration category removes any potential ambiguities regarding the ability of non-generating units to provide more non-network system services by investing in stand-alone synchronous condensers.

Stanwell sees this as the simplest and most practical way to close the identified regulatory gap, and will allow thermal generating units to be converted and provide ESS as standalone synchronous generators.

Stanwell supports CS Energy's proposal for a new registration category, and we agree the proposed Rule change is non-controversial, not administratively complex, and has net benefits for industry participants such as TNSPs, AEMO, and most importantly consumers.⁶

Option 2a and 2b

The alternate Options discussed in the paper use the IRP registration category which looks to:

- 2a. Provide clarification in the Final Determination of the NER to stand-alone synchronous condensers with no accompanying Final Rule.
- 2b. Make minimal amendments to address any gaps in the NER and specify its application to stand-alone synchronous condensers.

Stanwell does not prefer this option as registering a converted thermal unit as an IRP (based on being a market connection point) as noted above, would likely preclude synchronous condensers from providing their full capacity of ESS as they may be restricted to ancillary services only. This would be particularly relevant in the development of a market-based procurement mechanism for inertia.⁷

Stanwell has continuously advocated for reforms that move away from contracted ESS to a transparent, operational market for system security and inertia services. These markets will need to be developed prior to any inertia shortfalls occurring.⁸

The proposed registration category under Option 1 will capture all non-generating categories that can provide system security services, and this will allow for more flexibility for future innovation and participation in market mechanisms under development. It may also provide incentives to retiring thermal generating units to consider alternative generation options, which may reduce costs and ultimately benefit energy consumers.

Conclusion

Stanwell appreciates the opportunity to provide feedback on the Consultation Paper.

Stanwell endorses CS Energy's proposal to create a new registration category under the NER for non-generating units such as stand-alone synchronous condensers.

⁶ CS Energy Rule Change Request Introducing a new registration category to enable the provision of essential system security services by non-generating units p.2.

⁷ CS Energy Rule Change Request Introducing a new registration category to enable the provision of essential system security services by non-generating units p.6.

⁸ Stanwell response to the Efficient Provision of Inertia Directions Paper p.2.

Option 1 would, in our view, provide an opportunity to resolve regulatory ambiguity and provide the additional benefit of enabling retired thermal generators to be repurposed and operate as stand-alone synchronous generators. This approach should also allow for greater flexibility for future innovation and cost-effective reuse of existing infrastructure.

Stanwell agrees with CS Energy that using the IRP category may limit participation of synchronous condensers in the NEM, while the proposed alternatives under Option 2 have the potential to restrict full capacity provision of ancillary services.

Stanwell welcomes the opportunity to further discuss the matters outlined in this submission. Please contact Brad Supple via email at Bradley.supple@stanwell.com

Yours sincerely

A handwritten signature in black ink, appearing to read 'Lya McTaggart', with a stylized, cursive script.

Lya McTaggart
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