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Paul Harrigan
Director
Australian Energy Regulator
GPO Box 3131
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Dear Paul

System Strength Charging amendments to pricing methodology

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

- Transgrid 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, Transgrid is pleased to provide our revised current pricing methodology, which the AER approved for the period commencing 1 July 2019 to 30 June 2023. The amended pricing methodology would commence on 1 July 2023 and apply until 30 June 2024.

As explained in this letter, Transgrid 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, the efficient level of system strength 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 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

Transgrid has worked with the other TNSPs to develop a common approach to setting a system strength unit price (SSUP) for each system strength node. As part of this joint work, the 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.

Transgrid 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. Transgrid 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.

Key issues

In preparing the proposed pricing methodology, the 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 is reasonable to expect that the costs of providing system strength services will decline over time. While batteries may ultimately provide a lower cost alternative to network solutions, such as synchronous condensers, the task of providing system strength services as specified by AEMO must be met by the SSSPs. In some cases,

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.

The prospect of technological change and 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 F, 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.

Transgrid 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. Transgrid would welcome any feedback that the AER has in relation to this submission, with a view to obtaining AER approval as soon as practicable.

Yours faithfully



Stephanie McDougall
General Manager Regulation

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