



Australian Energy Market Commission
Level 15, 60 Castlereagh St
Sydney NSW 2000

Submitted via online portal

04 February 2021

Dear Sir/ Madam,

Frequency Control Rule Changes Directions Paper (ERC0263, ERC0296)

ENGIE Australia & New Zealand (ENGIE) appreciates the opportunity to respond to the Australian Energy Market Commission (“the Commission”) in response to the Frequency Control Rule Changes Directions Paper (“the Directions paper”).

The ENGIE Group is a global energy operator in the businesses of electricity, natural gas and energy services. In Australia, ENGIE has interests in generation, renewable energy development, and energy services. ENGIE also owns Simply Energy which provides electricity and gas to more than 720,000 retail customer accounts across Victoria, South Australia, New South Wales, Queensland, and Western Australia.

A timely examination of missing markets

The directions paper sets out a framework for assessing the options for provision of fast frequency response (FFR) and for primary frequency control beyond 2023 when the current mandatory provision sunsets. ENGIE broadly supports this framework and considers it would be opportune to extend the assessment to market options for the provision of inertial response, given its partial substitutability with FFR.

ENGIE is supportive of market solutions to the provisions of these essential security services and subject to any specific barriers considers that the existing FCAS markets provide a useful template for the way in which these services can be procured from the market.

In the case of primary frequency control, ENGIE commends the work of the Australian Energy Council’s frequency control subgroup to narrow down the workable options for an enduring solution.

ENGIE’s detailed responses to the individual questions in the Directions paper can be found in the Commission’s submission template that accompanies this letter.





Should you have any queries in relation to this submission please do not hesitate to contact me on, telephone, (03) 9617 8415.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Jamie Lowe".

Jamie Lowe

Head of Regulation,
Compliance and Sustainability



Directions paper – Frequency control rule changes

STAKEHOLDER SUBMISSION TEMPLATE

The template below has been developed to enable stakeholders to provide their feedback on specific questions that the AEMC has identified in the directions paper for the frequency control rule changes.

The rule changes discussed in the frequency control directions paper are:

- AEMO – *Primary frequency response incentive arrangements* (ERC0263)
- Infigen Energy — *Fast frequency response market ancillary service* (ERC0296)

This template is designed to assist stakeholders provide valuable input on the questions the AEMC has identified in the directions paper. However, it is not meant to restrict any other issues that stakeholders would like to provide feedback on.

Given the breadth of issues discussed in the directions paper, it is not expected that all stakeholders respond to all the questions in this template. Rather, stakeholders are encouraged to answer any and all relevant questions.

SUBMITTER DETAILS

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CHAPTER 4 – FAST FREQUENCY RESPONSE MARKET ANCILLARY SERVICE

Question 1: Section 4.5.3 – PROBLEM DEFINITION AND REFORM OBJECTIVE — FFR RULE CHANGE

What are stakeholders’ views on the problem definition and reform objective for FFR as set out in section 4.5.3 of the directions paper?

The problem definition and reform objective appear a reasonable starting point for consideration of this rule change

Question 2: Section 4.7.1 – FFR PROCUREMENT

In relation to the discussion of potential procurement arrangements for FFR services in section 4.7.1 of the directions paper:

- What are stakeholders’ views on the pros and cons of establishing new FCAS market arrangements for FFR services versus revising the existing arrangements to incorporate FFR within the fast raise and fast lower services?
- Do stakeholders agree that the existing arrangements for contingency FCAS provide an appropriate model for FFR market arrangements?
- What are stakeholders’ views on how each of the proposed procurement arrangements for FFR would interact with the arrangements for the existing contingency services?
- Are there any aspects of the existing contingency FCAS arrangements that should be varied for procurement of FFR services?

On balance it appears more straightforward to pursue Option 1. As identified in the directions paper, option two would involve a number of consequential changes to definitions and specification of existing services, potentially affecting participants’ eligibility for these services.

Question 3: Section 4.7.2 – FFR PRICING ARRANGEMENTS

In relation to the discussion of potential pricing arrangements for FFR services in section 4.7.2 of the directions paper:

- What are stakeholders’ views on the pros and cons of maintaining the existing FCAS pricing arrangements for FFR services?

Replicating the existing FCAS pricing arrangements for the new services is likely to be the most straightforward, as they are well understood by participants. Notwithstanding this, if alternative arrangements are clearly superior and justify the additional complexity and work to design and implement them, then that could outweigh the simplicity of replication.

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| <ul style="list-style-type: none"> • What are stakeholders’ views on the potential pros and cons of incorporating performance-based multipliers into the pricing arrangements for FFR services? • Do stakeholders have any other comments or suggestions in relation to the pricing arrangements for FFR services? | |
| <p>Question 4: Section 4.7.3 – FFR COST ALLOCATION</p> | |
| <p>In relation to the discussion of arrangements for the allocation of costs associated with FFR services set out in section 4.7.3 of the directions paper:</p> <ul style="list-style-type: none"> • What are stakeholders’ views on the arrangements for the allocation of costs for FFR services? • Would it be appropriate for the cost of FFR services to be allocated in a similar way to the existing arrangements for the allocation of contingency FCAS costs? | <p>The default option is to allocate costs in a similar way to existing arrangements for the allocation of contingency FCAS costs. This appears, on the face of it, to be the most straightforward option.</p> |
| <p>Question 5: Section 4.8 – ISSUES FOR CONSIDERATION - FFR</p> | |
| <p>Are stakeholders aware of any additional issues that the Commission should take into account in developing market ancillary service arrangements for FFR?</p> | <p>N/a</p> |
| <p>Question 6: Section 4.8.1 – VALUATION OF INERTIAL RESPONSE</p> | |
| <p>In relation to the potential arrangements for the valuation of inertial response described in section 4.8.1 of the directions paper:</p> <ul style="list-style-type: none"> • What are stakeholders’ views on the valuation of inertial response as part of the contingency services, including the proposed new FFR contingency services? • What are stakeholders’ views on the current governance arrangements for contingency services; where the detailed service specification is determined by AEMO and documented in the MASS? (Is it appropriate for the NER to provide further guidance on how inertial response should be considered in the MASS?) | <p>Inertia is an important characteristic of the power system that has historically been provided freely by synchronous generators. As such generation exits the market and is replaced primarily by inverter-based resources (IBRs) that do not provide an inertial response, the scarcity value of inertia will begin to be revealed more frequently. This is a classic example of a missing market. Given the substitutability – at least partially – of FFR and inertial services, ENGIE considers the best approach would be to consider the provision of both services in concert.</p> |

Question 7: Section 4.8.2 – PRICE RESPONSIVE DEMAND FOR CONTINGENCY SERVICES

In relation to the discussion of arrangements for incorporating price responsiveness into the procurement of contingency services in the NEM set out in section 4.8.2:

- What are stakeholders’ views on the potential pros and cons associated with the implementation of a “demand curve” approach to procurement of FCAS?
- What are stakeholders’ views on the priority of such a change to the market frameworks?
- If such an approach was to be implemented, what are stakeholders' views on the appropriate governance arrangements, including the potential oversight role for the AER?

The concept of introducing a demand curve approach is consistent with the direction of travel of NEM reform, given the ESB’s stated goal of moving towards two-sided markets more broadly (notwithstanding that in this case it will likely be an administratively determined demand curve). It appears, however, to be a broader reform goal than the establishment of new FFR markets, given it would likely apply across FCAS markets. So, there is no need to implement it at the same time an FFR market is implemented, especially given the potential complexity of constructing a demand curve.

ENGIE notes that in the energy market, the administrative price signals, i.e. the price cap, floor and cumulative threshold, are determined by the Reliability Panel. It would appear consistent with this approach for the Reliability Panel to be the party tasked with evaluating the trade-offs between cost and system reliability/stability entailed in developing a demand curve for FCAS.

Question 8: Section 4.8.3 – INTERACTION BETWEEN MANDATORY PFR & FFR ARRANGEMENTS

What are stakeholders’ views in relation to the potential interactions between new FFR arrangements and the Mandatory PFR arrangement?

ENGIE considers that the Mandatory PFR arrangement should sunset as originally planned. The proposed FFR arrangements, by contrast are intended to be enduring (though of course, subject to rule change requests just as other elements of the NEM are). So, the design of the FFR arrangements should not be compromised by the way they interact with the Mandatory PFR arrangement, rather they should be robust to its replacement with some form of market mechanism in due course.

Question 9: Section 4.8.4 – IMPLEMENTATION AND STAGING FOR FFR

In relation to the discussion of the implementation arrangements for FFR services as set out in section 4.8.4:

- What are stakeholders’ views in relation to the process for the implementation of FFR arrangements in the NEM?
- What are stakeholders’ views on the potential need for interim or transitional arrangements as part of the transition to spot market arrangements for FFR?

It would be appropriate to work through the issues raised by AEMO to date and via the FFR implementations report to ensure implementation does not compromise system security and reliability. However, transitional or interim arrangements would introduce additional complexity to the reforms and so would be better avoided if possible.

CHAPTER 5 – PRIMARY FREQUENCY RESPONSE INCENTIVE ARRANGEMENTS

Question 10: Section 5.1.3 – THE ROLE OF MANDATORY PFR

In relation to the discussion of the role for a mandatory obligation as part of the enduring PFR arrangements in the NEM, set out in section 5.1.3:

- Do stakeholders agree that a mandatory PFR arrangement provides a valuable safety net to help protect the power system from significant non-credible contingency events?
- Do stakeholders agree that the narrow, moderate and wide settings for a mandatory PFR response band adequately represent the broad policy options for the frequency response band for Mandatory PFR?

To the extent a mandatory PFR arrangement over the longer-term is desirable as a backstop against extreme system events, it should not supplant market-based procurement of frequency control services to meet normal system requirements. It appears that the narrow band settings of the current mandatory arrangement may do so. Thus, while from an analytical perspective, the broad policy options set out are reasonable, ENGIE is opposed to the continuation of a narrow-band mandatory PFR requirement. Such an approach does not appear sustainable in the long-run, relying as it does on the ongoing participation of large synchronous generators that are expected to progressively exit the market over the next twenty years, but providing no incentive for new entrants (which are largely expected to have very different characteristics) to be able to consistently provide material levels of PFR.

Question 11: Section 5.4 – PROBLEM DEFINITION AND REFORM OBJECTIVE — PFR INCENTIVE ARRANGEMENTS RULE CHANGE

What are stakeholders' views on the problem definition and reform objectives for enduring PFR arrangements set out in section 5.4?

Noting the comment above, the problem definition and reform objectives appear broadly appropriate. ENGIE welcomes the recognition they entail that the current mandatory PFR arrangement is intended as an interim approach only.

Question 12: Section 5.4.1 – ECONOMIC ANALYSIS OF MANDATORY PFR

In relation to the discussion of the costs and benefits of Mandatory PFR arrangements set out in section 5.4.1:

- What are stakeholders' views of the indicative curves for costs and benefits of Mandatory PFR with respect to the frequency response band settings, set out in figure 5.4?
- Do stakeholders agree that the frequency response band setting is a key variable for the determination of enduring PFR arrangements that meet the power

The indicative curves set out in Figure 5.4 are useful for illustrating some relevant concepts. Firstly, that there is a cost to generators of providing PFR for which are not recompensed under current arrangements. Secondly that to the extent the costs materially increase the tighter the band setting, the most economically efficient setting is a wider one. Thirdly, in all cases the benefits are assumed to exceed the costs. If this is the case, then there is clearly a consumer surplus associated with the provision of PFR at or below cost. A properly designed market or procurement process for PFR would: allow generators to be compensated for costs; create incentives for new entrants to be able to provide PFR and still allow customers to retain some consumer surplus.

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| <p>system needs and are economically efficient over the long term?</p> <ul style="list-style-type: none"> • What are stakeholders’ views on the effectiveness of the exemption framework under the Mandatory PFR arrangement? • What are stakeholders’ views on the role that the allowance for variable droop settings plays in relation to the cost impacts of Mandatory PFR? • Based on the initial roll out of the Mandatory PFR arrangement to generators over 200MW, what are stakeholders’ views on how the cost impacts of Mandatory PFR are impacted by the proportion of the fleet that is responsive to frequency variations? • What other considerations are there in relation to developing effective and efficient arrangements for PFR in the NEM? | <p>While investigation of the costs of PFR provision may aid in determining which of the cost curves is most representative, a well-designed market remains the best way for participants to reveal their costs through their bidding.</p> |
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Question 13: Section 5.5 – ADVICE FOR ENDURING PFR ARRANGEMENTS

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| <p>What are stakeholders’ views of the Commission’s proposed approach to obtaining advice to inform its determination of enduring arrangements for PFR in the NEM?</p> | <p>As the designated rule-maker, the Commission has the primary role in determining future arrangements for PFR, including the design of any market or procurement process. In order to do so it should take all the relevant advice it needs. AEMO’s technical input is critical, given its responsibility for system security and for operating markets. It would not be appropriate for the Commission to delegate its market design responsibilities to AEMO, however, as apparently contemplated in the terms of the advice sought.</p> |
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Question 14: Section 5.6.1 – PROCUREMENT ARRANGEMENTS FOR NARROW BAND PFR SERVICES

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| <p>In relation to the discussion of potential procurement arrangements for narrow band PFR services in section 5.6.1:</p> <ul style="list-style-type: none"> • What are stakeholders’ views on three options identified for further consideration? <ol style="list-style-type: none"> a. Existing market ancillary service arrangements b. New market ancillary service arrangements c. New incentive-based arrangements for voluntary provision • Are there any other options that would be preferable? | <p>ENGIE is supportive of the work carried out by the Australian Energy Council’s frequency control subgroup in this area and agrees with their evaluation of the potential options. Accordingly, a new FCAS market or a double-sided causer pays arrangement (options E and F) appear the most promising options for further development.</p> |
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Question 15: Section 5.6.2 – PROCUREMENT ARRANGEMENTS FOR NARROW BAND PFR SERVICES

What are stakeholders' views on the arrangements for the pricing of PFR as described in section 5.6.2?

The potential pricing arrangements set out in section 5.6.2 are consistent with ENGIE's understanding of how either of its preferred options would work.

Question 16: Section 5.6.3 – ALLOCATION OF COSTS FOR NARROW BAND PFR

What are stakeholder's views on the allocation of costs for narrow band PFR services as described in section 5.6.3?

Do stakeholders agree that the any additional costs for narrow band PFR be allocated through the existing causer pays procedure for the allocation of regulation costs (or a revised version as described in section 5.9)?

The allocation process described in section 5.9 appears appropriate where necessary – in the case of double-sided causer pays the mechanism would be self-funding.

Question 17: Section 5.7 – PATHWAYS FOR ENDURING PFR ARRANGEMENTS

In relation to the pathways for enduring PFR arrangements set out in section 5.7:

- What are stakeholders' views on the enduring PFR pathways?
- Do stakeholders agree with the Commission's preliminary preference for pathway two? (the widening of the PFCB and the introduction of market arrangements for narrowband PFR)

Pathway two appears a reasonable way forward providing the PFCB is set wide enough to allow the market arrangements to work properly. In this respect, ENGIE agrees with the AEC subgroup's conclusion that +/-0.5Hz is appropriate as a safety net.

Question 18: Section 5.8 – FUTURE REVIEW OF THE FOS

What are stakeholders' views of the Commission's proposed approach towards a future review of the FOS as part of the development of enduring PFR arrangements?

A future review of the FOS is an important foundation for the development of enduring PFR arrangements. ENGIE considers the Reliability Panel should retain ultimate responsibility for determining the FOS. Thus, while AEMO's advice is an important input to the review it cannot supplant the Panel's role in assessing the trade-offs inherent in determining the FOS.

Question 19: Section 5.9 – REFORMS TO THE NER RELATING TO COST ALLOCATION FOR REGULATION SERVICES – CAUSER PAYS

In relation to the proposed reforms to the NER relating to the allocation of regulation costs, set out in section 5.9:

- What are stakeholders' views on the proposal to allocate regulation costs on the

n/a

basis of performance against system frequency as opposed to Frequency indicator (FI)?

- What are stakeholders' views on the proposal to align the sample and application periods for determination of causer pays factors and shorten the application period to 5 minutes, in line with the NEM dispatch interval?
- What are stakeholders' views on the removal or shortening of the ten-day notice period for causer pays contribution factors?
- What are stakeholders' views on AEMO's proposal to pre-calculate seven sets of contribution factors including local contribution factors?
- What are stakeholders' views of AEMO proposal to include non-metered generation in the residual component for allocation of regulation costs?