



Re: invitation to engage on the AEMO Draft 2022 Integration Systems Plan.

We appreciate the opportunity to engage with AEMO on the Draft 2022 Integration Systems Plan (ISP) and provide submissions in response to the draft.

We make reference to the mentions of energy storage systems, noting the types mentioned include batteries and hydro storage. We request that the final report also recognises the emerging and critical role of thermal energy storage systems (TES) in the rapid growth of firming capacity. As coal retires and other renewables sources such as solar require medium and deep / extended operating timeframes to ensure reliable supply, thermal energy storage is a highly effective solution.

As further context, thermal energy storage sits in both the Medium and Deep Storage categories which are identified in the plan as the most pressing utility-scale need in the next decade, to manage daily variations in solar and wind output and meet consumer demand as coal capacity declines (Page 49, Daft 2002 ISP). Additionally, thermal energy storage systems are versatile and will meet multiple energy storage needs; utility-scale dispatchable energy storage, distributed storage and power systems, solid oxide electrolysis for Hydrogen production.

Australian innovation is leading in the thermal energy storage sector; MGA Thermal Pty Ltd is just one of the rapidly scaling Australian organisations with global commercial traction, backed by government grants and Main Sequence Ventures (CSIRO).

For an example of a next step, the Executive Summary 'significant investment' dot points on page 8, could be changed to read:

"Treble the firming capacity that can respond to a dispatch signal, including utility-scale batteries, **thermal energy storage**, hydro storage, gas generation, and smart behind-the-meter batteries or "virtual power plants" (VPPs)." We noted approx. 11 instances in the document where this type of addition could be made. Thank you.

We would welcome the opportunity to discuss any aspect of the submission.

Best regards,

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