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30 January 2025

AEMC

Subject: Review of the system restart standard 2025

To whom it may concern,

I refer to AEMC's *Review of the system restart standard* Market review, released in December 2024.

Genaspi Energy (Genaspi), would like to propose a range of considerations for the review, as well as capabilities of the in development Bunday Solar & BESS generator, situated in close proximity to the Bunday substation.

Genaspi Energy (Genaspi) would like to propose the following submission to be considered in the review:

Key Considerations

1. Evolving Power System Dynamics:

- **Retirement of Traditional Generators:** The progressive decommissioning of thermal generation units necessitates a reassessment of system restart strategies. The diminishing pool of traditional System Restart Ancillary Services (SRAS) providers poses challenges in meeting the current Standard.
- **Integration of Renewable Energy Sources:** The increasing penetration of transmission-connected renewable generation and distributed energy resources, such as rooftop photovoltaic (PV) systems, introduces complexities in system restoration. High concentrations of distributed PV can impact the stability of restart processes, requiring innovative approaches to maintain system resilience.

2. Enhancing SRAS Procurement Framework:

- **Incorporation of New Technologies:** The current framework should be updated to facilitate the inclusion of non-traditional SRAS providers, including battery storage systems and other emerging technologies capable of providing black start capabilities. This approach would diversify the SRAS portfolio and enhance system resilience.



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- **Clear Investment Signals:** Establishing transparent and consistent investment signals is essential to encourage the development of new system restart capabilities. This includes providing clarity on procurement processes, performance expectations, and remuneration mechanisms for SRAS providers.
- 3. **Improving Transparency and Reporting:**
- **Regular Assessment of SRAS Sufficiency:** Implementing routine evaluations of SRAS adequacy across different regions will help identify potential shortfalls and inform proactive measures to address them.
- **Stakeholder Engagement:** Enhancing communication channels between the Reliability Panel, AEMO, SRAS providers, and other stakeholders will foster collaboration and ensure that emerging risks are promptly identified and managed.

Recommendations:

- **Adaptive Standard Framework:** Revise the Standard to accommodate the dynamic nature of the evolving power system, ensuring it remains relevant and effective in guiding SRAS procurement and system restoration strategies.
- **Encouragement of Technological Innovation:** Promote the integration of innovative technologies into the SRAS framework by removing barriers to entry and providing support for research and development initiatives.
- **Value of technological benefits:** Promote the use of innovative technology such as Grid Forming inverters to aid in voltages control and system strength capabilities. Recognise the additional value add provided through the utilisation of these technologies
- **Enhanced Monitoring and Reporting Mechanisms:** Establish comprehensive monitoring systems to assess SRAS performance and system restoration outcomes, with findings disseminated to stakeholders to inform continuous improvement efforts.
- **Value of strategically beneficial locations:** Generators with the ability to assist black start of the region, while connecting with the rest of the NEM. IE, generator operates on an interconnector with the ability to assist in connecting the region with the rest of the NEM. In addition to this, proximity to local nodes for provision of voltage control and system strength capabilities
- **DC charging capabilities:** recognise the value of having a DC connected charging option for the provision of Black Start capabilities. IE, BESS with a DC



connected PV charger to allow for NEM removed charging to support SRAS and Black Start

- **Generator Supply and Load Balance:** criteria surrounding the ability for a generator to assist in load and supply balancing within the SRAS process, for example, dampening over supply of rooftop PV and non scheduled generation

Bundey Solar & BESS generator capabilities

As an Australian-based company, Genaspi Energy Group is committed to driving innovation in renewable energy integration and storage. Our flagship project, the Bundey BESS and Solar Project, serves as a cornerstone of this mission. This project introduces a 1.2GW/3GWh BESS deployed in multiple stages and strategically located adjacent to the Bundey substation, developed as part of Project EnergyConnect (PEC). This positioning is not incidental—it is central to our strategy for delivering significant grid stability and reliability benefits while seamlessly integrating renewable energy sources.

At the heart of this project is an innovative, dual-mode 2x4hr BESS configuration, which provides unparalleled flexibility in meeting energy storage and dispatch needs:

- **Under Normal Conditions:** The BESS operates as a 4-hour system, efficiently storing and discharging energy within a shorter operational cycle.
- **For Extended Support Needs:** The system transitions seamlessly to an 8-hour operational mode, delivering long-duration capacity while recharging daily during low-cost periods.

This approach offers a distinct advantage over traditional 8-hour systems, which often face operational inefficiencies or increased costs due to extended charging requirements or suboptimal energy pricing windows. By contrast, our system optimizes charging and discharging cycles to maximize the value of renewable energy, lower operational costs, and support grid reliability.

The Bundey BESS and Solar Project is a prime example of how innovative energy storage solutions can enhance grid reliability while supporting South Australia's renewable energy ambitions. Key benefits include:

- **Dual-Mode Operation:** The ability to provide either 150MW or 300MW over 8 hours through two consecutive 4-hour discharges ensures flexibility and reliability. With minimal changes or impact even 150MW over 16 hours can be implemented.
- **Cost Efficiency:** Charging during low-cost periods minimizes operational costs while maximizing system availability. Or charging through the DC Solar PV

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- **Environmental and Economic Alignment:** By leveraging renewable energy for charging, the project reduces emissions and contributes to lower energy costs for consumers.

Organisational information and key contact details.

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Should you require any further clarification or support, please do not hesitate to contact me directly.

Thank you for your dedication and commitment to Genaspi Energy Group Pty Ltd.

Sincerely,

Signature:

Name: Cornelius Strydom
Position: Chief Technical Officer/ Director
Genaspi Energy Group Pty Ltd
Date: 30/1/2025