10th June 2022

Submitted via email: info@esb.org.au

Dear Energy Security Board

ESB Transmission Access Reform Consultation Paper (May 2022)

Hydro Tasmania appreciates the opportunity to respond to the Energy Security Board's (ESB) *Transmission Access Reform* Consultation Paper.

Transmission access reform has been a key topic in the regulatory reform agenda of the National Electricity Market (NEM) for several years. Recognising the materiality of congestion challenges facing our market, Hydro Tasmania has been actively involved in access reform discussions. Our engagement has included: providing comprehensive submissions to consultation processes; participation in industry forums and working groups; and the development of our *Synchronous Services Market* rule change proposal.

Hydro Tasmania is supportive of amendments to the NEM's regulatory framework that can support an influx of new energy generation investments, and manage the subsequent impacts this may have on our transmission network. The overarching commitment should be to ensure that we are adjusting the NEM's access regime in a way that promotes efficient and transparent outcomes, without imposing unnecessary costs on market participants.

The ESB has demonstrated a genuine commitment to industry consultation throughout this process. We commend the ESB for their approach to identify and address challenges distinct to the investment and operational timeframes. This is a highly logical approach which can assist in facilitating a coherent market design that enhances locational investment decisions of prospective generators, as well as the delivery of suitable mechanisms to manage and mitigate the risk of congestion in real-time.

While we recognise the significant work that has been expended by the ESB and industry participants to propose various models, there are still key design features of the models which have not yet been fully explored. Some of these design features are pivotal in determining the effectiveness of the models such as:

- The methodologies for determining transmission capacity;

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- The role of the Transmission Queue Model's queue mechanism;
- The allocation of rebates under a Congestion Management Model;
- Refinements required to facilitate a co-optimisation of a Congestion Relief Market with energy and other essential system services;
- Tradability of 'access' under various models; and
- Treatment of interconnectors.

We are concerned that the ESB intend to immediately proceed to a more detailed design of only one preferred hybrid model, without further elaborating on other models identified. This approach will not allow sufficient opportunity to compare and contrast the shortlisted options, and assess the relative merits and drawbacks of each proposal. Therefore, we encourage the ESB, as an interim step, to further develop each of the design options, and then evaluate each of these against the assessment criteria for this reform.

Hydro Tasmania considers there are some key design principles that must be upheld under a final design/recommendation. These design considerations are further explored in **Appendix A** to this submission. We have also provided some specific commentary on the shortlisted options in **Appendix B**.

We look forward to ongoing engagement with the ESB as this important work progresses. If you wish to discuss any aspect of this submission, please contact Jonathan Myrtle (0422 535 092 or Jonathan.Myrtle@hydro.com.au).

Yours sincerely,

John Cooper
Manager Market Regulation

Appendix A – Principles for Access Reform Design

Hydro Tasmania considers it important that any proposed access reform recommended to Energy Ministers should:

1. **Be supported by robust modelling that both evidences its value and demonstrates its capacity to work cohesively under current and future market frameworks.** This supporting modelling analysis should:
    a. Clearly demonstrate how the proposed reforms will deliver upon the stated objectives of this consultation process.
    b. Include an updated and more refined estimate of the congestion cost associated with the status quo, and detailed implementation costs for market bodies and participants associated with the different models.
    c. Explain how the proposed model can be appropriately designed to support state-based energy ambitions, including the establishment of Renewable Energy Zones.

2. **Provide enduring risk mitigation tools for pre-existing generators to counteract new constraints arising from subsequent connections.** A key objective of this reform should be to ensure that the costs of congestion are borne by those that create them, and that tools/mechanisms are made available to market participants to manage congestion risks as they emerge.

3. **Ensure that current and future interconnectors are not disadvantaged under any new access scheme.** AEMO's Integrated System Plan has identified that increased interconnection between regions is aligned with a least-cost resource mix. It is Hydro Tasmania's view that one of the key benefits of greater interconnection is increased competition by enhanced sharing of dispatchable resources across regions. We have identified a key risk to these benefits: increased congestion caused by new generation connecting in close proximity to an interconnector and subsequent reductions in interconnector limits. There is some evidence that this is already occurring on some interconnectors including the Queensland to New South Wales Interconnector (QNI).

    We encourage the ESB to consider specific treatment of interconnectors under each model design, including the impact of increased congestion on efficient interconnector flows. This may include special treatment of potential interconnector congestion under either of the proposed investment models (that is, consideration of whether a greater cost should be placed on congestion that negatively affects inter-regional trade).

4. **Avoid depressing or impeding contract market liquidity.** Cap contracts are a critical risk mitigation tool that enhance competition in retail markets, driving lower costs for consumers. Therefore, we consider that any access reform proposal must carefully consider the impact on cap contract liquidity, and the implications this may have for the market at large. Importantly, the final design must avoid reducing contract market liquidity, due to market participants losing confidence in their ability to back cap contracts across interconnectors.

5. **Strengthen locational signals and incentivise investments in a least-cost and efficient mix of generation, storage and transmission assets.**

    a. **Locational investment signals** – Hydro Tasmania encourages the ESB to further explore the suitability of new forecasting tools such as a "Transmission Statement of Opportunities" to indicate current and expected future congestion. Such a document

could be effective in signalling to market participants where grid capacity is expected to become available in light of changing market dynamics, such as forthcoming transmission investments/expansions (including REZ), announced generation retirements, or the alleviation of stability constraints through system strength remediation works.

b. **Incentivising investments** - Storage assets such as grid-scale batteries and pumped storage hydro are a practical solution to manage congestion in our power system, which are not currently adequately incentivised to connect in congested parts of the grid. It is important that any preferred access model adequately recognises and remunerates the role of storage in alleviating thermal constraints. In many instances, the efficient location of storages can also negate the need for grid expansion and augmentation, resulting in lower costs for consumers.

6. **Recognise the dynamic nature of transmission capacity, and avoid creating a rigid access regime with settings based upon static modelled outputs.** The interdependencies of our power system will mean that line capacity and periods of constraint will be forever changing, and any future reforms to our access regime must reflect this. To the extent possible, flexibility must be built-in to any final access design to reflect the availability of transmission capacity in real-time as the market evolves. Hydro Tasmania is concerned that a future access regime may limit the availability (or volume) of access rights based upon overly conservative assumptions about line capacity. This risks undermining the efficiency of any future access regime, and must be avoided. To this end, we encourage the ESB to carefully design any future access regime to reflect the true availability of transmission capacity in real-time.

Appendix B – Responses to specific consultation questions

Hydro Tasmania provides the following responses to specific questions raised in the consultation paper.

1. Congestion zones with connection fees

Question 1.1. What form of incentive should be used to influence generator location decisions?

A static connection fee appears to be a reasonable and direct way influence investment decision making. However, much more detail is required to understand how the level/volume of the connection fee is determined and whether these can continue to be updated in a timely fashion to reflect congestion changes given the pace of change in the market.

Question 1.2. How does this methodology reflect differences in the output profiles of different generator types?

A connection fee should reflect the potential impact of different generator types and sizes in creating congestion. For example, a battery that relieves congestion should be exempted from a connection fee, and wind and solar farms would have different impacts on congestion given their different output profiles. A very large project connecting in a remote part of the grid with limited transmission would cause greater congestion and should be subject to a greater fee than a more appropriately sized project.

2. Transmission queue

No specific responses on this model.

3. Congestion management model

3.1. What objective should we seek to achieve when selecting a metric to allocate rebates between generators?

This is a critical design feature of the CMM that we believe will be a key determinant in the viability of this model to efficiently address congestion in the long-term. Hydro Tasmania is broadly supportive of some of the principles proposed by the ESB for allocating rebates including, increased certainty for generators with priority access rights, sharing of risks and similarity to actual dispatch. We believe any congestion model should be consistent with the dynamic nature of transmission capacity. As such, the volume of rebates available should reflect real-time transmission capacity availability.

Question 3.3. What are the consequences of the CMM in terms of bidding incentives?

Depending on how rebates are allocated, the CMM has the potential to increase the likelihood of generators bidding closer to their true short-run marginal cost, rather than engaging in 'race to the floor' bidding. We consider the CMM could also improve the locational signal for storage to connect in congested areas of the grid.

Question 3.4. Should we adapt the model to preclude out of merit order generators from receiving rebates when the RRP is low?

No, this would not be practical to implement. Assessing the true merit order would require a complex assessment of each generators' costs and commercial incentives, which can change dynamically over time. The potential problem of out-of-merit bidding would be better addressed in other aspects of the CMM design and may already be sufficiently disincentivised by exposing generators to the local price behind the constraint.

4. Congestion relief market

Question 4.1. What key attributes should the ESB seek to preserve as it works out how the dispatch algorithm should solve in the congestion relief market

Noting that *"the ESB does not propose to change the role of generator coefficients in dispatch"*, it is not clear whether a purchaser of congestion relief would be dispatched if there are generators with lower coefficients bidding at the floor price and only the seller of congestion relief raises the price of its output. In that case, the generator with the second lowest coefficient would be dispatched by NEMDE as the 'efficient market outcome' unless there are specific provisions for the purchaser to be dispatched regardless of coefficients.

Question 4.4. Should we adapt the model to reflect queue position in deciding which parties may sell congestion relief?

As per point 2 of appendix A, Hydro Tasmania considers that the Transmission Queue represents the most pragmatic approach to mitigate the risk of future congestion for pre-existing generators. However, based upon the information provided, it is not clear how the Transmission Queue, or any other investment timeframe model can achieve this imperative alongside the CRM, as transmission rights are not held or tradeable by any party.

Under the CRM, generators with the lowest coefficients dispatched in a preliminary run of NEMDE will be incentivised to sell congestion relief. Where there is disorderly bidding (for example, every generator bidding at the Market Floor Price), this ability to sell congestion relief would accrue to the generator with the lowest coefficient. Given that *"the ESB does not propose to change the role of generator coefficients in dispatch"*, it appears that the suggestion in the Consultation Paper to permit the right to sell congestion relief in accordance with the queue mechanism in the Transmission Queue model would not be able to override the CRM's assignment of the right to sell congestion relief.

Hydro Tasmania is seeking greater clarity on how these two models could work in combination as an overall package.