

3 July 2025

Australian Energy Market Commission (AEMC)

Submitted via website: <https://www.aemc.gov.au/contact-us/lodge-submission>

Dear AEMC,

Clarifying registration for non-generating units providing system security services

Hydro Tasmania welcomes the opportunity to provide feedback on the AEMC's consultation paper for *Clarifying registration for non-generating units providing system security services*.

Hydro Tasmania has owned and operated the Tamar Valley Power Station (TVPS) since July 2016. The 386 MW station consists of 208 MW of Combined Cycle Gas Generation (CCGT) and 178 MW of Open Cycle Gas Generation (OCGT). In 2014, the FT8 units were modified to operate in synchronous condenser mode as needed. It is also possible to convert the generation to a standalone synchronous condenser by replacing the gas turbines with an electric pony motor to start and synchronise the unit.

In this context, we are supportive of the CS Energy's rule change request and agree that the National Electricity Rules (NER) currently lack a clear registration pathway for converted synchronous condensers. While either option outlined in the consultation paper would resolve this gap, we believe developing a dedicated non-generating system service provider registration category, as put forward by CS Energy, would be the simplest approach.

Hydro Tasmania looks forward to engaging further with the AEMC throughout this consultation process. If you wish to discuss any of the points in this submission in more detail, please contact Shannon Culic at shannon.culic@hydro.com.au.

Yours sincerely,

A handwritten signature in blue ink that reads 'John Cooper'.

John Cooper
Manager Market Regulation

Email: john.cooper@hydro.com.au



Attachment A: Consultation paper questions

Question 1. Is there a substantive problem or evidence of an emerging one?

- Do you agree that existing NER arrangements create a barrier to converting retiring synchronous generators to standalone synchronous condensers to provide system security services post-retirement?

Yes, we agree that the current NER arrangements present a barrier to converting retiring thermal generations into standalone synchronous condensers. While Hydro Tasmania has not undertaken such a conversion and registration process ourselves, we acknowledge that the existing framework is not fit-for-purpose, particularly given the growing need for system security services in a renewable energy future,

The absence of a dedicated registration category for standalone synchronous condensers restricts their ability to formally participate in the market and provide essential system services. This, in turn, limits the options available to Transmission Network Service Providers (TNSPs) when procuring these services. At a time when there is already a supply chain constraint for new synchronous condensers, it is critical to provide a clearer and more efficient pathway for the conversion of thermal units to help meet emerging system needs.

- To the extent there is a barrier, do you consider this barrier to be material to the costs and benefits of maintaining system security over the transition?

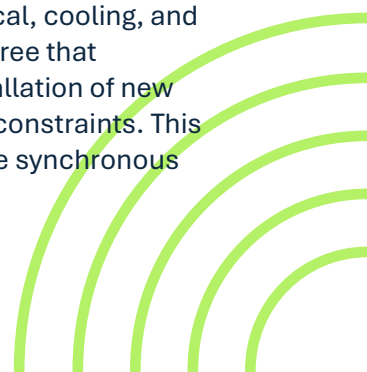
Yes, we consider the barrier to be material. System strength and inertia are essential to maintaining a stable and secure electricity grid. As synchronous generators retire, the availability of these critical services will decline, posing a growing challenge to system security. In this context, enabling the conversion of retiring thermal generators into synchronous condensers is a practical and cost-effective solution. Repurposing existing infrastructure is significantly faster and less capital-intensive than procuring and installing new synchronous condensers. It also takes advantage of existing site infrastructure, such as voltage control systems, cooling systems, and electrical connections, thereby reducing both costs and deployment time. Given the urgency and scale of the system security challenge during the energy transition, any regulatory barriers that delay or prevent the reuse of existing assets are materially detrimental to the efficient delivery of secure energy.

Question 2. Questions on the costs and benefits of CS Energy's proposal

- Do you agree with CS Energy's assessment of the costs and benefits of their proposed change?

Yes, we agree with CS Energy's assessment. Repurposing existing thermal generation infrastructure as synchronous condensers is generally more cost-effective than building new equipment from scratch. It avoids the duplication of assets and makes efficient use of existing electrical, cooling, and control systems, reducing both capital costs and deployment complexity. We also agree that conversions can typically be completed more quickly than the procurement and installation of new synchronous condensers, which is particularly important given current supply chain constraints. This approach offers a practical pathway to address urgent system security needs as more synchronous generators exit the system during the transition to renewables.

- Are there any other costs or benefits the Commission should be aware of?



Yes, an important additional benefit is the opportunity to capture and share learnings from early conversions of thermal generators to synchronous condensers. These case studies will provide invaluable technical, operational, and regulatory insights that can reduce uncertainty and streamline future conversions across the NEM. We also note that ARENA has expressed an interest in supporting projects that deliver learnings for the broader market, including the conversion of existing thermal assets.¹ Facilitating early conversions under a clear and efficient registration framework would not only improve system security outcomes but also provide a foundation of real-world experience that benefits the whole industry. These knowledge-sharing benefits, while less tangible, are critical to enabling a smoother and more cost-effective energy transition.

Question 3. Will the proposed solution address the issue raised by the proponent?

- Do you consider CS Energy's proposal will address the identified issue?

We consider that CS Energy's proposal could possibly enable a clearer pathway for registration, enabling services from converted synchronous condensers to by TNSPs.

- Are you aware of any issues that would be created by adopting CS Energy's proposed solution?

While we acknowledge the Commission's concern that introducing a new registration category could add complexity to the NER framework, we consider it a simpler and more effective solution than amending the existing Integrated Resource Provider (IRP) category. As outlined further below, adapting the IRP category to accommodate synchronous condensers would require substantial changes and could create additional complications due to rule references throughout the NER.

Question 4. What are your views on applying the Integrated Resource Provider registration category to standalone synchronous condensers?

What are your views on:

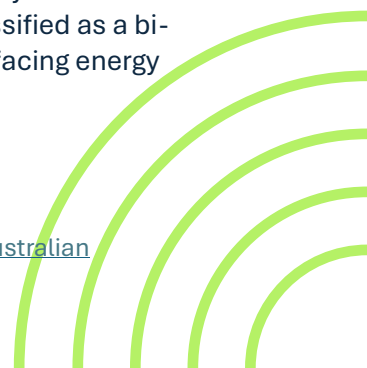
- Whether the existing IRP registration category could be applied without amendment, with appropriate clarification provided in the final determination?

We do not consider the existing IRP registration could be applied for synchronous condensers without significant amendment, given that synchronous condensers are not a generating unit. This is discussed further below.

- Whether a standalone synchronous condenser can be classified as a bi-directional unit for the purposes of IRP registration?

Under the existing definition in the NER, we do not consider that a synchronous condenser can be classified as bi-directional unit for the purposes of IRP registration. This is because a synchronous condenser does not generate or consume active energy in the way required to be classified as a bi-directional unit and also operates more like a network support device than a market-facing energy resource.

¹ For more information see: [Repurposing Existing Generators as Synchronous Condensers - Australian Renewable Energy Agency \(ARENA\)](#).



We therefore consider that the rules would need to be significantly amended to include non-generating system services as part of the IRP registration.

- Any other elements of the current NER that may be a barrier to registering a standalone synchronous condenser as an integrated resource system?

As noted above, we have not directly undertaken this process, and therefore have not identified any further elements of the NER that may present a barrier.

Question 5: Assessment framework

- Do you agree with the proposed assessment criteria?

We agree with the Commission's proposed assessment criteria.

- Are there additional criteria that the Commission should consider, or criteria included here that are not relevant?

We have no additional criteria to suggest.

