17 January 2020

Dr Kerry Schott AO
Energy Security Board

info@esb.org.au

Dear Dr Schott,

Re: Consultation on Draft ISP Rules

Hydro Tasmania welcomes the opportunity to provide a submission to the ESB's consultation on the draft rules. We have made a parallel submission to the AER's Issues Paper to make the ISP actionable.

Hydro Tasmania is Australia's largest producer of renewable energy, and is internationally recognised for its expertise in renewable energy operation, development and integration. Our renewable energy assets generate around 9000 GWh from hydropower and 1000 GWh from wind generation in an average year (around 5% of NEM demand). In addition, Tasmania's hydropower system can store up to 14 000 GWh of energy. The Hydro Tasmania group also comprises of Melbourne based electricity and gas retailer Momentum Energy (Momentum) and our specialist power and water consulting firm Entura. Momentum will continue to grow its electricity and gas retail business on the mainland by offering competitively priced energy products to NEM consumers. These offers are simple, readily understood and appreciated by customers. Momentum retails energy to all segments of the market from residential to large business customer and is also in discussion with wind and solar developers regarding offtake arrangements.

Tasmania is uniquely placed to support Australia through the transition to cleaner sources of energy. Further interconnection coupled with Tasmanian pumped hydro and wind resources offer a future that's clean, reliable and affordable.

It is Hydro Tasmania's view that:

- As proposed, AEMO should develop and publish the **Integrated System Plan** (ISP) at least every two years, with additional updates (such as the July 2019 'Insights Report') provided where there are threshold changes in the current or forecast market or project conditions.
- We support the intention that: *"AEMO will publish the net present value of market benefits of different options under a range of scenarios and explain which development path it considers to be optimal and why."*

- The **ISP should replace the Project Specification Consultation Report (PSCR)** in the case of 'Actionable' ISP Projects.
- There needs to be a combination of **market forces, system planning and investment support** to achieve a transition of Australia's electricity sector - with the appropriate mechanism matched to the required outcome.
- **Transmission is a key enabler** that can allow integration of variable renewable energy, diverse energy resources and deliver strong outcomes for consumers.
- **Renewables and energy storage** can meet the energy trilemma.
- **Investment support for strategic, long-term transmission and generation assets** will reduce risks and benefit energy consumers over the medium and long-term. Any short term solutions must be considered with great care and diligence and avoid increasing longer-term costs or slowing an efficient transition of the sector.

We support the approach that, *"the ISP optimal development path will be required to have a positive net benefit for the central case, but it need not have the highest net benefit in the central case. AEMO will have some flexibility in its approach to scenarios, modelling and therefore choice of optimal development path." (ESB Consultation Paper, Page 7).* This recognises: firstly, that investments proposed by the ISP must be to the benefit of electricity consumers; but also that the optimal development pathway must be one that is robust to future uncertainties and a range of scenario outcomes. Hydro Tasmania believes this direction provides AEMO with an appropriate level of flexibility for system planning.

We believe the changes above are consistent with the National Electricity Objective (NEO).

Hydro Tasmania continues to support the use of the ISP to satisfy the requirement previously covered through the Project Specification Consultation Report (PSCR) stage of the RIT-T process. Where there is a demonstrated system need, this can speed up the process of the RIT-T for critical 'actionable' ISP projects. The lack of development of interconnection and transmission infrastructure over the last decade is partly due to the difficulty and challenges in satisfying the requirements of the RIT-T and securing investment in these assets. The NEM now appears to be playing catch-up, to address and prepare for the changing energy market.

We note that: *"The AER will be responsible for making two sets of guidelines that govern how AEMO develops the ISP and how TNSPs carry out RIT-Ts in relation to actionable ISP projects: Best Practice Forecasting Guidelines and Cost Benefit Analysis Guidelines."* These guidelines will have critical implications for the development of the ISP. In particular, as the ESB consultation paper states, the cost benefit analysis guidelines will cover AEMO's objectives with respect to:

- *"characterising the counterfactual development path*
- *selecting a set of development paths for assessment*
- *describing the identified need to be examined by TNSPs in their RIT-T.*
- *the framework used to select the optimal development path, including the quantitative cost benefit analysis that should be undertaken."*

Hydro Tasmania supports the ESB paper's view that the cost benefit analysis guidelines require the AER to *"recognise the risks to customers associated with uncertainty including risks associated with over-investment, under investment and investment that is too early or too late."* Hydro Tasmania has consistently argued that understanding and preparing for these risks is a key justification for, and benefit of, the ISP process and efficient system planning.

Cost-Benefit Analysis

As the ESB consultation paper notes:

> *"The scale of the current energy transformation brings a high level of uncertainty to long term planning. Utilising a probability weighted approach (as required under the current RIT-T framework) will tend to obscure the risks of not being prepared for a range of different worlds that may be faced." (ESB Consultation Paper, Page 11)*

There is great complexity in carrying out cost-benefit analysis, particularly at a system planning level. We support AEMO conducting transparent and rigorous consultation on the inputs, assumptions and scenarios as well as the use of sensitivity analysis to develop the optimal development path. Nonetheless, there are several issues that may continue to be difficult to capture under this scenario based system modelling, these include:

- The competition benefits for consumers of additional interconnection; the sharing of resources between regions; and the addition of potential price setters in each NEM region;
- The benefits that stem from diversity in both the type and location of generation sources available (particularly with respect to variable renewable generation);
- The lack of perfect foresight in the real world which assumes that all energy resources, demand side participation and energy storage can be dispatched efficiently and optimally to meet system peaks - this can lead modelling to underestimate the amount of energy, demand side or storage resources needed;
- The benefits of 'deep storage' (8 hours +) as a complement to variable renewable resources, where increased storage duration increases the likelihood of supply being available at critical times;
- The uncertainties that come from construction risks (costs and timing);
- Limits within Australia on the number and scale of projects that can be resourced, developed, constructed and commissioned within a set period of time; and
- That modelling may select theoretical energy resources before credible development opportunities (which already have a proponent and expenditure). It is Hydro Tasmania's view that announced, 'real-world' projects should be given additional consideration over and above theoretical modelled proposals in the ISP and that, where relevant, AEMO should engage directly with project proponents to fully understand proposals.

Selecting the optimal development path (Section 2.2.4)

> *"The ISP optimal development path will be required to have a positive net benefit for the central case, but it need not have the highest net benefit in the central case. AEMO will have some flexibility in its approach to scenarios, modelling and therefore choice of optimal development path." (ESB Consultation Paper, Page 7)*

Hydro Tasmania supports AEMO having the flexibility to select an optimal development path using their expertise that meets future system needs and prepares the NEM against the reasonable range of future market outcomes. While Hydro Tasmania supports this flexibility, a natural tension arises between the need for impacted stakeholders to have visibility of future transmission development pathways, and AEMO's capability to respond and remain robust to future market scenarios and uncertainties. Significant generation and storage investment decisions will flow from the development of ISP transmission projects, highlighting the impact of 'non-market' processes such as the ISP to shape and impact markets themselves. Therefore AEMO must clearly communicate the choices that are made in selecting the optimal development path and the justifications for doing so. It is hoped that the AER Guidelines and the stakeholder experience of AEMO's 2020 ISP can provide confidence in this approach going forward.

Feedback Loop / "ISP Update"

Hydro Tasmania believes it is sensible for AEMO to provide an update to the ISP if new information, becomes available that may impact on the optimal development path or on the RIT-T for actionable ISP projects. We therefore support draft rule 5.22.12.

Where a RIT-T on an actionable project produces a preferred option that differs from the ISP, we support a feedback loop whereby AEMO can consider any impacts this might have.

Consideration of Public Policy Needs

Hydro Tasmania acknowledges that Federal, State and Territory policies will have an impact on ISP modelling and on the optimal development path. While it is not the role of AEMO to determine public policy decisions, it could be granted the flexibility to consider how the NEM would develop in the absence of some or all federal or state-based policy interventions. This could provide some additional insights into the optimal and least-cost development pathway for consumers. This analysis would build on AEMO's established work on Renewable Energy Zones and could highlight the transmission development paths, energy resources and geographic areas that are best suited to further development. It may also provide insight into any additional costs and/or benefits imposed by having locational based constraints in generation or resource development. Hydro Tasmania believes that providing advice on least-cost supply in this manner would be consistent with the National Electricity Objective.

Hydro Tasmania also believes that AEMO must consider international experience of market trends and developments. This includes technology costs, asset closure and re-investment schedules and the decarbonisation of energy systems in other jurisdictions. Reference to these international developments is important when considering what sensitivity analysis to conduct in an Australian context.

Hydro Tasmania believes that executing AEMO's Integrated System Plan (ISP) alongside investment support for critical, long-term energy supply and storage can appropriately balance the risk of transition between energy consumers and market participants. We have welcomed the level of transparency, engagement and detail provided by AEMO in the latest round of ISP scenarios and assumptions.

Hydro Tasmania appreciates the strong engagement and consultation that the ESB is undertaking. We look forward to continuing to working with the ESB regarding its work to action the ISP. For further information or follow-up, please contact Colin Wain (colin.wain@hydro.com.au; 03 8612 6443).

Yours sincerely,

Andrew Catchpole
Chief Strategy Officer