

Paul Harrigan
Director
Australian Energy Regulator
Level 4, 23 Marcus Clarke Street
Canberra

29 November 2022

Dear Paul,

System Strength Charging amendments to pricing methodology

I am writing to you in relation to the required amendments to TasNetworks' approved pricing methodology to introduce system strength charging arrangements. Clause 11.143.5 of the National Electricity Rules (the Rules) requires:

- TasNetworks to submit proposed amendments to the AER by 30 November 2022; and
- The AER to make a Final Decision in relation to these proposed amendments by 31 January 2023.

In accordance with these requirements, TasNetworks is pleased to provide marked up changes to our current pricing methodology, which the AER approved for the 2019-24 regulatory control period.

As explained in this letter, TasNetworks considers that its proposed transmission pricing methodology complies with the Rules requirements and the AER's updated transmission pricing guidelines, dated 25 August 2022.

Background

The AEMC's Efficient Management of System Strength on the Power System Rule 2021 introduced new arrangements for system strength charging. This Rule established arrangements to coordinate the supply and demand of efficient levels of system strength services. In the context of the current energy transformation, ensuring that efficient levels of system strength continue to be available is an emerging challenge as large synchronous generating units are replaced by inverter-based generation.

The Rule introduces new planning obligations on transmission networks to meet the system strength standard specified by AEMO. The new system strength standard must be met by a subset of TNSPs, known as System Strength Service Providers (SSSPs). The SSSPs must determine what services they need to procure to meet the standard. These services may include building new network infrastructure, such as synchronous condensers, or contracting with existing synchronous generators.

The Rule introduces a new way of charging for system strength, giving generators and large loads a choice of paying to use the system strength services offered by the SSSP or to provide their own system strength (self-remediate). By applying a location-specific system strength charge, the connecting party is incentivised to consider self-remediation or to locate in a part of the grid where it would face a lower system strength charge.

In developing its final Rule, the AEMC concluded that the AER should have the flexibility to determine how the system strength charge should be calculated. Following extensive industry consultation, the AER concluded that the system strength charge should reflect long-run average costs (LRAC).

Our approach

TasNetworks has worked with other TNSPs to develop a common approach to set a system strength unit price (SSUP) for each system strength node. As part of this joint work, TNSPs also engaged with AER staff to discuss specific aspects of the pricing methodology, having regard to the AER's transmission pricing guidelines and the Rules requirements.

TasNetworks acknowledges and appreciates the constructive approach adopted by the AER staff, which accords with the requirements of clause 11.143.5(f) of the Rules. This provision explicitly requires the AER and TNSPs to cooperate to ensure that the proposed pricing methodology is capable of being approved by 31 January 2023. TasNetworks notes that while the TNSPs have worked together to develop a common approach to system strength charging, specific issues may arise for particular TNSPs that will need to be addressed in their application of that methodology.

TasNetworks will consider the appropriateness of this proposed amended pricing methodology in preparing its pricing methodology as part of the reset process for the 2024-29 regulatory control period.

Of particular note, while TasNetworks expects that its general approach to determining the SSUP is aligned with other SSSPs, as set out in the proposed pricing methodology, determining the LRAC in the Tasmanian context is challenging and requires several assumptions to be made. TasNetworks has sought to comply with its obligations and requirements in a pragmatic, transparent, and defensible way.

It should also be noted that individual units that supply system strength transmission services (located remotely from system strength nodes) ultimately supply varying volumes of system strength at those nodes. The costs of procuring services from an individual unit are therefore not necessarily fully attributable to a single system strength node. As such, TasNetworks has made assumptions that seek to proportionately attribute costs to multiple nodes, where appropriate. This approach is intended to reflect the system-wide supply of services available from the existing hydro generation fleet.

TasNetworks would welcome the opportunity to provide the AER with further information on its detailed approach for determining the SSUP in the Tasmanian context.

Key issues

In preparing the proposed pricing methodology, TNSPs are particularly conscious of the limited information that will be available in setting SSUPs for the first system strength charging period. As explained in the proposed pricing methodology:

- There is limited historical data that could inform our forecast revenue from system strength charges; and
- There is no information available regarding the likelihood that connection applicants will elect to pay the system strength charge in relation to a proposed connection or alteration.

While the TNSPs expect the current paucity of information to improve over time, it is important to highlight the practical challenges in setting SSUPs.

A further related issue is the uncertain future costs of providing system strength services. It may be reasonable to expect that the costs of providing system strength services from new investments will decline over time as technology evolves. However, while batteries may

ultimately provide a lower cost alternative to other network solutions, such as synchronous condensers, the task of providing system strength services as specified by AEMO must be met by the SSSPs in a proactive manner based on forecast generation developments. In this scenario, synchronous condensers may be the lowest cost option to address AEMO's specified requirements, despite the prospect of cheaper solutions becoming available in future periods.

However, in the Tasmanian context, TasNetworks does not foresee material retirement of synchronous machine capacity, as is more likely on the mainland. This means that the need to supply system strength is driven by additional inverter based capacity being connected to the network and not to replace the retirement of existing synchronous generation that currently provides system strength. TasNetworks notes that the existing (and continuing) generation portfolio is capable of providing a significant quantity of system strength, and is generally expected to be the most cost-effective solution in the short term to support many areas of the network. It can be noted that depending on how Tasmania's Renewable Energy Zones are eventually developed, there is a potential that electrically remote connection points may require bespoke solutions.

As such, perhaps unlike other SSSPs, we generally expect that the LRAC is likely to increase over time as the existing capacity to provide system strength is more fully utilised (up to its capacity) and new investment is required to meet our obligations to supply new connections.

TasNetworks currently meets its inertia and system strength shortfall obligations contractually. This commercial arrangement has been a key input into TasNetworks' approach to determining the LRAC and ultimately the SSUP, as discussed above.

In any case, the prospect of technological change and potentially lower future costs of providing system strength services create a challenge in setting SSUPs. In particular, there are two competing objectives:

- To recover the actual costs of providing system strength services from the connecting parties; and
- To avoid connecting parties from self-remediating in circumstances where the SSSP could provide the system strength services at a lower price.

As detailed in the proposed pricing methodology and the examples in Appendix G, the proposed approach in setting SSUPs requires the SSSP to consider both its actual costs of providing system strength services and the future costs of providing those services. As discussed with the AER staff, this pragmatic approach to setting SSUPs is consistent with the requirements of the Rules and the AER's reasoning in selecting LRAC as the preferred pricing methodology, which is that it:¹

- Results in stable pricing across system strength charging periods. This in turn would support investor confidence and more optimal location decisions; and
- Allocates more of the costs of providing system strength transmission services to the parties that require those services. This in turn reduces the costs to be recovered from customers via prices for prescribed common transmission services.

¹ AER, Explanatory statement, Final decision - Pricing methodology guidelines: System strength pricing 25 August 2022

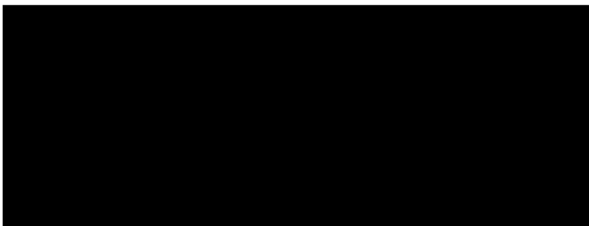
TasNetworks also notes that a draft determination has been published in relation to the National Electricity Amendment (Operational Security Mechanism) Rule 2022. The interface between this Rule and the system strength charging arrangements has not yet been settled. To recognise the possible implications of the final Rule for the system strength charging arrangements, the proposed pricing methodology notes that the capital and operating costs of providing system strength capacity at a system strength node will have regard to the National Electricity Amendment (Operational Security Mechanism) Rule 2022.

Next steps

As already noted, we appreciate the AER staff's constructive approach to date in relation to the development of this proposed pricing methodology. TasNetworks would welcome any feedback that the AER has in relation to this submission, with a view to obtaining AER approval as soon as practicable. Please contact [REDACTED] at [REDACTED] at your earliest convenience if you have any queries.

TasNetworks would welcome the opportunity to provide the AER with further information on our detailed approach to determining the SSUP to apply from 1 July 2023.

Yours sincerely,

A large black rectangular redaction box covering the signature area of the letter.

Chantal Hopwood
Head of Regulation