

Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

Submitted online.

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ERC0364 – National Electricity Amendment (Clarifying mandatory primary frequency response obligations for bi-directional plant) – Draft determination

The Australian Energy Council ('AEC') welcomes the opportunity to make a submission to the Australian Energy Market Commission's ('AEMC') National Electricity Amendment (Clarifying mandatory primary frequency response obligations for bi-directional plant) – Draft determination (Draft).

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.

AEC position on mandatory primary frequency response

The AEC has consistently opposed a reliance on mandatory narrow-band Primary Frequency Response (MPFR) 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 for incentives to investment;
- ignores the principle of competitive market based solutions; and
- requires affected participants to incur costs without any compensation.

The schedule 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 MPFR. 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.

While the AEC is strongly opposed to MPFR, this submission accepts that mandatory PFR (MPFR) is in force and likely to remain so until the FPP market demonstrates market-based solutions can efficiently and effectively provide services such that MPFR is demonstrably redundant and should be discontinued.

Batteries provide MPFR when generating

The AEC acknowledges that the Integrating Energy Storage System (IESS) December 2021 rule was remiss in not requiring Bi-directional Units (BDUs, ie, batteries) to be liable for MPFR. To create a level playing field for all generation types the AEC agrees that batteries should be required to provide MPFR when generating.

However, AEMO's rule change proposal goes well beyond this requirement. Stakeholders have expended significant time and resources on this matter over the course of three years and the broad

scope of AEMO's proposal has yet again required more time and resources to be expended on this round of consultation. To try and maintain investor confidence, this process must be the last iteration.

Batteries providing MPFR when charging

The AEC does not support batteries being required to provide MPFR when charging. In our view this represents both scope creep for MPFR and violates the technology neutral axiom as scheduled load is not required provide MPFR. We do not accept that merely reclassifying batteries as bidirectional units (BDUs) mitigates the erosion of technology neutral. No other generation technology is subjected to this uncompensated overreach on both its generation and sourcing of fuel. For example, pumped hydro-electric storage is excluded from this requirement because it is technically unable to when charging.

Batteries are liable for TUOS when charging and it seems unreasonable that they should also be required to provide MPFR when charging. The Draft notes that batteries have negotiated low or zero TUOS costs with TNSPs however while this may correct the battery investor has still had to expend resources negotiating. Furthermore, while this may be the case now, it may not persist into the future as more batteries connect to the grid.

Another concern (raised in our earlier submission) is that 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.

Batteries providing MPFR when enabled for provision of Regulation FCAS

In principle the AEC has concerns with this proposal because:

- It has the potential to increase 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.
- 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 AEC understands the 2021 IESS sought to recognise the advanced capabilities of BDUs and believes these should be utilised to their fullest extent to support the NEM. What we disagree with is the method of sourcing some of these capabilities through uncompensated MPFR. The best way to deliver the National Electricity Objective (NEO) and the best outcome for consumers, is where competitive market-based solutions are the default option for service delivery. If this is not feasible, then other approaches are necessary. Although, MNPFR takes this one step further by sourcing PFR without compensation for the providers.

Nevertheless, under the MPFR regime, the AER accepts the logic of a battery being obligated to provide MPFR when enabled for Regulation FCAS. But this obligation should only extend to the regulation FCAS enablement level. Any excursion above this level would be to encroach on storage that the operator is not prepared to offer to the market at that time. This may disincentivise an operator from offering regulation FCAS enablement because they would be exposed to the risk of exposing storage over and above what they are prepared to offer. If this is widespread then less Regulation FCAS may be offered which could increase FCAS costs. Therefore, the AEC believes the

Rules need to be clear that the MPFR obligation does not extend beyond the Regulation FCAS enablement level offered by the battery.

With respect to the costs of MPFR when charging, the Draft refers to a battery OEM stating that it believes they are immaterial.¹ However, the AEC has received mixed signals on this matter and it would be helpful to confirm this. One way to do this would be to review warranty agreements to see if they ignore additional cycling caused by MPFR.

Batteries not subject to MPFR when idle or providing contingency FCAS

The AEC is pleased to see that the Draft has acted on stakeholder submissions and does not require batteries to provide mandatory PFR when they are idle, only running auxiliaries or enabled solely for Contingency FCAS.

Questions about this submission should be addressed to Peter Brook, by email to peter.brook@energycouncil.com.au

Yours sincerely,

Peter Brook
Wholesale Policy Manager
Australian Energy Council

¹ Draft, p.19.