

Friday, 17 March 2017

Rob Jackson
Principal Analyst, Systems Performance and Commercial, Operations
Australian Energy Market Operator
Via email

Dear Mr Jackson,

RE: Market Ancillary Services Specification Stage 1 Consultation, Issues Paper Submission

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in solar, wind, energy efficiency, hydro, bioenergy, energy storage, geothermal and marine along with more than 4000 solar installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

We have previously noted that the Market Ancillary Service Specification (MASS) needs to be revised. The current version of the MASS was designed in a time when large synchronous plants were the dominant technology in providing both energy and ancillary services to the NEM. However, because an increasing array of new technologies is now available to meet ancillary service market expectations, the current MASS should be aligned to tap into this opportunity.

Over recent weeks, the CEC and our members have raised significant concerns about the robustness of the current Frequency Control Ancillary Services (FCAS) market¹. A concern is that the FCAS regime is predicated on the delivery of energy, not the control of frequency. The result of this is a degradation in the control of frequency, which has been observed across the NEM. The MASS is a key contributor to this outcome.

While we appreciate the restricted scope of this review, we expect that the review should at least provide a view on significant issues that are beyond its scope. This can allow future work to consider these issues.

We provide the following responses to other matters considered in the paper.

¹ K. Summers, Fast Frequency Service – Treating the symptom not the cause, February 2017.

Variable generation

AEMO's language used around the 'dispatch targets' modelled by AWEFS and ASEFS and provided by NEMDE for semi-scheduled or 'variable' generation is inconsistent with the National Electricity Rules. The language is also inconsistent with the Australian Energy Market Commission's intent when making their final determination to include semi-scheduled generation in central dispatch².

AEMO should be clear that AWEFS and ASEFS do not produce 'dispatch targets', and that the NER refers to this as a 'dispatch level'³. The distinction is important as it emphasises the differences between a generator's 'estimated power' (as created by the recent change to the energy conversion model) and the forecasts provided by AWEFS or ASEFS. Over time, semi-scheduled generators should be making their own predictions of generation as their 'estimated power'. These predictions would be expected to be more accurate than those from AWEFS or ASEFS, and therefore more akin to a 'dispatch target' provided to a synchronous generator.

In addition, given the existing FCAS regulation regime, it is not clear that options exist outside of straight line interpolation between generation at the start of the interval and the dispatch level (or estimated power). However, faster acting solutions do exist that could arrive at a set point quickly, and then hold it for the remainder of the interval, rather than gradually reaching it linearly over the period. AEMO should design a measurement regime in the MASS that reflects this operating capability. AEMO should also be sure to specify the MASS in a way that does not restrict faster responses if they are called upon by the market settings.

Measurement across aggregated sites

The MASS should be revised to reflect performance in terms of the control of frequency, not the delivery of energy. Given this, the performance should be based on whether all of the procured services have an aggregate effect on the intended outcome, and the extent to which this occurs – in other words, whether the service is delivered. Each unit should be assessed based on its contribution to that aggregate outcome.

For aggregators, it will remain important to measure responses at each unit. The ability to sense and record frequency at each unit can be underpinned by a mandatory reporting requirement for each aggregator that avoids the need for real time communications. Where a local frequency disturbance occurs, the registered aggregator should be required to provide data for each unit to demonstrate individual performance. The measurement systems could also be fitted with flags that detect the occurrence of the event and capture the appropriate

² AEMC, Rule Determination, Central Dispatch and Integration of Wind and Other Intermittent Generation, May 2009.

³ NER, v89, page 1146.

data set. The MASS should define this flag and the need to provide data to AEMO across the relevant time window.

High speed metering

SCADA, 3G or 4G based systems will create barriers to entry for aggregators and must be avoided. Recording equipment is now available that can be located on site and report data to the registered aggregator as requested. However, AEMO should take care to ensure that measurement equipment tolerance levels or specifications are set in a way that does not create new barriers to entry for these units.

Allocation of switching controller settings

Based on the information provided, there does not appear to be any specific barriers to generator aggregators designing the response of switching controllers to specific settings across many small units. It is important that a balance is struck between aggregators with multiple units and those with a small number of large units. AEMO should attempt to allocate bands of response across each aggregator. We also note that a vibrant demand response and aggregator market providing ancillary services would reduce concerns about this issue.

We thank AEMO for the opportunity to provide our views on these matters. Please contact the undersigned of Emma White (03 9929 4107) for any queries regarding this submission.

Sincerely,



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