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TasNetworks
Delivering your power

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Mr John Pierce
Chairman
Australian Energy Markets Commission
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Dear John

Submission on the Supplementary Pricing Report for Optional Firm Access (EPR0039)

Thank you for the opportunity to comment on the Supplementary Pricing Report, which forms part of the Optional Firm Access design and testing work-stream.

As the Commission is aware, TasNetworks was formed on 1 July 2014, by combining Tasmania's former transmission network service provider, Transend, and the former distribution network service provider component of Aurora Energy. TasNetworks is the sole provider of regulated transmission and distribution network services in Tasmania. TasNetworks is therefore a key stakeholder in Optional Firm Access (OFA) in the Tasmanian region.

Summary

TasNetworks supports the principles which OFA seeks to address: that generators should have a mechanism available to ensure access to the network, both now and in the future; that incentives for disorderly bidding are reduced; and that generators should directly signal the value of, and contribute to the cost of, network augmentations which are of benefit to them.

TasNetworks has extensively reviewed the Long Run Incremental Cost pricing prototype model ("the LRIC pricing model"), upon which the Supplementary Pricing Report ("the Report") is based. We have found numerous problematic issues in the application of the LRIC pricing model to the Tasmanian region. As the Report acknowledges, the LRIC pricing model does not produce representative prices for the Tasmanian region. The LRIC pricing model is a core component of the overall OFA proposal, hence a precondition for the workability of OFA is the LRIC pricing model must produce defensible results.

TasNetworks supports the statements made in Grid Australia's submission to the First Interim Report, that in order to recommend the adoption of OFA, (i) there must be a demonstrable benefit and (ii) the OFA model must be practically workable. Although TasNetworks supports the principles of OFA, we now consider that OFA, in its current form, will not be practically workable in the Tasmanian region. Consequently, we consider that Tasmanian customers would bear an increased risk if OFA was implemented in Tasmania.

Specific Concerns with LRIC Pricing Model

Operational Control Schemes

Tasmania has a number of operational control schemes which permit network flows higher than traditional "N-1" thermal limits. The crux of these schemes involves participating generators or loads rapidly reducing output in the event that particular network contingencies occur. The LRIC pricing model does not adequately account for the presence of such schemes.

Whilst we understand this to be a Tasmania-specific issue at the moment, pressures to reduce network costs will likely see the more widespread implementation of such schemes in other jurisdictions in future years. TasNetworks therefore urges the Commission to consider (i) how both OFA and the LRIC pricing model would influence the more widespread adoption of operational control schemes, and (ii) the appropriateness of the LRIC pricing model if such schemes were utilised more widely.

Stability constraints

The LRIC model does not currently account for stability constraints at all. Given stability constraints can vary with network load, generation dispatch, and the characteristics of generation and load customer equipment, it is more difficult for TNSPs to predict stability constraints some years in advance than it is to predict thermal constraints. The mechanisms to reduce or eliminate stability constraints can vary vastly in their cost. TasNetworks considers it essential that OFA prices inherently account for stability issues. Given the bespoke nature of stability constraints, we are unable to see how this can be adequately accommodated in a generic, stylised, pricing model.

Prices are based on a single network condition

The LRIC pricing model calculates prices based on one highly simplified load flow for each year of the access period, currently based around maximum demand. Tasmanian maximum demand occurs in winter, when network thermal capacity is higher than it is in summer. In its current form, the pricing model is unable to predict material constraints which occur during summer periods. TasNetworks' assessment is this will lead to material errors in firm access pricing.

Queueing is mandatory

The LRIC pricing model can process only one access request at a time. It is unable to determine more economic access prices which may arise from a single expansion providing access to multiple generators. It is possible that any generation portfolio owner will concurrently request access quantities for its entire generator fleet. To accommodate this, some sort of arbitrary queueing system will need to be implemented. Such a queueing system will impact on resulting access prices, which will not be reflective of an optimised price for multiple concurrent access requests. This issue is particularly pertinent in Tasmania, given the market dominance of one generator.

Pricing model is too stylised to be realistic

The LRIC pricing model assumes network expansion will duplicate existing network elements, and resulting prices are calculated on this basis. TasNetworks' experience is there are often ways to deliver increased transfer capacity which do not require transmission line duplication.

Furthermore, when duplication is ultimately required, it is common practice to consider holistic reconfiguration of the network area in question, which may address multiple issues, rather than simply replicating an existing element.

The Commission has consistently maintained a view that the stylised nature of the LRIC pricing model is acceptable, because under- and over-prediction of costs will balance in the long term, leading to prices that are broadly reflective over time. For this to occur, however, there needs to be a sufficient volume of augmentation expenditure over which averaging can occur. TasNetworks' augmentation programme has reduced to almost nil for the current regulatory period. Should the current low growth rates be sustained, this situation will continue. Given this situation, we cannot accept the argument that a stylised model will produce broadly reflective prices.

Firm access amounts must approximately equal load

The load flow calculations which underpin the LRIC pricing model are only realistic when the amount of firm access approximately equals the amount of load during the study horizon. If firm access exceeds load, the model adds hypothetical load at the Regional Reference Node; if load exceeds firm access amounts, hypothetical additional generation is added. TasNetworks' model testing has revealed that the underlying load flows can become nonsensical once too much hypothetical generation or load is added. The resulting prices become questionable as a result. In the Tasmanian region, the uncertainty regarding initial firm access allocations exacerbates this situation even further. AEMO's initial allocation studies had determined the average Tasmanian firm access allocation to be 63% of capacity. The pricing model was unable to deliver reasonable results with this level of firm access allocation.

Transparency

The LRIC pricing model's underlying load flow must consider all network load. In the Tasmanian region, more than 50% of electrical energy is supplied to transmission connected industrial customers. Omitting these customers' loads from the load flow simulations leads to unreasonable results, however these customers' consumption is confidential information. It is unclear how the loads of such customers can be incorporated in a publicly available model. Furthermore, one would expect that a model with such commercial ramifications as the LRIC pricing model would be able to be independently validated to ensure correctness of results. Unless all input information is available, such validation is not possible.

Conclusion

Given the centrality of the LRIC pricing model to the overall OFA proposal, the problems in applying the LRIC pricing model to the Tasmanian region give TasNetworks no confidence that firm access prices would be reflective of the costs of firm access provision. As the Commission is aware, this leaves open the possibility that consumers will bear an increased risk under OFA.

The above pricing model issues, coupled with other issues beyond the scope of this submission, such as the proposal that the Firm Access Planning Standard would be based on one set of power system conditions only, have led TasNetworks to consider the OFA would not prove to be practically workable, as currently proposed, in the Tasmanian region.

If you have any queries regarding this submission, please contact Paul Rayner on 03 6271 6683 in the first instance.

Yours sincerely

Bess Clark
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