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Australian Energy Market Commission
GPO Box 2603
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2 June 2021

Re: ERC0296 – National Electricity Amendment (Fast Frequency Response Market Ancillary Service) Rule 2021

Reposit Power Pty Ltd (Reposit) thanks the AEMC for the opportunity to contribute to the rule making process currently considering the implementation of a Fast Frequency Response (FFR) service in the NEM. Reposit considers the draft determination to represent a well-considered and rapidly implementable approach to the introduction of a FFR market ancillary service.

In section 4.3.6 of the draft determination the AEMC asks for stakeholder views on the extent and materiality of the risks associated with the implementation of the new market. In particular these have been expressed by AEMO as being the risks that early investors in FFR-capable plant may experience as a result of:

1. Any refinements to the service definition made after AEMO has gained some operational learnings

2. Uncertain revenues as a result of AEMO applying conservative operational constraints to the dispatch of FFR services.

Reposit does not support AEMO operating non-market, transitional arrangements as part of the implementation of the Very Fast FCAS markets. Reposit's experience with AEMO's VPP Demonstrations project provides evidence that non-market, transitional arrangements currently being operated by AEMO have delivered incorrect service specifications and have distorted rational market responses. In addition, AEMO has demonstrated via the VPP Demonstrations project its willingness to deliver perpetual time extensions to the trial without meeting AEMO-stated extension criteria, at the cost of continued market distortion. Reposit is enthusiastic to engage with the AEMC on AEMO's conduct of its most recent non-market, transitional arrangement.

Reposit suggests that these types of arrangements are also unnecessary because:

1. The Very Fast FCAS service definitions are naturally limited in what they can specify, and refinements can be guaranteed to be loosening of requirements only

2. It is likely that the first Very Fast FCAS providing plant will be that which is already commercially delivering Fast FCAS services into the NEM.

Limited Degrees of Freedom in Service Definition

Investors in plant able to deliver Very Fast FCAS must be able to rely upon any service definition to be consistent with:

- the National Electricity Objective (NEO)
- the NER, specifically the Market Design Principles specified in 3.1.4(a)
- the Frequency Operating Standard (FOS)
- Physical and mathematical principles
- The rule change

Maintaining consistency with the above leaves little room for AEMO to define the Very Fast FCAS service as anything other than a faster Fast FCAS service.

The measurement and verification (M&V) and frequency response requirements for Very Fast FCAS are where the service definition is likely to generate the most discussion and uncertainty for investors. As with the current FCAS services, these requirements provide the input to processes that determine if AEMO is satisfied with a particular FCAS Contingency response from a given participant.

At the beginning of the 18-month service specification period AEMO should underpin the definition of M&V and frequency response formulation with quantitative descriptions of what is considered an acceptable delivery. This should include the acceptable bidirectional error or uncertainty for each quantity. These quantities can be derived from existing engineering data, and mathematical principles. The draft determination contains evidence that AEMO are keenly aware of what is required of the service. This awareness is readily and deterministically transformable into requirements by AEMO engineering staff supported by consulted participants.

Built upon this underpinning, there is little room for material revisions of M&V and frequency response requirements. If AEMO are concerned for the investments of initial participants then tighter requirements for a given quantity should be specified at first. A loosening of requirements to increase participation will most likely not exclude those participants that are already participating. This principle of "tighter first" can successfully extend across the entirety of the new service definitions.

Initially Participating Plant

Reposit suggests that the majority of plant that will initially provide Very Fast FCAS services will already be participating in Fast FCAS. This plant will consist of existing units and units that will deliver pre-2024 committed capacity.

Existing units are most likely battery-based, inverter mediated and software controlled. These units do not require Very Fast FCAS revenues as they operate today without them. Very Fast FCAS services on existing units will be enabled through changes to control schemes and in some cases the installation of additional M&V equipment.

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Additionally AEMO is projecting a significant market entry of new storage capacity by 2024. While not yet in existence, this capacity is being committed without the existence of Very Fast FCAS services and so must already be considered to be commercially viable. It is probable that this capacity will be fitted with programmable controllers and M&V equipment sufficient to deliver any likely Very Fast FCAS service definition at a low marginal cost.

All investors in existing and committed capacity are by definition currently satisfied with 0MW Very Fast FCAS targets and $0 Very Fast FCAS revenues. This makes them resilient to small Very Fast FCAS quantities being enabled by AEMO at the beginning of market operations. As such no transitional arrangements will be required to incentivise initial capacity or protect initial investors.

Continued Engagement

Reposit would welcome the opportunity to more fully discuss this rule change proposal with the AEMC and other stakeholders as required, and looks forward to participating in the implementation of these new services.

Kind Regards

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