

29 June 2021

Sent to: energymarkets@energy.wa.gov.au

PROPOSED WEM AMENDING RULES – TRANCHE 4B

Thank you for the opportunity to make a submission in respect of the proposed Tranche 4B Amending Rules. We have a small number of comments, which we hope can improve the final wording, set out below.

Under Frequency Load Shedding

Clauses 3.6.6 and 3.6.7 require the development of the UFLS Requirements document by Western Power and review by AEMO. With the large amount of solar PV behind the meter generation the net load on many distribution feeders will be much less than in past years. This means that more feeders will need to be interrupted to achieve any nominated level of reduction which, in turn, is likely to interrupt many more customers than in the past.

Estimates of the total loss of supply to customers should be provided by Western Power so that both AEMO and EPWA can be aware of the extent of supply interruptions that may take place. This may also lead AEMO and Western Power (and EPWA) to determine that some alternative approach should be adopted such as carrying increased contingency reserve raise.

General comment on reliability

There are several areas where system reliability is addressed including the UFLS requirement, reserve capacity mechanism and network reliability standards. These need to be integrated to ensure that a common reliability standard is developed across the WEM. This might also indicate where reliability increases can be most economically achieved.

Inertia and frequency control

A12.6.1.8 – There appear to be two typos in this:

*All generating units, or the generating system as applicable, **must be** capable of operating ... and correct ~~to~~ changes in system frequency*



A12.6.1.9 – Typo (no verb)

*A dead band **is required** on each Generating Unit ...*

A12.6.2.1 (d) (vii) – Is this “*beyond 10 seconds*” measured beyond the “*further 10 seconds*” referred to in (vi)?

A12.6.3.2(g) and (h) – Is the “*further 10 seconds*” in (g) and the “*beyond 10 seconds*” in (h) measured from when the generator or generating system reaches 60% response or 90% response?

Not-in-service Capacity

7.13.1J. and 7.13.1K. – the three options identified in (a), (b) and (c) are not mutually exclusive and could each give different answers. Presumably (a) should take precedence over (b) and (b) take precedence over (c) but this is not clear as drafted.

Also, these clauses refer to “... *MW quantity of **energy** scheduled...*” whereas it is **capacity** that is being scheduled. The definition of “*Not In-Service Capacity*” correctly refers to the sent-out capacity.

Refund quantity for storage facility

It is unclear how the proposed refunds are calculated where a battery has inadequate storage to meet the four-hour charge obligation period. While the obligation is for a certain charge level at the start of the period, it should step down over the eight trading intervals such that:

- Obligation at start of TI 1 is Q
- Obligation at start of TI 2 is seven eighths of Q
- ...
- Obligation at start of TI 8 is one eighth of Q

This will allow for a battery being partially charged or for a battery being charged up during the first trading intervals and therefor being able to fully meet its obligation in later intervals.

There will need to be a specific term that applies to the state of the battery when it has less charge than its obligation. A market participant cannot declare a “forced outage” because the battery may still be fully available to meet its obligations in the next trading interval or it may be under charge. It can only be declared as on forced outage when it is incapable of both accepting charge and injecting into the system.



Cancellation of capacity credits by DSM provider

Generating systems need to give three years notice of closure to minimise the risk of a shortfall in capacity. We should consider something similar for large DSM providers – greater than 10 MW perhaps. Options could be to require them to give three years notice of their intention to change their capacity by more than 10 MW or else requiring them to nominate in the EOI process.

Should you have any questions in respect to this submission please do not hesitate to contact me at p.peake@perthenergy.com.au or on 0437 209 972.

Kind regards,

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