Hydro Tasmania

10 October 2017

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

Dear Mr Pierce

2017 Energy sector strategic priorities (EMO0032)

Hydro Tasmania appreciates the opportunity to comment on the AEMC's *2017 Energy Sector Strategic Priorities* discussion paper.

Hydro Tasmania is Australia's largest producer of renewable energy, and is internationally recognised for its expertise in renewable energy operation and development. We are an integrated energy business providing retail energy products through our Victorian-based retailer Momentum Energy, power and water consulting services through our specialist consulting business Entura, and are a material participant in the National Electricity Market (NEM). Hydro Tasmania's assets generate around 9,000GWh from hydropower and 1,000GWh from wind generation in an average year (around 5% of NEM demand). In addition, Tasmania's hydropower system can store up to 14,000GWh of energy.

The National Energy Market (NEM) is undergoing a period of significant transformation through the increased penetration of variable renewable energy sources and the retirement of synchronous generation. Addressing the energy market trilemma of affordability, system security and low emissions requires a holistic view when approaching individual issues. Hydro Tasmania commends the efforts made by the AEMC in navigating this unprecedented period of transition, and offers the following views on the strategic direction of the NEM moving forward.

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Executive Summary

The NEM's changing generation mix is bringing forth a number of challenges. Hydro Tasmania supports the creation of the Energy Security Board as this can provide the opportunity to consider the interrelated nature of these current challenges. Understanding how proposed market mechanisms will impact interrelated processes and characteristics of the NEM is critical. Alongside the Energy Security Board, AEMO's Expert Panel can provide advice to Government on the necessary market reforms required to meet the trilemma.

Maintaining system security and reliability is essential through this period of transition. Flexible generation sources will play an increasingly valuable role in balancing supply and demand fluctuations. Incentivising investment in flexible generation will be integral to the effective incorporation of variable renewable energy sources. Likewise, facilitating greater uptake of demand response participation in the market will assist in mitigating the risks associated with fluctuations in the power system. Establishing effective incentives and financial signals to drive new investment and meet system security and reliability requirements is vital.

The blueprint for the future NEM must also consider emissions intensity as a key factor to address. The energy sector is the largest contributor to greenhouse gas emissions in Australia. To achieve emissions reduction targets in line with Australia's commitments to the Paris agreement, the energy sector will need to make deep and lasting cuts to emissions. The Federal Government's 26% to 28% emissions reduction target for 2030 indicates that the electricity generation sector will need to significantly reduce its emissions intensity. An effective emissions reduction mechanism that can support investment in low and zero emissions generation is required.

The role of networks in facilitating the transition to low-emissions technology must also be considered. Effective (and possibly coordinated) development of renewable energy sources should be examined for the benefits this can bring in the transforming power system. Effective interconnection between regions is one tool that can help address the energy trilemma.

Hydropower assets are a flexible and synchronous source of renewable energy generation with a long lifespan. These characteristics are conducive to addressing the issues of affordability, system security and emissions reduction in the energy sector. In formulating the strategic priorities of the NEM, the optimal use of hydropower generation should be fully considered.

Attachment 1 addresses the key areas of concern that Hydro Tasmania believes the AEMC should consider as part of this review. We look forward to ongoing engagement with AEMC and its working groups to address these issues going forward. If you would like further information on any aspect of this submission, please contact John Cooper (john.cooper@hydro.com.au or (03) 6230 5313).

Yours sincerely

Steve Davy
CEO

Attachment 1 – Hydro Tasmania's key areas of focus in the 2017 Strategic Priorities review

Market Design

Appropriate market design is integral to the efficient transition of the NEM. Hydro Tasmania believes that a structured and thorough approach to market design can achieve optimal outcomes for market participants and consumers, as opposed to consecutive market alterations with distinct objectives. Proposed market designs should be carefully considered to ensure efficient investment, maintenance, and operation of the power system. To realise this goal, rigorous testing incorporating experimental and behavioural economics should be undertaken to ensure implemented designs will meet the current and future needs of the NEM.

Emissions Reduction

Development of a long-term and stable emissions policy for the sector is critical to facilitate the effective transition to low emissions generation. Consideration of investment decisions in the NEM extend well beyond the federal government's 26% to 28% emissions reduction target by 2030. The lack of clear, lasting emissions reduction policy is causing underinvestment in the sector and has contributed to poor outcomes for consumers. The development of a suitable emissions reduction mechanism, integrated with energy policy is a key requirement in order for efficient investment in secure, reliable, affordable and low emissions generation. A stable and effective emissions reduction policy would encourage modernisation and reinvestment in existing low emissions sources as well as the development and effective integration of emerging renewable energy developments.

System Security and Reliability

Hydro Tasmania believes the AEMC should give further consideration to the role of hydropower generation in maintaining system security and reliability. Section 3.3 of the discussion paper notes that "thermal generators have a number of characteristics that contribute to the maintenance of power system security and reliability" for the following reasons:

- They are dispatchable, meaning they can schedule their generation without being constrained by weather conditions, and
- They can be synchronised to the frequency of the power system.

Hydropower assets also possess these key characteristics. In discussing the benefits to the NEM associated with these characteristics, the AEMC must include and consider the optimal use of Australia's hydropower generation assets.

Historically, "dispatchable" generation in the NEM has been championed as the key characteristic of a reliable power system. There has since been widespread acknowledgement that "flexible" generation will be a critical success factor for a reliable power system with an increasing penetration

of renewable sources. Flexible generation is distinct to dispatchable generation and is able to increase/decrease output in a responsive manner based on demand/supply fluctuations. While dispatchability is an important attribute, flexible sources are likely to be of increasing value in the NEM. These characteristics will facilitate the integration of increasing variable renewable energy sources by providing a balancing service. It is vital that the AEMC explicitly consider the role of flexible sources of energy in the NEM.

Facilitating Investment

The most cost-effective market transition can be achieved through a mix of new technology and the optimisation of existing plant. Policymakers and governments should not attempt to predict the particular technologies and business models that will be successful in addressing the energy trilemma. Market design should facilitate investment in a range of generation assets if this can provide for effective transition of the sector. Appropriate consideration should be given to the role each generation type can play in addressing affordability, system security and emissions reduction, and the trade-offs that exist between them. The Generator Reliability Obligation (GRO) as recommended by the Finkel report is one example where technology neutral, market based solutions should be explored in the first instance. This has the potential to allow more efficient outcomes than a prescriptive or narrow requirement on new power stations.

The AEMC's strategic priorities should consider how an alternate operation of existing assets can contribute to achieving sectoral goals. For example, providing the right incentives could allow existing plant to increase their ability to maintain system security through greater contributions of inertia or frequency control ancillary services (FCAS). Hydro Tasmania has made extensive investments in hydro and gas generation to allow assets to operate in synchronous condenser mode, as well as modernising governor settings to increase ancillary service provision. Further, opportunities to augment Hydro Tasmania's assets are being assessed in partnership with the Australian Renewable Energy Agency (ARENA) including the potential to increase energy storage through pumped-hydro projects. It is critical that the AEMC consider how existing energy resources can support the NEM's transition to a secure and reliable, low-emissions system.

The AEMC's deliberation of proposed market changes should thoroughly consider the potential impact on contract markets. The contract market plays a fundamental role in initiating investment, risk management and facilitating retail competition in the NEM. A reduction in contract market liquidity would hinder investment and effective retail competition. Maintaining, or where possible improving, upon current contract market liquidity should form part of AEMC's decision making process.

Interconnectors

Hydro Tasmania believes that interconnectors can play a significant role in ensuring positive reliability, security and competitive market outcomes in the future. Interconnection will be particularly beneficial in the role they can play in linking flexible generation sources with demand centres. Hydro Tasmania believes the AEMC should consider the role of interconnectors in the NEM and how their value to the market can be correctly identified. Hydro Tasmania notes that section 9.2 of the discussion paper relating to distribution and transmission does not explicitly consider interconnection in the NEM. Hydro Tasmania encourages the AEMC to fully consider the role of interconnection in its strategic priorities. We understand that AEMO will be undertaking further work in this area in line with the Finkel recommendations.

Gas Markets

Hydro Tasmania is supportive of the AEMC's recent actions to improve gas market transparency and consistency of reporting information. Hydro Tasmania believes that extension upon these efforts could be made via improving supply-demand forecasts. This may be achieved through categorisation of supply-side reserves. A greater symmetry of information may also be achieved via categorising demand as expected, peak, gas powered generators (GPG), and discretionary for example. Hydro Tasmania believes these categorisations will aid in developing a more efficient gas market. Further, Hydro Tasmania believes these measures may help to further minimise the significant forecast variations that have historically occurred in the gas market.

Hydro Tasmania supports the AEMC's efforts relating to gas market reforms to enhance the ability of participants to manage price and volume risks, as well as increasing trading of commodity and capacity. Consideration should also be given to the vast distances separating demand centres from supply and the obstacle this presents in achieving truly efficient liquid gas markets. Hydro Tasmania contends that incremental changes to the existing gas market structure may achieve similar or better outcomes, opposed to full market reform.

Retail Markets

Hydro Tasmania believes that the AEMC should take an all-inclusive view of issues relating to retail markets in the NEM. Particularly, issues relating to engagement and participation, pricing, and consumer protections should be assessed collectively, as opposed to individually. For instance, Hydro Tasmania's retailer Momentum has noted consumer disengagement has been driven by mistrust of retailer practices, increasing prices, and confusion. These factors broadly relate to the AEMC's goals of accessible information, protections, and affordability. Therefore, Hydro Tasmania believes that the pursuit of enhancing one factor of the retail market cannot be achieved in isolation from others keys factors.