Hydro Tasmania

08 November 2019

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear ~~Mr Pierce~~, John

Coordination of Generation and Transmission Investment – Access and charging (EPR0073)

Hydro Tasmania appreciates the opportunity to respond to the Australian Energy Market Commission's (AEMC) Coordination of Generation and Transmission Investment (COGATI) proposed access model discussion paper, and supplementary discussion paper on Renewable Energy Zones (REZ). This submission predominantly responds to the proposed access reforms, but also provides some additional commentary on the AEMC's REZ discussion paper.

At a high-level, Hydro Tasmania considers that:

1. The proposed COGATI access reforms are a fundamental reform, with far-reaching impacts across a variety of aspects in the National Electricity Market (NEM), and should therefore be considered as part of the Energy Security Board's (ESB) Post-2025 Market Design Process;
2. It is inappropriate to propose implementation until the benefits of the proposed reforms are appropriately quantified and proven to be fit-for-purpose in the future market design; and
3. There are other, more immediate and simplistic solutions available to manage and alleviate congestion in the NEM, which should be considered alongside the proposed reforms. These include the utilisation of generator tripping schemes, and the creation of new market signals for the provision of inertia.

The National Electricity Market (NEM) is undergoing significant transformation through the rapid uptake of renewable energy sources and the retirement of ageing thermal generation. The transition of the NEM to predominantly cleaner variable generation sources can make market reform more challenging, however, this disruption also provides a huge opportunity to deliver on the energy trilemma; ensure a fit for purpose electricity system; and efficiently facilitate the development of new technologies and customer solutions.

To effectively facilitate this transformation, it is essential that the NEM's regulatory framework evolves to maximise the utility of existing (fit for purpose and fit for future) assets in our network, as well as

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enabling necessary investments in new generation and transmission assets. It is also critical that changes to the NEM's regulatory frameworks are undertaken with a holistic view of changing market dynamics, and with consideration for other concurrent market reform processes.

The AEMC are proposing to implement Dynamic Regional Pricing (DRP) and Financial Transmission Rights (FTRs) by July 2022. This is a significant change and we believe, an unrealistic timeframe for implementation. Amending the NEM's access regime will have far-reaching implications for a variety of aspects in the NEM, and should be approached with appropriate diligence and caution. Hydro Tasmania remains concerned that the AEMC intend to implement such significant reforms without having demonstrated a clear net benefit through a robust cost-benefit assessment process. While we acknowledge a number of important changes to the reforms have been considered since the June consultation, a number of elements highlighted in our previous submission remain concerning. Our two fundamental concerns with the COGATI reforms as presented are that they are likely to:

1. create significant complexities, costs and risks which could impede (rather than support) the timely transition of the NEM - particularly affecting increased deployment of low emissions generation, distributed energy resources and the development of new strategic transmission and distribution assets; and

2. limit the potential reform options that may be needed for the future of the NEM, which are currently being considered through the Energy Security Board's (ESB) Post-2025 Market Design process. As stated in our previous submission, Hydro Tasmania consider it may be more appropriate for the AEMC to consider minor refinements to current market operations to resolve issues identified through the COGATI process, whilst other large-scale market reform processes are underway. Implementation of DRP and FTR would constitute a major change, and would best be considered as part of the ESB's Post-2025 Market Design process.

We agree with the AEMC's finding that Dynamic Regional Pricing (DRP) is not a suitable mechanism to incentivise further transmission investment, and we support its removal following the last round of stakeholder consultation. However, a critical challenge for the market is the need for strategic transmission investment. Support for strategic transmission investment could be a more effective and timely solution to emerging market challenges regarding congestion in the NEM. Where thermal congestion occurs, we continue to encourage an increased utilisation of existing network assets through the use of a Tasmanian style 'run-back' scheme[1] which has nearly doubled the transmission capacity in Tasmania.

Where non-thermal congestion occurs, Hydro Tasmania considers that higher utilisation of the transmission system could be achieved by creating incentives for critical system security services such as inertia. Ensuring adequate levels of inertia in the system is a key challenge, currently handled sub-optimally through off-market AEMO directions. The existing AEMO dispatch system is already aware of the benefit of placing synchronous generators online in either generation or synchronous condenser mode, but is unable to issue dispatch instructions to them due to the lack of compensation mechanism for a variety of synchronous services. Synchronous services are instead taken as an unchangeable input, represented by the closed or open circuit breaker status of key machines on the Right Hand Side

[1] The Tasmanian energy system utilises high speed communication systems to trip generation in response to sudden transmission outages, allowing significantly higher pre-contingent flows.

(input side) of the constraint. Hydro Tasmania has recently lodged the Synchronous Services Market rule change with the AEMC. This rule change proposes to amend the National Electricity Rules to shift the online statuses of relevant generators to the Left Hand Side of AEMO's constraints where generator could receive a target to come online in response to a price signal, and without AEMO direction. We will continue to work with the AEMC, and look forward to this rule change request being published shortly.

In the event that the AEMC determine that the COGATI reforms must be progressed, Hydro Tasmania considers there are other complexities and design issues which must be fully assessed and problems addressed. These complexities and design issues relate to: the timing of implementation; grandfathering and transitional arrangements; impacts on contract market liquidity; treatment of constraints under DRP dispatch; and the lack of, and need for a thorough and robust cost-benefit assessment process. Hydro Tasmania considers that the resolution of these issues are critical in order to achieve a successful implementation of the AEMC's proposed reforms. Further discussion of these concerns is provided as Attachment A to this letter, and we welcome ongoing engagement with the AEMC to further understand the issues, impacts, and solutions.

Hydro Tasmania also notes the release of the AEMC's discussion paper on Renewable Energy Zones (REZs). REZs are also a core component of the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP) and the ESB's 'Actioning the ISP' work. REZs are an internationally recognised concept, which have been proven to assist in the effective planning of energy networks. If implemented well, REZs can assist in identifying the benefits of co-location and co-optimisation of resources, capture the benefits of geographical diversity, and can support the efficient transition of energy markets to lower-carbon sources. AEMO's ISP identified the North-West of Tasmania as a priority REZ development zone due to the region's high quality wind resources, and extensive hydropower fleet.

As acknowledged by the AEMC, the term REZ has *'... been used by different parties to mean different things.'* In this regard, we welcome the AEMC's work to more succinctly identify and define what REZ potentially 'means' in the NEM context. We support and acknowledge the importance of AEMC having now separated this aspect of the work program from other COGATI considerations. In developing more succinct definitions and potential classes of REZ, it will still be important to ensure flexibility for recognition/accommodation of the unique factors and circumstances for each individual REZ. This is essential because experience shows that each REZ (however classified) will have different requirements to facilitate orderly and efficient connection. In continuing to conceptualise REZ's for the NEM it is essential that there is harmonisation between the ESB, AEMO and AEMC approaches to design and development. Hydro Tasmania welcomes the opportunity for ongoing engagement with the AEMC and other market bodies as their work progresses in this space.

If you would like any further information on any aspect of this submission, please contact John Cooper (john.cooper@hydro.com.au or (03) 6230 5316).

Yours sincerely,

Steve Davy
Chief Executive Officer

Hydro Tasmania

Attachment A – Hydro Tasmania's comments on proposed access reforms

1. **Timing of implementation** – With several design details yet to be developed, and limited analysis available to date, it is difficult to determine whether the proposed July 2022 implementation date is appropriate. Based upon current information, Hydro Tasmania considers it likely that this proposed timeframe for implementation is unrealistic. Hydro Tasmania encourages the AEMC to refrain from determining an implementation date until the proposed reform has been fully developed, assessed, and considered alongside other market reform processes. Rushing the implementation of such a fundamental reform could potentially result in significant unintended consequences.

2. **Interaction with concurrent market processes** – The alignment and interaction of the proposed access reforms with other concurrent market processes are particularly ambiguous. It remains unclear as to how the AEMC's proposed access reforms may interact with the Energy Security Board's (ESB) Post-2025 Market Design Review. The AEMC states that COGATI reforms *'...are likely to be an appropriate, no regrets step that is suitable for any post-2025 design...'* However, Hydro Tasmania is concerned that the proposed access reforms may create some limitations on what market design mechanisms may be possible under the ESB's market design process. For example, if the ESB's Post-2025 market design process identified that it would be better to have a different number of regional prices across the NEM, it is unclear how this would work under a potential future design. While both the ESB and the AEMC have provided reassurances in this regard, it remains difficult for industry participants to fully assess how the two processes will interact and that the most efficient mix of reform options are considered and implemented. This interaction should be carefully considered to ensure that the proposed access reforms will remain functional and fit-for-purpose under any future market design considerations.

3. **Grandfathering** – Hydro Tasmania consider it essential that transitional arrangements strike the appropriate 'balance' between maintaining historical arrangements for existing generators, whilst continuing to enable the efficient connection of new generation assets. We consider grandfathering will likely be particularly important to support ongoing contract market liquidity and that transitional arrangements should be set in such a manner that we avoid shocks for existing generators. The approach needs to be balanced to ensure that there are no impediments to the timely and efficient transition of the NEM.

4. **Contract market liquidity** – Contract market liquidity is a fundamental component of an open and competitive market. Hydro Tasmania remain uncertain as to how the proposed access reforms may impact contract market liquidity in the NEM across the short and longer-term. In this sense, we consider it integral that the implications for contract market liquidity are well understood under any new access regime.

    a. **Short term liquidity considerations** - Generators and retailers often start developing their contracted position in the market approximately 3-4 years in advance. With an implementation start date of July 2022, many contracts may already be impacted by the proposed scheme. To the extent that there remains uncertainty over the ability of generators to access FTRs, Hydro Tasmania considers it likely that generators will be reluctant to offer contracts that are traded beyond July 2022. This could have a damaging impact on contract market liquidity beyond the proposed implementation date.

b. **Long-term liquidity considerations** - The quantity of FTRs offered will have implications for contract market liquidity. Without access to hedging products, generators will not have adequate confidence in their ability to 'back' forward contracts. This will likely result in an increasing reluctance by generators to offer contracts in the wholesale market. Such a loss of contract liquidity could create significant challenges for NEM participants including impacting the ability of Tier 2 and new entrant retailers to remain competitive, which would be at the detriment of consumers. This uncertainty may also undermine the functionality of the Retailer Reliability Obligation, should a material reliability gap be forecast. This interaction should be carefully considered by the AEMC.

c. **Increased NEM Liquidity** – Hydro Tasmania considers it appropriate that through the COGATI process the AEMC consider what the optimal combination of regional prices could be, in order to balance the objectives of: (1) dealing with constraints within and between regions; and (2) supporting deep and liquid forward contract markets. Potential recalibration of regional reference prices could improve competition within the NEM and address issues of limited liquidity facing some regions.

5. **DRP dispatch process impacts** –It is unclear as to whether National Electricity Market's Dispatch Engine (NEMDE) will be calibrated appropriately to support the AEMC's proposed access reforms. Hydro Tasmania considers that the proposed reforms may not be easily enacted without further changes to NEMDE. This should be carefully considered. Further, as currently proposed, it is unclear if DRP will be capable of incorporating all of the constraints that are currently recognised in NEMDE. This may mean that constraints relating to frequency and inertia, which are likely to be the prevalent form of constraint in the future power grid, are excluded from the DRP process. Hydro Tasmania is therefore concerned about the efficacy and revenue adequacy of DRP as currently described. As discussed in the cover letter, where non-thermal constraints occur, Hydro Tasmania considers that there may be relatively simpler ways to address some of these issues.

6. **Cost-benefit analysis** – Hydro Tasmania welcomes the AEMC's commitment to undertake focussed analysis to understand the impacts and implications that may arise from the proposed reforms. However, it is Hydro Tasmania's view that the AEMC's proposed approach to modelling may not fully capture the nuances of such a complex scheme, and therefore, may not be truly indicative of how the scheme will work in practice. Further, we consider that this modelling should be conducted prior to determining whether implementation of the proposed reforms is appropriate. We encourage the AEMC to undertake more detailed in-depth analysis of the proposed scheme, highlighting issues that have been experienced in other regions with nodal pricing and tailored solutions for the NEM context. For instance, we consider that a 10 node paper trial will be insufficient to understand how the system may handle the 12,000+ constraints currently in the NEM. A paper trial with more nodes will be more indicative of system behaviours and participant behaviours than the approach proposed. While we appreciate that this level of modelling will be challenging in the timeframe proposed, it is critical that all issues are fully understood prior to considering any implementation. It will also be important to test the modelling under a variety of generation mix scenarios, to ensure that the reforms are robust to all future market contexts, including scenarios where the uptake of VRE and closure of thermal plant occurs much quicker than may be expected.