7 November 2024

Ashwin Raj
Australian Energy Market Commission (AEMC)

Submitted via www.aemc.gov.au

Dear Mr Raj,

Improving consideration of demand-side factors in the ISP (ERC0396)

Hydro Tasmania welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC's) draft determination for the *Improving consideration of demand-side factors in the ISP (ERC0396)* rule change.

The Integrated System Plan (ISP) is a key policy document in the Australian energy market, and it is essential that the plan accurately reflects the current opportunities, challenges, and uncertainties that Australia's energy sector faces. Since the inception of the ISP, there have been numerous changes to both the energy landscape and generation mix within Australia, along with federal energy polices and international economic conditions. Hydro Tasmania supports the intent of this rule change to update and improve the scope of the ISP to better reflect the challenges of the energy market today.

Hydro Tasmania supports the direction of the Draft Determination. We support the AEMC's proposal to expand of the definition of consumer energy resources (CER) to include energy efficiency, demand flexibility, and electrification as this will help provide a more holistic view of demand-side factors. We also support the AEMC's proposal to allow AEMO, but not require them, to co-optimise these factors with the rest of the model. However, it is our view that testing CER forecasts with a co-optimised model would greatly assist in ensuring forecasts are realistic and robust; we recommend AEMO include this as part of their modelling process.

i. Consumer Energy Resources (CER)

Hydro Tasmania supports the creation of a demand-side factors statement, its inclusion in the Inputs, Assumptions and Scenarios report (IASR), and as a new appendix to the ISP. It is critical that the assumptions underpinning the growth trajectory for CER are transparently communicated to

stakeholders and that the demand-side factors statement clearly identifies which conclusions are AEMO modelled outcomes, and which are input assumptions.

It is also important that AEMO transparently develops robust core CER assumptions that consider a wide variety of risks and opportunities. The rate of CER uptake (especially orchestrated CER) is driven by consumers individual motivations. Historically, these have been heavily influenced by subsidies and government policies and not necessarily aligned with the macroeconomic influences that drive grid-scale investment. Thus, timing of household energy upgrades is unlikely to align with grid-scale requirements and could lead to increased irregularity in the pace of the energy transition. Hence, along with robust core CER assumptions, sensitivity testing of these assumptions will be critical in ensuring the ISP remains robust to changes and supports the AEMC's proposals in this area.

Given the uncertainty and exogenous nature of the assumptions, it is essential that the ISP provides clear guidance on the alternative developments needed if CER growth does not eventuate to the levels originally forecast. The 2024 ISP forecasts high rates of home battery uptake, demand flexibility, and energy efficiency upgrades across all scenarios, most of which is assumed to operate in a highly coordinated fashion. High development of CER reduces the modelled need for grid-scale storage and flexible generation, and instead assumes short-duration storage and demand-side factors will be sufficient to manage the daily demand/supply balance. However, long-duration energy storage (LDES) provides a variety of grid-stabilising services that are not included in the ISP model. Having deep storage in the energy system earlier provides not only additional flexibility, but necessary resilience against any unexpected (or imperfectly forecast) market outcomes in a way that short-duration storage cannot. It is imperative that the ISP signals the need for LDES with enough notice to support the long-lead times for development of these assets.Whilst we support the inclusion of the demand-side factors statement as an appendix, it is our view that heavy reliance on consumer-driven investment increases risks of an uncoordinated transition. Guidance on developments required to support low amounts of CER needs to be in the main body of the ISP.

ii. Distribution Networks

The policy landscape and energy market composition have already changed substantially since the inaugural ISP in 2018. Energy flows to households are increasingly more bidirectional; with the growth rates of CER forecast in the 2024 ISP, Hydro Tasmania supports the inclusion of distribution level changes and costs in the scope of the ISP.

Currently, the ISP assumes that distribution networks will be appropriately augmented in order to support the forecast levels of CER growth. Hydro Tasmania agrees with the proponent in that this assumption requires more critical analysis within the ISP. We support the AEMC's proposed changes in this area and believe that including an explanation of which distribution level developments are expected to occur, along with the assumptions underpinning those, will greatly assist in improving the accuracy and realism of the ISP – particularly if this feeds into the CER assumptions as limits or as cost increases. It will be essential for AEMO and DNSPs to collaborate closely on this and we support the AEMC's recommendation of the creation of information guidelines for DNSPs. Developing the ISP is a substantial undertaking and involves much input and consultation from stakeholders; it is good practice to streamline information gathering to reduce burden on participants wherever possible.

Robust system planning requires transparency and realism and we commend the AEMC's willingness to revise and update the scope and breadth of the ISP based on a changing energy landscape. If you

wish to discuss any aspect of this submission further, please contact Dani Williams at danielle.williams@hydro.com.au.

Yours sincerely,

Colin Wain
Manager Policy Development