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Energy Security Board
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Material Reliability Gap Definition and Communication Consultation Paper

Snowy Hydro Limited welcomes the opportunity to comment on matters raised in the Consultation Paper from the Energy Security Board (ESB) on the Material Reliability Gap Definition and Communication.

Snowy Hydro Limited is a producer, supplier, trader and retailer of energy in the National Electricity Market ('NEM') and a leading provider of risk management financial hedge contracts. We are an integrated energy company with more than 5,500 megawatts (MW) of generating capacity. We are one of Australia's largest renewable generators, the third largest generator by capacity and the fourth largest retailer in the NEM through our award-winning retail energy companies - Red Energy and Lumo Energy.

Snowy Hydro believes that the high level design with a trigger period of 3 years for retailers to meet a forecast reliability gap will allow for more current and complete information. If retailers do not meet the requirement by the compliance date, the last resort function will be triggered by the Australian Energy Market Operator (AEMO) 1 year before the forecasted reliability gap. The ESB's high level design builds on existing spot and financial market arrangements in the NEM to facilitate investment in dispatchable capacity.

Snowy Hydro therefore supports the existing form and level of the reliability standard as an average of 0.002 per cent unserved energy (USE) across all simulations and believe it is premature for AEMO to propose making significant changes to arrangements and structures when they have not settled issues regarding the values of customer reliability (VCR) and forecasting. In defining a material reliability gap we support the ESB's consideration to extend Australian Energy Market Operator (AEMO)'s Medium Term Projected Assessment of System Adequacy (MT PASA) to 3 years to support this process and the Australian Energy Regulator (AER) having the discretion to not trigger the Retailer Reliability Obligation (RRO) even when the threshold is reached to maintain reliability in the absence of adequate market investment.

Proposed framework for materiality decisions

Snowy Hydro welcomes the proposed rules that set a materiality test to determine whether a reliability gap identified in AEMO's annual Electricity Statement of Opportunities (ESOO) is sufficiently material to trigger the RRO and believe the reliability gap should be calculated in a way that is consistent with the NEM reliability standard.

From the possible metrics noted in the RRO to determine materiality in the consultation paper Snowy Hydro supports the existing form and level of the reliability standard as an average of 0.002 per cent USE across all simulations. The reliability standard sets an appropriate trade off between the prices paid for electricity and the cost of not having energy when it is needed. We believe the

reliability settings adequately protects the long-term integrity of the market by limiting the extent to which wholesale prices can rise and fall, to limit market participants' exposure to prices that could threaten the financial viability of a prudent market participant. The reliability standard should remain a key standard to input into various decisions made by AEMO in its role as the system operator, including being a trigger for the reliability gap.

The ESB notes that AEMO is currently working with the AEMC Reliability Panel on the appropriateness of the NEM reliability standard. As noted in the Snowy Hydro submission to the Enhanced RERT¹ we believe it is premature for AEMO to be proposing to make significant changes to arrangements and structures when they have not settled issues regarding the values of customer reliability (VCR) and forecasting. The Reliability Panel consults with all market participants and AEMO before making any decisions.

Overall we believe the RRO would negate the need for an Enhanced RERT. The RRO will oblige retailers to hold a minimum amount of contracts with dispatchable generators in relation to their own demand. Snowy Hydro believes with more policy certainty through the RRO, the market will have sufficient certainty to deliver investments which will be in the long term interests to consumers. We do not support the proposal for a further safety net if AEMO and/or a relevant state government considered that circumstances in a particular jurisdiction require action to ensure the ongoing reliability of the electricity system. The market should allow the Procurer of Last Resort to work as intended without the need for further rule changes. It is also relevant to note that there are currently Instructions and Directions that can be used close to real time dispatch to bring the supply/demand balance into equilibrium.

Metrics for determining materiality

The appropriate metrics to determine materiality should be metric A which requires that annual regional expected USE exceeds the reliability standard and metric B which requires that annual regional expected USE exceeds the reliability standard by X per cent (for example, by 10 per cent or USE greater than 0.0022). It is for that reason we do not support metric C and D which effectively introduce a "loss of load probability" concept.

The Loss of load probability (LOLP) is defined as the probability that the load will exceed the available generation. Its weakness is that it defines the likelihood of encountering trouble (loss of load) but not the severity; for the same value of LOLP, the degree of trouble may be less than 1 MWh or greater than 1000 MWh. It cannot recognise the degree of capacity or energy shortage. Therefore LOLP has less physical significance and is difficult to interpret. It is for that reason we do not support using the LOLP as a metric.

Defining a material reliability gap period

Snowy Hydro support the ESB's exposure draft legislation for the RRO which requires AEMO to specify the period of a forecast material reliability gap in any request to the AER to make a reliability instrument at either T-3 or T-1. We understand for this to effectively work AEMO would be required to update reliability forecasts on an annual basis and more frequently if there was a material change to the supply demand outlook, such as an announced retirement or significant changes in demand.

Snowy Hydro welcomes AEMO's efforts to integrate new data streams, hold various Forecasting groups, and look beyond the transmission grid. However increased variability and uncertainty on the demand side make AEMO's task extremely challenging to forecast demand in the long-term. The

¹ <https://www.aemc.gov.au/sites/default/files/2018-11/Snowy%20Hydro.PDF>

increased climate variability and quantification of uncertainty in the growth of certain technologies mean that although AEMO makes every effort to ensure the information is accurate over the long term the likelihood of being inaccurate is much higher than a short-term to medium-term forecast. As AEMO notes in their ESOO the lack of granularity in a changing energy environment make it difficult to detect and understand key trends.²

To undertake more frequent updates Snowy Hydro supports the ESB's consideration to expend the MT PASA to 3 years to support this process. AEMO's development of the MT PASA methodology to improve and replace the existing methodology with a new method that can better capture the impacts of intermittent generation on supply adequacy is welcome. An update to extend the period would require the MT PASA to be updated more often and published on a set schedule from AEMO allowing it to become more transparent and used as a decision input.

Snowy Hydro also supports the ESB consideration *"that further information requirements should include, but not necessarily be limited to, sensitivity analysis for projects outlined in AEMO's Integrated System Plan (as captured in the 2018 ESOO) and the estimated costs of AEMO exercising the RERT to maintain reliability in the absence of adequate market investment."*³

AEMO should continue to be responsible for the accuracy of the market demand forecast and openingly consult with Market Participants to understand how their forecasts can be improved. Snowy Hydro however advocates that the Australian Energy Regulator (AER) act as the independent entity to assess and decide on a request from AEMO to trigger the reliability obligation. With demand forecasting becoming increasingly difficult to accurately calculate it is important for industry to receive as much investment certainty as possible, forecasts made at T-3 will have less precision than those made at T-1. Long-term forecasting accuracy issues through increased variability and uncertainty on the demand side make the AER's role important to assess the outcomes.

Snowy Hydro supports the AER having the discretion to not trigger the RRO even when the threshold is reached, by considering the costs involved should the RRO be triggered, and agrees that AEMO should notify the AER of its estimated costs of exercising the RERT to maintain reliability in the absence of adequate market investment.

Snowy Hydro appreciates the opportunity to respond to the Consultation Paper. Any questions about this submission should be addressed to Panos Priftakis, Regulation Manager, by e-mail to panos.priftakis@snowyhydro.com.au.

Yours sincerely,



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² Australian Energy Market Operator (AEMO), 2018, "2018 Electricity Statement of Opportunities", pp28

³ Energy Security Board, 2018, "Material Reliability Gap Definition and Communication"