

Project Team
Australian Energy Market Commission
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ERC0364 – Clarifying mandatory primary frequency response obligations for bi-directional plant

The Australian Energy Council ('AEC') welcomes the opportunity to make a submission to the Australian Energy Market Commission's ('AEMC') Consultation Paper ('Paper') on AEMO's proposed rule for Clarifying mandatory primary frequency response obligations for bi-directional plant.

The Australian Energy Council is the peak industry body for electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. AEC members generate and sell energy to over 10 million homes and businesses and are major investors in renewable energy generation. The AEC supports reaching net-zero by 2050 as well as a 55 per cent emissions reduction target by 2035 and is committed to delivering the energy transition for the benefit of consumers.

Context

The AEC has consistently opposed a reliance on mandatory narrow-band Primary Frequency Response (PFR) as a means of maintaining power system security. Obtaining security services through obligations on all capable providers is:

- inefficient as it uses socialized over-procurement without reference to individual costs,
- distortionary to incentives to investment, and
- does not represent predictable operating practice as
 - the total PFR on the system arises through happenstance rather than structured market scheduling, and
 - provides an uncertain quantity of stored energy.

The 2025 introduction of two-sided Frequency Performance Payments (FPP) is a welcome reform which will go some way to addressing the second of the above shortcomings of mandatory PFR. The AEC considers that with such a mechanism in place it will be possible to plan the repeal of mandatory narrow-band PFR as FPP will result in adequate PFR voluntarily provided from the lowest cost providers.

The AEC recognises that the AEMC has only recently decided to make mandatory PFR enduring, and the Paper has been written in this context. However, the AEC remains hopeful that following a successful FPP implementation, a more considered frequency control discussion will re-emerge that will enable the AEMC to recommit to the NEM's fundamental principle of using competitive markets to procure non-monopoly services.

This submission is written from this optimistic standpoint, and that eventually, narrow-band PFR will no longer be obtained through obligation. With that in mind, the AEC considers the NEM should not take further steps that extend or entrench mandatory PFR. Instead, incremental changes to the mandatory PFR arrangements should be first assessed from the standpoint of whether they move toward or away from this fundamental principle. AEMC should only consider changes that result in a PFR obligation that is at least no worse than the AEMC's original decision.

The AEC continues to support its previously articulated vision of voluntary provision of narrow-band PFR in response to incentives, supported by mandatory *wide*-band PFR as a backstop. This vision would retain the NEM's current resilience in the presence of extreme events. Neither this Paper nor previous material adequately explains why universal *narrow*-band PFR is materially more resilient to extreme events than universal *wide*-band provision.

Questions 1 & 3 – Non-inclusion of scheduled bidirectional units in the mandatory PFR obligations when discharging

The AEC accepts that the mandatory PFR obligation included a requirement for storage to provide PFR when discharging energy and that an inadvertent consequence of the Integrating Energy Storage Systems (IESS) arrangements is the relinquishment of the obligation on this group of intended providers. The AEC does not oppose this proposed clarification.

Question 2 Long-term provision of PFR

The AEC agrees that the transitioning power system will require ongoing PFR and will require obtaining it from non-traditional sources. The AEC strongly disagrees with AEMO that the transition necessitates a mandatory PFR approach. In fact, the mandatory PFR approach was conceived from the perspective of a traditional power system.

The future power system will be highly eclectic. In that environment, uniform approaches such as mandatory PFR are inappropriate. Instead, the new power system will be better served by exposing these highly varied assets to financial incentives for the services and allowing the assets themselves to decide whether these incentives exceed the individual cost burdens of provision, including investment in that provision.

PFR from bi-directional storage systems can be very useful in supporting system frequency. There will be varying costs in providing that support, and this is precisely why it should be up to the owners of these systems themselves to choose if they wish provide it.

Question 4 Proposal for scheduled bidirectional units to be required to provide PFR when consuming from grid

The AEC does not support this proposal because:

- It was considered in the AEMC's original decision to mandate PFR and explicitly rejected.
- It increases costs on this form of PFR provider without assurance that FPP payments will adequately compensate.
- If FPP performs as hoped, those bidirectional units that can perform this service at low costs are likely to voluntarily provide it.
- As discussed in the introduction, by expanding mandatory PFR it further entrenches an approach that is inconsistent with market principles, when the industry should instead be targeting a long-term future of voluntary PFR provision in response to FPP signals.
- The existing frequency characteristic shows some undesirable and unexplained skew and oscillation. The AEC obtained [advice](#) that theoretically linked these outcomes to an oversupply of near-zero deadband PFR response. This issue needs to be fully understood and resolved before adding yet more low deadband PFR, which could worsen the issue if the theoretical linkage proves correct.

Question 5 Proposal for scheduled bidirectional units to be required to provide PFR when providing FCAS

The AEC does not support this proposal for the same reasons listed in Question 4.

Further the AEC takes exception to AEMO's suggestion that this obligation removes a perverse incentive to withdraw from FCAS. Indeed, AEMO is effectively arguing for a distortion of an efficient FCAS market price.

By obliging providers to provide PFR through an obligation, AEMO postulates that the additional cost of participating FCAS then falls to zero, and therefore FCAS offer prices fall and so does the total cost of FCAS.

This argument is effectively promoting as a benefit the suppression of an efficient price of a voluntary and otherwise functional existing market.

When mandatory PFR was first proposed by AEMO, it was accompanied by assurances that the existing FCAS markets and their signals would be left in place and not be devalued by mandatory PFR. The AEC was unconvinced this would be technically possible but was pleased by the intent. This commitment appears to have since been disregarded and replaced by arguments favouring mandatory PFR for the explicit purpose of distorting these existing competitive markets.

Question 6 Other proposed changes

The AEC agrees clause 4.9.4(e) requiring AEMO approval of changes to unit response mode appear redundant because of mandatory PFR rules. The AEC's long-term vision of voluntary provision of narrow-band PFR would involve notification to AEMO, possibly with a notice period, but would not require AEMO's approval assuming it remained compliant with other rules, such as wide-band PFR. If, in an extreme case where AEMO considered an otherwise compliant governor change represented an unacceptable reduction in security, AEMO would exercise its last-resort power of direction to delay the change.

The AEC shares the Paper's hopes that schedule-lite demand-side resources will take advantage of FPP incentives to voluntarily provide PFR. The AEC also notes that this discussion of the virtues of incentives and voluntary provision is entirely consistent with the AEC's views on how PFR should be obtained from all assets. The Paper is inconsistent in applying one sentiment (market-based provision) for one group of competitive technologies and another (mandatory provision) for others.

The AEC is not opposed to a registration mechanism of frequency performance from these assets.

Question 7 & 8 Implementation considerations

The AEC concurs that the implementation challenges of the first change, retention of mandatory PFR when discharging, appear to be nil. The AEC is not able to comment on implementation challenges of the second and expects asset owners will identify these.

Question 9 Assessment Framework

The AEC does not oppose the criteria and notes that 3 (efficiency) and 4 (innovation) run counter to proposals to extend the reach of mandatory PFR.

Questions about this submission should be addressed to David Feeney, by email David.Feeney@energycouncil.com.au.

Yours sincerely,



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