20 January 2022

Dear IESS team,

**RE: Consultation on SO_OP_3705**

Atmos Renewables thanks AEMO for considering its suggestion on dynamic Aggregated Dispatch Conformance (ADC) and re-opening the consultation on SO_OP_3705. Atmos Renewables owns interests in 14 large-scale renewable generation assets in the NEM with over 900 MW in Atmos' economic interest. Atmos has grown rapidly to become one of the top 5 renewables businesses by MW in the NEM and intends further growth by development and acquisition.

Atmos intends to deploy storage (including co-located) to support the transition of the power system consistent with the rapid deployment anticipated by AEMO's ISP.

Several of Atmos' operating assets have the potential to accommodate a BESS sharing the same network infrastructure, potentially behind-the-meter, giving Atmos a strong interest in the "Mixed Aggregate" aspect of this procedure. To enable the rapid deployment of storage it is important to maximise the value to the power system and investors. Making use of solar and wind farm energy that would otherwise be spilt when a site experiences curtailment from network constraints, as the Mixed Aggregate ADC would, captures additional low-emissions energy and increases the return from the BESS.

Given the scale of Atmos capacity footprint and strategic intentions we consider Atmos to be a key stakeholder in this consultation as an investor and project developer.

Atmos strongly supports AEMO's work in implementing the Mixed Aggregate ADC.

Atmos has reviewed in detail the Mixed Aggregate sections of SO_OP_3705. As further detailed below:

- Atmos commends AEMO's work to refine the logic to allow a BESS to partially firm a semi-scheduled unit.
- Atmos requests AEMO clarify in the procedure the handling of the semi-dispatch cap, as the procedure appears contradictory.
- Regarding the point above, if AEMO did intend the semi-dispatch cap flag be ignored, and therefore assumed always 1, Atmos would see this as a strong disincentive to employ ADC.
- Atmos notes that despite the trade-off in an interval between providing regulation FCAS and spilling excess generation to the BESS, we believe there remains substantial value to a behind-the-meter wind/solar/BESS project from the implementation of Mixed Aggregate ADC.

Atmos commends AEMO's work in the refinement to the aggregate conformance logic to allow the semi-scheduled units to operate under-target as long as the scheduled units are at least at their aggregate targets, which would allow a BESS to partially firm a semi-scheduled unit.

In reviewing the updated procedure SO_OP_3705, we are confused about the definition of the Mixed Aggregate, specifically in intervals where the semi-scheduled component does not have a semi-dispatch cap and generates above its dispatch level. It was our understanding from the IESS Working Group meeting on 26 Oct 2022 that a semi-scheduled unit that did not have a Semi Dispatch Cap (SDC) could be over its target without aggregated dispatch being deemed, as is allowable for a semi-scheduled unit by itself. In the procedure, 2.6.2(b) says that semi-scheduled units in a mixed aggregate ignore their SDC flag and (c) says the conformance mode will be 1

unless individual conformance is required. Given this, it's not clear how a semi-scheduled unit would know whether it needed to be under its dispatch level to be conforming (and hence whether it would trigger ADC). Section A.2 (the conformance calculations appendix) appears to contradict this, referring to the individual semi-scheduled small-error logic (which considers the SDC) in the logic to deem aggregate conformance. Atmos requests that this confusion be cleared up in the procedure, for example by removing the statement in 2.6.2(b) that the SDC flag is ignored.

If AEMO did intend for the SDC to be ignored for semi-scheduled units, and hence the unit be required to always operate below its dispatch level, Atmos has strong objections. The output of wind and solar farms vary with the natural variation in the available energy. Absent network or economic curtailment, the dispatch level will be set at the forecast output for the interval. The forecast is only ever a best guess, and the actual output will vary above and below this level, including both sides within the same interval. Limiting the output of the semi-scheduled generator by requiring it to be always below the dispatch level would mean material loss of production. It is our view that if this is the intended implementation, for a behind-the-meter renewable plus BESS site the cost of the semi-scheduled unit always staying under the target would outweigh the benefits of the mixed aggregate ADC.

Atmos acknowledges there is complexity of managing regulation FCAS at the same time as aggregate dispatch conformance in the Mixed Aggregate scenario but would like AEMO to explain further the technical issues here, and to understand whether these could be resolved at a future time. We anticipate that a BESS would aim to be enabled for regulation FCAS much of the time, so there may be a trade-off between capturing spilt energy during constraints and enabling the plant for regulation FCAS. While this trade-off increases the complexity of the operating decisions for the plant, we believe there is still substantial value to a behind-the-meter wind/solar/BESS project in the Mixed Aggregate ADC.

We thank AEMO again for the opportunity to participate in this consultation. Please direct any queries to Marcelle Gannon at marcelle.gannon@atmosrenewables.com.au or 0409 799 095.

Yours sincerely,

Allison Hawke

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