

8 February 2019

Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Submitted by email to [aemc@aemc.gov.au](mailto:aemc@aemc.gov.au)

Project number: REL0069

### **AEMO Request for Protected Event Declaration Consultation paper**

Snowy Hydro Limited welcomes the opportunity to comment on matters raised in the Consultation Paper from the Australian Energy Market Commission (the Commission) on the Australian Energy Market Operator (AEMO) Request for Protected Event Declaration.

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 understands the reasons AEMO submitted a request to the Reliability Panel (Panel) seeking the declaration of a protected event to assist in maintaining power system security in South Australia. We are however concerned by the number of issues the Panel identified in the initial consultation in relation to AEMO's recommended options for managing the protected event. There still needs to be more supporting data in regards to AEMO's proposal as it is very difficult to critique in the absence of more detailed information. The risks and proposed responses by AEMO can come at a material cost to consumers. The obligation in the end should therefore be on the Panel, insuring they are satisfied with the needs that AEMO has requested.

### **Current Market**

Snowy Hydro understand that certain non-credible contingency events, if left unmanaged, could have significant impacts on the community with the protected event framework allowing AEMO to operate the system to limit the consequences of these types of events should they occur. The issues identified by AEMO regarding a number of characteristics of the South Australian power system can create challenges from a power system management perspective, these issues noted by AEMO include:

- the region's high reliance on gas powered generation for system strength and inertia response;
- a high penetration of rooftop solar PV and wind generation;
- the radial design of the transmission network, with load centres being serviced by transmission elements connecting generation in remote parts of the network with low system strength;

- the transmission network's susceptibility to severe storms and destructive winds. AEMO noting that these characteristics contribute to the South Australian power system being vulnerable to the loss of a large amount of generation.<sup>1</sup>

AEMO considers that the risk of a large loss of generation in South Australia leading to the loss of the Heywood Interconnector is increased during destructive wind conditions due to the heightened risk of occurrence and potentially greater magnitude of line failures and other transmission faults. The risks and proposed responses by AEMO<sup>2</sup> however come at a cost to consumers predominantly through costs associated with AEMO buying frequency control ancillary services, or through higher electricity prices caused by AEMO constraining output from generators.

The Panel should therefore continue to remain the appropriate body to undertake the cost benefit assessment necessary to determine whether it may be economically efficient to maintain the power system within the frequency operating standards applicable to protected events, should an event occur. Where the benefits of managing the event outweigh the costs of doing so, the Reliability Panel would declare the non-credible contingency event a protected event.

### **Proposed options for protected events**

AEMO identified five options for managing the proposed protected event which include:

1. Rely solely on the existing SIPS
2. Incorporate more load and/or batteries into the existing SIPS
3. Implement a high-speed post-separation tripping scheme
4. Upgrade the SIPS
5. Upgrade the SIPS and limit total import capacity over the Heywood interconnector during destructive wind conditions (AEMO's recommended option).<sup>3</sup>

The Panel however has identified a number of issues in relation to AEMO's recommended option for managing the protected event. These are noted in the paper as:

- AEMO considers a 250 MW import limit to be necessary although the import limit of 250 MW was only reached for one per cent of the time with the limit invoked in 2017-18. South Australia is generally exporting power during periods of high wind speeds.<sup>4</sup>
- Extensive studies undertaken under a range of system conditions indicate that a 500 MW target capability will be challenging to meet under all conditions. There are also inherent uncertainties associated with such studies which make it difficult to identify a precise amount of generation loss as the appropriate standard.<sup>5</sup>
- One of the target capabilities for the upgraded SIPS proposed by AEMO is that the SIPS should be capable of compensating for the loss of 500 MW of generation in the South Australia region. The Panel noted that there are large credible contingencies in the South

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<sup>1</sup> Reliability Panel, AEMO Request for Protected Event Declaration, consultation paper, December 2018, Sydney, pp6

<sup>2</sup> Ibid, pp 6

<sup>3</sup> Ibid, pp8

<sup>4</sup> Reliability Panel, AEMO Request for Protected Event Declaration, consultation paper, December 2018, Sydney, pp11

<sup>5</sup> Reliability Panel, AEMO Request for Protected Event Declaration, consultation paper, December 2018, Sydney, pp11

Australia region that are capable of tripping large wind farms while historical non-credible contingency events involving loss of generation have been in the range of 450 MW to 520 MW. However, the loss of 520 MW of generation related to events involving Northern power station is no longer in operation.<sup>6</sup>

In addition, AEMO notes in their cost benefit assessment that “*capital costs for the SIPS upgrade are estimated at \$4-5 million*”<sup>7</sup> which Snowy Hydro believes is a material amount of money. The Reliability Panel should exercise due consideration to the declaration of this as a protected event which does AEMO's cost/benefit analysis with the ascribed expectations on usage justify this expenditure.

It is for that reason that Snowy Hydro believe there still needs to be more supporting data in regards to AEMO's proposal as it is very difficult to critique in the absence of more detailed information. The onus in the end should be on the Panel to be satisfied that AEMO's request for a protected event is justified.

Snowy Hydro appreciates the opportunity to respond to the Consultation Paper and any questions about this submission should be addressed to Panos Priftakis, Regulation Manager, by e-mail to [panos.priftakis@snowyhydro.com.au](mailto:panos.priftakis@snowyhydro.com.au).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'K Ly', with a horizontal line underneath.

Kevin Ly  
Head of Wholesale Regulation  
Snowy Hydro

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<sup>6</sup> Ibid, pp11

<sup>7</sup> Ibid, pp13