2 July 2025

Level 12, 171 Collins Street,
Melbourne
VIC 3000, Australia

Lodged by email: gpsrr@aemo.com.au

Dear Sir/Madam,

Re: 2025 General Power System Risk Review Report – Consultation Draft

ACEN Australia is pleased to provide a response to the 2025 General Power System Risk Review (GPSRR) Draft Report.

We are a fully owned subsidiary of the AC Energy Corporation (ACEN). ACEN, headquartered in Manila, is one of the largest renewable energy companies in South-East Asia. The company has approximately 7 GW of attributable capacity in the Philippines, Vietnam, Indonesia, India, and Australia. It currently has several GW of projects at various stages of development across the National Electricity Market (NEM), including a significant wind project (of up to 1000 MW) in the early stages of development in North western Victoria. We currently have two projects in operation, the New England Solar project (400MW), which will reach full operations in 2023 and the Stubbo Solar project (400MW) currently in commissioning and expected to reach full operations later in 2025. ACEN has also commenced construction on a 200 MW Battery Energy Storage System (BESS) located in the New England region. For more on ACEN, please visit www.acenergy.com.ph[1].

We agree with the priority risks set out by AEMO in its Draft report. In particular we strongly support AEMO undertaking more in depth work and consultation on the management of non-credible contingencies as we transition to a renewable dominated power system.

The current security framework is primarily focused on managing credible contingencies, ie the loss of a single identifiable generating unit or network element. However, the power system is increasingly exposed to non-credible contingencies – more complex, less predictable disturbances not attributable to a single element or generator. These might include for example the sudden, correlated reductions in

[1] In 2017 ACEN acquired an 50% equity stake in UPC Renewables Australia Pty Ltd, headquartered in Tasmania and part of the global UPC Renewables Group that was established in the early 1990s. The UPC Renewables Group has developed, owned, and operated over 10,000 MW of large-scale wind and solar farms in 10 countries across Europe, North America, North Africa, China, Southeast Asia, and Australia, with an investment value of over $5 billion USD. In 2021 ACEN started the process to fully acquired UPC Renewables Australia Pty Ltd to form ACEN Australia, which was completed in 2023.

output from multiple renewable generators due to a loss in irradiance or wind; or the loss of multiple power system elements due to a storm. Contingency events appear to be getting larger and more frequent. For these events it may not be possible to identify specifically which elements will be affected and thus reclassify them as a credible contingency, so corrective actions can be undertaken.

Contingency risks may also be increased due to the increasing prevalence of generators connecting in clusters in areas of high renewable potential in remote parts of the network - ie Renewable Energy Zones (REZ). Where these REZs are connected to the main grid with one or two long transmission lines, this significantly increases the risk of a non-credible contingency leading to loss of large amounts of generation.

Importantly, this also raises questions around definition of credible contingencies and maximum contingency limits. The report's hypothetical example of a REZ on page 62 is instructive. AEMO identifies the risk of the loss of one line in a double circuit during a contingency, which then means the loss of the remaining circuit become a credible contingency. This invokes application of a contingency limit of 700MW on the remaining line (with the limit set to reflect largest generation unit in operation), which requires that generation within the REZ is 'run back' to this level – the level reflects the number of megawatts that can immediately be restored through procurement of FCAS, should the second line fall over and thereby avoiding huge imbalance between demand and supply.

The practical implications of this approach to contingency management for developers and investors in renewable generation are significant. If non-credible contingencies become more prevalent, generators within REZs. or those connected to Designated Network Assets (DNA), could face substantial levels of curtailment. In the hypothetical example, 2300MW of generation within the REZ is constrained down, because a 700MW limit is placed on a transmission circuit with a capability to provide up to 3000MW.

Further, not only does this approach to contingency management limit allowable transfers following a contingency event, it does so also under system normal conditions. The impacts of this can be illustrated through our own lived experience in the Central West Orana REZ. The transfer capability of our Hub to Project (HTP) 330kV connection infrastructure for our three projects in the area (Valley of the Winds 920MW, Birriwa Solar 600MW and Birriwa BESS 600MW) means circuits are limited to 700MW, when their actually capability would be more than 1000MW – in other words we are funding 100% of the infrastructure while only being able to utilise about 70% of it. We expect the same would apply for DNAs and REZs across the NEM. This level of underutilisation of network infrastructure feels unsustainable in a market environment of ever increasing transmission costs.

As Australia accelerates towards decarbonisation, significant new generation is expected to connect via REZs. However, current FCAS and operating reserve arrangements limit the scale and efficiency of REZ and DNA connections, particularly where high-capacity double-circuit lines are involved. These constraints reduce network utilisation and inflate connection costs - costs that ultimately flow through to consumers and undermine affordability and competitiveness.

For these reasons we consider AEMO's proposal for a comprehensive review of contingency management is timely. The review should consider whether the definition of credible contingencies - and the corresponding volume of required FCAS – should be decoupled from the legacy concept of "largest single generator."

We consider that instead, AEMO should be empowered to define more dynamic, power system-informed contingency sizes, accounting for:

- Geographically correlated renewable output variation;
- Localised REZ generation concentrations;

ACEN Australia
Suite 2, Level 2, 15 Castray Esplanade, Battery Point, Hobart Tasmania, Australia 7004

- Network configuration and redundancy; and
- Weather and climate driven events

This approach will likely result in larger contingency sizes to be considered and more innovative ways to procure FCAS. We consider there should be a greater emphasis on regional or sub-regional procurement of FCAS and operating reserves, which would have the following benefits:

- By reducing dependence on global FCAS delivery this could increase the level of headroom on interconnectors;
- Increasing the level of local FCAS supply would allow contingency limits on transmission to be raised, and allow for higher utilisation of transmission assets;
- This in turn would allow more scale efficient REZ and DNA development, ultimately reducing their cost to consumers.

We acknowledge that regional procurement may result in initially higher local FCAS costs. However, over time these markets would deepen with new entry, competitive pressure would moderate prices, and the avoided network costs of raised contingency limits would deliver substantial net benefits to consumers. FCAS represents less than 1% of NEM traded value, so there is enormous potential for FCAS procurement to be leveraged to have an outsized impact on transmission costs.

Further, our own analysis suggests that despite a significant increase in the volume of contingency FCAS procurement - particularly following the entry of large-scale batteries such as Hornsdale Power Reserve and other BESS assets in South Australia - average raise and lower FCAS prices have remained relatively stable or declined over the past 5 years. This reflects growing competition and depth in the FCAS markets, particularly in the mainland NEM regions, and demonstrates that increased reliance on FCAS does not necessarily lead to upward pressure on market prices. Any increase in FCAS cost would appear negligible compared to the potential saving in network infrastructure costs

To conclude, the nature of contingency risks are changing with climate change and the shift of the power system towards renewables. Risks from non-traditional contingency events - such as sudden, correlated loss of multiple generators – are increasing. It is critical that AEMO's approach to managing contingencies can adapt to these evolving system risks.

If you would like to discuss any of the comments in this submission further, then please contact Con Van Kemenade at con.vankemenade@acenrenewables.com.au or 0439399943.

Sincerely,

Dr Michael Connarty
Head of Operations and Trading
ACEN Australia