

To energymarkets@deed.wa.gov.au
Subject Capabilities Class 2 Technologies Review
Date 1 September 2026

Good Morning

Thank you for the opportunity to comment on the proposed changes to be made following the Capability Class 2 Technologies Review.

Perth Energy has concerns that the operation of battery electric storage systems (BESS) on the SWIS does not appear, at times, to fully support the State Electricity Objective of optimising customer prices, system reliability and environmental impacts. This year we have seen BESS simultaneously both charging and discharging on a number of occasions. We also see BESS systems regularly having less than full state of charge at the start of their obligations intervals.

At present, the power system is shielded by the presence of coal fired power stations which provide a substantial quantity of firm MW capacity and MWh energy production capability. Collie and Muja D are both scheduled for closure soon and the remaining life of Bluewaters is uncertain. With these stations taken out of service, potentially within the next five years, BESS will be required to make a major contribution to energy security as well as capacity. It is imperative that the rules relating to BESS obligations are optimised for both roles.

This requirement is accentuated by the substantial capacity provided by existing and proposed BESS and the high share of peak demand that these facilities will be required to meet. Further, with the duration obligation being raised to seven hours, which implies a further eight hours or so potentially required to take a BESS from zero to full charge, BESS management during times of even modest system stress will be critical.

We note, too, that while the current emphasis is on BESS capability during peak summer demand, optimum management of BESS during winter peaks will be important to minimise costs and emissions. The replacement of firm coal fired capacity with weather driven renewable generation will increase reliance on BESS for meeting winter system reliability.

Overall, Perth Energy supports the proposed changes and makes the following comments in respect to the individual proposals.

Comments on specific proposals

It is proposed that:

- *The Linearly Derated Method for assigning Certified Reserve Capacity for ESRs will be retained*
- *The current approach for determining Electric Storage Resource Obligation Intervals (ESROIs) will be retained.*
- *No changes will be introduced to tie-break different configurations of Capability Class 2 facilities within the Network Access Quantity (NAQ) prioritisation.*

Consultation questions: 1. Do stakeholders disagree with any of the review outcomes outlined above? If yes, why?

Perth Energy agrees with these proposals. They maintain the objectives of simplicity, transparency and predictability.

Proposal 1 Amend the ESM Rules (including clause 4.22.2E(a)) to allow AEMO to measure the total energy delivered for assessing ESR performance during Reserve Capacity Tests.

Consultation questions: 1. Do stakeholders support amending the ESM Rules to account for ESR ramping during Reserve Capacity Tests? If not, why?

Perth Energy supports the proposed change to include ramping during ESR reserve capacity tests. It is important, however, for tests to demonstrate that the BESS can safely discharge to its nominated operating minimum state of charge without restriction.

Proposal 2a Amend the ESM Rules to change DSP availability obligation intervals to 8:00am to 12:00pm (noon) and 2:00pm to 10:00pm on all Business Days. However, stakeholder feedback is sought on whether the morning window obligation should be change to 4:00am to 8:00am.

Proposal 2b Amend the ESM Rules to:

- allow a DSP participant to choose only the 2:00pm to 10:00pm obligation window and receive the Reserve Capacity Price derated by 8/12 to reflect the reduced reliability availability; and
- require any DSP participant that chooses only the 2:00pm to 10:00pm obligation window to trade its Capacity Credits through AEMO.

Proposal 2c Amend the ESM Rules to:

- remove the option for DSPs to offer availability outside of the availability obligation intervals specified in the ESM Rules;
- allow a DSP to associate different loads within its portfolio to the morning and the evening sets of obligation intervals (for every Trading Day) at least 3 weeks before the associated loads effective date; and
- empower AEMO to conduct Reserve Capacity Tests in the availability obligation windows selected by the DSP.

Consultation questions: 1. Do stakeholders support the proposals for the changes associated with the DSP availability obligation intervals outlined above? If not, why? 2. Is there justification for the 4:00am to 8:00am (rather than 8:00am to 12:00pm (noon)) morning availability obligation and if yes, what is the justification?

Perth Energy supports the proposed changes for the DSP availability intervals. We consider that they are a realistic approach to maximising the amount of demand management that can be brought online.

We do not have an opinion on whether a 4am to 8am window is necessary; we consider that AEMO is probably best placed to advise on this matter. We do, however, note that raising the duration obligation for

BESS facilities to seven hours implies a potential increase in charging duration to around eight hours. This means that BESS facilities could well be charging in the 4am to 8am period. This could potentially result in DSP being called to allow BESS to charge which would not be appropriate.

Proposal 3 Amend the ESM Rules to allow a DSP participant (whose Facility was not certified under clause 4.10.1B) to have its Capacity Credits reduced and a corresponding portion of its Reserve Capacity Security returned if:

- an Associated Load greater than 5 MW ceases operations permanently or for the entirety of a Capacity Year in which the relevant DSP has Reserve Capacity obligations;
- the DSP participant notifies AEMO no later than 1 April in Year 3 of the Reserve Capacity Cycle, so that the impact of the load exit on system demand can be factored into the upcoming ESOO; and
- the relevant participant provides sufficient evidence, to be specified in the relevant WEM Procedure, that the Associated Load has ceased operations or will be offline during the relevant Capacity Year.

The ESM Rules are also proposed to be amended to prevent the Associated Load that ceased operations permanently, or on an extended basis, from participating in Supplementary Capacity for the upcoming Capacity Year.

Consultation questions: 1. Do stakeholders support the proposals to allow a DSP participant to request a reduction in its Capacity Credits and a corresponding portion of its Reserve Capacity Security returned under the above conditions? If not, why?

Perth Energy supports this change. Balancing the loss of a load with a corresponding reduction in capacity credits is logical and sound. We consider that the appropriate mechanisms are being put in place to avoid either double dipping by the load or increased reliability risk for the market.

Proposal 4a Amend the ESM Rules to:

- update clause 3.17.11 (the head of power for the LRC WEM Procedure) to empower AEMO to incorporate a LOR-SOC condition into the LRC framework that applies to Peak Certified ESR:
 - the LOR-SOC condition declaration is the trigger for imposing a state of charge (SOC) obligation on the ESR fleet certified for Peak Certified Reserve Capacity.
 - The LRC WEM Procedure will also be amended to outline:
 - under what system conditions the LOR-SOC obligations will apply; and
 - the methodology AEMO will use to determine the SOC obligation level.
 - allow AEMO to withdraw a LOR-SOC condition if it determines they are no longer necessary;
 - specify the notification times for AEMO when declaring a LOR-SOC condition:
 - AEMO must use best endeavours to declare the LOR-SOC condition and SOC obligations by 8:00pm on the Scheduling Day; and
 - AEMO must declare the LOR-SOC condition and SOC obligations no later than 8:00am on the Trading Day,
 - specify that the LOR-SOC obligation will be a uniform charge level applicable to all Peak Certified ESR Facilities, and that all ESR Facilities must be at that level at the start of their relevant ESROIs;

- *specify the information that must be provided to ESR participants to provide them a reasonable level of certainty regarding the event; and*
- *specify that the obligation applies to the remaining available capacity of ESRs, taking outages into account.*

Proposal 4b Amend the ESM Rules to implement one of the following options.

Option 1:

- *Amend the ESM Rules to empower AEMO to apply Constraint Equations to:*
 - *constrain ESRs from being dispatched for injection before its peak ESROIs, unless required to provide FCESS or other services to maintain PSSR on a Trading Day when a LOR-SOC is in effect;*
 - *to constrain ESRs from being dispatched for withdrawal during their peak ESROIs and during the peak ESROIs of any other ESRs, unless required to provide FCESS or other services to maintain PSSR on a Trading Day when a LOR-SOC is in effect;*

Option 2:

- *prevent ESRs from charging during their peak ESROIs and during the peak ESROIs of any other ESRs on a Trading Day when a LOR-SOC is in effect, except when AEMO instructs them for FCESS or system reliability purposes; and*
- *allow ESR facilities to make zero quantity offers for energy injections and bids for zero Withdrawal outside of their peak ESROIs on a Trading Day when a LOR-SOC Charge is in effect.*

Consultation questions: 1. Do stakeholders support the proposals to introduce a state of charge mandate through the introduction of new LRC – LOR-SOC)? If not, why? 2. Which option - Option 1 or Option 2, do stakeholders support to assist ESR operators in complying with a LOR-SOC obligation?

Perth Energy supports the proposal for AEMO to nominate minimum state of charge levels to apply to BESS facilities. We do not have a preference for either option 1 or 2 and are happy for AEMO to nominate the process that best meets a balance of convenience and cost.

While the main focus is currently on meeting summer peak demand, we suggest that consideration should also be given to potential energy shortages which may occur in winter. There are likely to be occasions when AEMO must nominate BESS state of charge requirements well ahead of forecast periods of low renewable generation.

Proposal 5 Amend the ESM Rules to introduce an addition to the current refund mechanism for ESRs when a LOR-SOC mandate applies.

- *The refund will apply only to ESR Facilities and only when a LOR-SOC condition has been declared by AEMO.*
- *ESR Facilities will pay twice the amount of refunds they usually pay for failing to offer their RCOQ when a SOC obligation applies.*

Consultation questions: 1. Do stakeholders support the proposals to introduce an addition to the current refund mechanism to apply only when a LOR-SOC is in effect?

Perth Energy understands that there are times when BESS facilities have sold electricity into the market early in the day at prices which offset any penalty from being short during their obligation period. We support the proposal for an additional refund penalty to prevent this behaviour. We note that the design of the market prevents any other facility from gaining a similar revenue benefit in the market.

It does raise a broader issue that BESS facilities are paid reserve capacity payments but are, apparently quite often, not sufficiently charged to meet any sudden obligation. Perth Energy considers that this needs further review, especially as more reliance will be placed on BESS when coal fired plant is taken out of service. In June this year the market again experienced periods of low wind farm production. If BESS facilities do not recharge when renewable energy is available, it is likely that gas fired plant will have to run harder than is necessary. It is unclear whether AEMO's LOR-SOC approach will drive this behaviour.

Should you have any questions please do not hesitate to contact me at p.peake@perthenergy.com.au or on 0437 209 972. This submission may be made public.

Kind regards

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I am based in the Perth Office and work Tuesday, Wednesday and Thursday