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Stuart Morrison
Senior Adviser
Australian Energy Market Commission
PO Box A2449
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18 October 2021

Dear Stuart,

Re: CAPACITY COMMITMENT MECHANISM AND SYNCHRONOUS SERVICES MARKETS (ERC0306)

Akaysha Energy (Akaysha) welcomes the opportunity to comment on the National Electricity Amendment (Capacity commitment mechanism and synchronous services markets) preparation of draft determination.

Akaysha are in principle supportive of rule changes that allow for and incentivise greater uptake of next generation energy technology and accelerate the energy transition. Most importantly, these incentives must occur in a way that is most productive for the energy market and consumers. It is the overarching view of Akaysha that this rule change will indeed facilitate this transition in a positive manner.

The following details more specific views of Akaysha regarding the preparation of draft determination paper.

Nature of the markets:

While the purpose of this paper is not to detail the exact nature of the services, or the relevant procurement processes, Akaysha have several views we wish to express on this matter for future papers pertaining to system services markets. Batteries and advanced-inverter technologies are referred to positively throughout the paper, which is encouraging. However, it must be stressed that the mechanisms and operating modes via which these technologies would offer system services (e.g., inertia and voltage support) are different to more traditional technologies. For example, synchronous generators can offer several system services simply by operating, irrespective of load level, but are restricted in their capacity to flexibly provide these services based on their inherent design parameters. Inverter-based solutions however can offer services individually or concurrently, depending on system design and operation setpoint, with a flexible capability range. Examples of such flexibility include a range of settable inertia constants, fault current ramping and level control. Flexible



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adjustment of settings facilitates superior optimisation of system strength services. Furthermore, the current draft of the paper seems to suggest that these services will be provided in a binary “on-off” manner, whereas Akaysha believes the market should leverage the variable levels of each service inverter-based technologies are able to offer. Again, whilst the prescription of these services is not the purpose of this paper, Akaysha must stress that these considerations are vital for these future markets to remain technology agnostic and therefore provide the most economical solution for consumers and provide new pathways or energy technology investment.

Market implementation:

In addition to the support of incentivising new energy technology, Akaysha are also supportive of transitions to more sophisticated and economic solutions to the function of the NEM. In principle, both the MAS solution (proposed by Hydro Tasmania) and the NEMAS solution (proposed by Delta Electricity) should satisfy operational system requirements in a more efficient way than the current directions process managed by AEMO. Moreover, Akaysha fully understand the preferencing of the NEMAS process by the AEMC, due to potential issues arising from the additional computational complexity introduced by a transition from Linear Programming to Mixed-Integer Linear Programming in NEMDE. Naturally, economic solutions cannot be implemented if calculations are not timely. However, a fully co-optimised solution for all the needs of the energy system (both in terms of supply-demand, FCAS and system security) should deliver the most economical solution. For this reason, Akaysha prefer the MAS-based solution and are therefore highly encouraging of a testing process to ensure that a MAS-based approach is truly not computationally feasible. It would be remiss to assume the solution with the most potential to provide the most benefit is not computationally feasible without a rigorous testing procedure to confirm this.

Sincerely,

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