

Australian Energy Market Commission

CONSULTATION PAPER

NATIONAL ELECTRICITY AMENDMENT (COMPENSATION FOLLOWING DIRECTIONS FOR SERVICES OTHER THAN ENERGY AND MARKET ANCILLARY SERVICES) RULE 2020

PROPONENT

AEMO

11 JUNE 2020

RULE

INQUIRIES

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ABOUT THE AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

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1 INTRODUCTION

On 19 September 2019, the Australian Energy Market Operator (AEMO) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) in relation to compensation to directed participants for services other than energy and market ancillary services (hereafter referred to as 'other services'). For example, 'other services' may include a direction for a generator to remain in service as a synchronous condenser to provide voltage support or a direction for a battery to maintain a specified state of charge.¹

Under the current rules, when participants are directed to provide other services (something which has occurred infrequently until recently), they may be compensated under the "fair payment price" (FPP) framework set out in clause 3.15.7A of the National Electricity Rules (NER). A directed participant may also lodge a claim for additional compensation if it is still out of pocket following the initial compensation calculation process under clause 3.15.7B.

AEMO considers that this two-step process is an unnecessary delay in finalising compensation for directed participants and proposes an alternative one-step process in its rule change request.

The consideration of this rule change request is part of a wider Commission work program updating frameworks for interventions in the NEM (see section 2.2).

This consultation paper has been prepared to facilitate public consultation on the rule change request and to seek stakeholder submissions. This paper:

- sets out a summary of, and a background to, the rule change request
- identifies a number of questions and issues to facilitate the consultation on this rule change request
- outlines the process for making submissions.

Key questions on which we are seeking stakeholder feedback include:

- Whether the current compensation arrangements for directions for other services are appropriate, administratively efficient, consistent and predictable?
- Whether the rule change request to combine the determination of FPP compensation and additional compensation into a single step process would be more administratively efficient than the current two-step compensation process for other services directions?
- Whether alternative options to the current arrangements and rule change request would better contribute to the long-term interests of consumers?

Written submissions from stakeholders are requested by **16 July 2020**.

¹ AEMO, *Renewable Integration Study: Stage 1*, April 2020, p. 35.

2 BACKGROUND

This chapter provides background information related to the rule change request in this consultation paper. It provides:

- an overview of current arrangements in the NEM
- information on related projects.

2.1 Current arrangements

This section provides an overview of current arrangements in the NEM, including:

- intervention mechanisms, intervention pricing and compensation frameworks
- types of services that can be directed
- directions for services other than energy and market ancillary services
- compensation for directions for services other than energy and market ancillary services.

2.1.1 Intervention mechanisms, intervention pricing and compensation frameworks in the NEM

Intervention mechanisms are tools that are available to AEMO in circumstances where the market response has been inadequate to maintain a reliable and secure power system, or in response to unexpected events. Broadly speaking, intervention mechanisms available to AEMO include the reliability and emergency reserve trader (RERT)², directions and instructions.³ This rule change request only relates to directions for services other than energy and market ancillary services and does not relate to the RERT or instructions.

Intervention mechanisms

The Reliability and Emergency Reserve Trader (RERT) allows AEMO to contract for reserves (generation or demand side capacity that is not otherwise available to the market) ahead of a period when available supply is projected to be insufficient to meet the reliability standard.⁴ At present, AEMO can contract for reserves from three hours to twelve months ahead of the projected shortfall.⁵ AEMO can dispatch these reserves to ensure reliability of supply and maintain power system security, where practicable.⁶ AEMO may contract only with resources that are 'out-of-market'.⁷ Examples include a back-up diesel generator or emergency demand response.

2 Rule 3.20 of the NER.

3 Clause 4.8.9 of the NER.

4 Where the RERT has been procured for reliability purposes, it can also then be used, where practicable, for the maintenance of power system security. Clause 3.20.2 of the NER. See also section 7 of the RERT guidelines developed and published by the Reliability Panel under clause 3.20.8 of the NER.

5 The AEMC made a rule to provide AEMO with the flexibility to enter into multi-year contracts of up to three years under the RERT mechanism in Victoria. This will help address the short to medium term reliability challenges facing that state. The time-limited derogation will end in June 2023, and apply only in Victoria. The rule contains robust checks and balances so that multi-year contracts are only entered into in circumstances where they minimise costs to consumers.

6 Clause 3.20.7(a) of the NER

7 Scheduled reserves cannot participate in RERT if in the wholesale market for the past 12 months as they are classified as 'in the market'. Unscheduled reserves cannot be both in the wholesale market and in RERT for the trading intervals to which the contract relate. AEMC, *National Electricity Amendment (Enhancement to the Reliability and Emergency Reserve Trader) Rule 2019*, 2 May 2019, p. xix.

Following advice from the Energy Security Board, the Council of Australian Governments (COAG) Energy Council in March 2020 agreed to implement interim measures to deliver further reliability by establishing an interim out-of-market capacity reserve and amending triggering arrangements for the Retailer Reliability Obligation (RRO).⁸ These measures, that the ESB is currently developing, aim to keep unserved energy to no more than 0.0006% in any region in any year. Ministers agreed that these were interim steps needed to improve reliability in the immediate term while an enduring market design is developed and that they will be reviewed as part of an expanded RRO review required by 1 July 2023.⁹ As at the end of May 2020, the ESB was seeking stakeholder feedback on draft amendments to the National Electricity Rules that will implement the temporary out-of-market capacity reserve.¹⁰

Clause 4.8.9 of the NER allows AEMO to intervene in the market by issuing directions or clause 4.8.9 instructions if AEMO is satisfied that it is necessary to maintain or re-establish the power system to a secure, satisfactory or reliable operating state. Section 116 of the National Electricity Law (NEL) also allows AEMO to issue directions to take certain action if AEMO considers that it is necessary to maintain power system security or for reasons of public safety.

In contrast to the RERT, directions and instructions are a non-voluntary regulatory tool: a registered participant must use its reasonable endeavours to comply with a direction regardless of the financial implications unless to do so would, in their reasonable opinion, be a hazard to public safety, materially risk damaging equipment, or contravene any other law.¹¹

Clause 4.8.9(a1) distinguishes between directions (which require registered participants to take action in relation to scheduled plant or a market generating unit) and instructions (which require a registered participant to take some other action, i.e. not in relation to scheduled plant or a market generating unit).¹²

In the period since April 2017, more than 400 directions have been issued by AEMO to maintain system security, primarily in South Australia in response to inadequate system strength. Directions have also been used to manage voltage issues, and 65 directions were issued between 31 January and 3 March 2020 to maintain system security during the recent islanding of South Australia when storm damage resulted in the loss of the interconnector between South Australia and Victoria.¹³ Some of these directions were directions for other services, as discussed in section 5.1 of this consultation paper.

Reliability directions occur infrequently reflecting that, when the supply demand balance is tight, it is generally more profitable for generators to participate in the market voluntarily and

8 Emergency contingencies would be met through the short and medium term RERT. The long-term RERT would be replaced with reserve capacity. Energy Security Board, Reliability Standard Review, March 2020, p. 3 and 6.

9 Ibid, p. 3 and 6.

10 Energy Security Board, *Interim Reliability Measures - Reliability Reserve*, Consultation on Draft Rules, May 2020, p. 6.

11 Clause 4.8.9(c) of the NER.

12 Scheduled plant is defined in chapter 10 of the NER as 'in respect of a Registered Participant, a scheduled generating unit, a semi-scheduled generating unit, a scheduled network service or a scheduled load classified by or in respect to that Registered Participant in accordance with Chapter 2'.

13 AEMO, *Preliminary report - Victoria and South Australia separation event, 31 January 2020*, April 2020.

receive the spot price, rather than be directed and then compensated under the framework established by the NER.

In contrast, reliability directions have incurred infrequently, reflecting that the NEM historically has largely delivered a high level of reliability. However, as the supply/demand balance grows tighter, higher levels of unserved energy are forecast in coming years, and use of the RERT is becoming more common.

Intervention pricing and compensation frameworks

When AEMO intervenes in the market, it is required to comply with a number of principles and processes. If the "regional reference node test" set out in clause 3.9.3 is met, AEMO is required to implement intervention pricing when it activates the RERT or issues a direction. Intervention pricing is a practice designed to reduce market distortion and preserve investment signals by setting prices across the NEM at the level which AEMO considers would have applied but for the direction. Intervention pricing does not apply in relation to directions for services other than energy and market ancillary services as there is no market price signal to preserve for these services. Therefore, intervention pricing is not relevant for the rule change request discussed in this consultation paper.

The NER also set out a compensation framework under which compensation may be payable to directed participants and to affected participants. A directed participant is a participant which is directed to provide services. Broadly speaking, affected participants are those who are dispatched differently due to activation of the RERT or issuance of a direction.¹⁴ The rule change request discussed in this consultation paper only relates to compensation for directed participants, and does not relate to compensation for affected participants.

In the majority of cases, compensation for directed and affected participants is calculated automatically in the first instance. For example, when a participant is directed to provide energy or market ancillary services, it is compensated based on the 90th percentile price for the relevant region over the preceding 12 months.¹⁵ The determination of compensation following directions for other services adopts a different approach and is discussed in section 2.1.4 below.

2.1.2

Types of services that can be directed

At the time of issuing a direction, AEMO does not specify the type of service that is being directed, only the action to be taken by the directed participant. AEMO will advise the participant of the physical deliverable requirement and the technical reason for the direction only.¹⁶ The type of service, or more specifically, the cost recovery methodology to apply, is determined by AEMO after the situation which precipitated the direction is resolved.¹⁷

¹⁴ Chapter 10 of the NER defines "affected participant" as a scheduled generator or scheduled network service provider which is dispatched differently as a result of an intervention event. The definition also includes "eligible persons", being settlement residue distribution (SRD) unit holders who are entitled to receive an amount from AEMO where there has been a change in flow of a directional interconnector. Affected participants are compensated under clause 3.12.2 of the NER. Market customers with scheduled loads are also entitled to compensation if they are dispatched differently as a result of an intervention event. While they are compensated under the same provision as affected participants, and in a similar manner, they are not defined as "affected participants".

¹⁵ Clause 3.15.7 of the NER.

¹⁶ AEMC, *National Electricity Amendment (Cost recovery for other services directions) Rule 2010*, 13 March 2010, p. 3.

AEMO may direct participants to provide one or a combination of different services, including:

- energy
- market ancillary services
- system strength
- reserves
- other services.

The rule change request in this consultation paper relates only to compensation following directions for "other services", as detailed below in section 2.1.3.

2.1.3

Directions for services other than energy and market ancillary services

Services are only defined in the Rules in terms of their compensation and/or cost recovery mechanisms. While "energy" and "market ancillary service" are defined terms in the Rules, "energy direction" and "market ancillary service direction" (or similar) are not defined. Furthermore, "other" is only defined by virtue of the service not being compensated as an energy direction or a market ancillary service direction and then only in terms of the relevant cost recovery mechanism.¹⁸ That is, a directed participant will be compensated using the fair payment process set out in clause 3.15.7A if the direction is considered not to be a direction for energy or market ancillary services under the "carve out" test set out in clause 3.15.7A(a1). If the direction is considered to be a direction for energy or market ancillary services, the directed participant will be compensated in accordance with clause 3.15.7 (see further below).

Services other than energy and market ancillary services include:

- **Network Support and Control Ancillary Services (NSCAS)** that are primarily used to:¹⁹
 - control the voltage at different points of the electrical network to within prescribed standards
 - control the power flow on network elements to within the physical limitations of those elements
 - maintain transient and oscillatory stability within the power system following major power system events
- **System Restart Ancillary Services (SRAS)** that are reserved for contingency situations in which there has been a complete or partial system blackout and the electrical system must be restarted.

Other services are services for which a dispatch price or ancillary service price is not determined. This differs from the provision of energy or market ancillary services where there is a dynamic price for these services in the wholesale spot market. As other services do not

¹⁷ Ibid, p. 3.

¹⁸ National Electricity Rules, *Chapter 10 - Glossary*, Version 139.

¹⁹ AEMO, *Guide to Ancillary Services in the National Electricity Market*, April 2015, p. 4.

have a 'market price', their price is typically determined through contracts between AEMO and the participant providing the service.

Historically, directions for services other than energy and market ancillary services have included directions to provide:

- voltage control support by synchronising and remaining in service as a synchronous condenser²⁰
- network support to remove a localised power system security violation²¹
- reactive power²²
- a reduction in generation²³
- manual or local frequency control²⁴
- an increase in scheduled load.²⁵

Between 2005 and 2008, directions for "other" services accounted for some 90 per cent of issued directions, and approximately 99 per cent of total compensation paid. During this period, directions for network support made up the bulk of "other" services directions.²⁶

Since the commencement of the updated NSCAS framework in 2012,²⁷ which provided the AEMO the ability to acquire NSCAS for system security, the number of other services directions has reduced. More recently, directions for services other than energy and FCAS have been infrequent.

2.1.4

Compensation for directions for other services

Historical background on 'fair payment price' compensation for other services directions in the NER

The entitlement of directed participants to receive compensation was included in the NER following a review of directions by the National Electricity Market Management Company Limited (NEMMCO) and National Electricity Code Administrator (NECA) in 2000. That review concluded that directed participants should receive a "fair payment" that would cover the cost incurred by the participant in complying with the direction while minimising inequitable impacts on other market participants. The review noted the "existence of the incentive to withdraw capacity" and that this "supports the case that directed participants should be given a 'fair payment'". The report concluded that the quantum of compensation paid to directed

20 IES Advisory Services, *AEMO direction to a NSW participant on 24 Jan 2019 to operate as a synchronous condenser*, Final Report, 17 July 2019, p. 4.

21 AEMC, *National Electricity Amendment (Cost recovery for other services directions) Rule 2010*, 13 May 2010, p. 2.

22 Ibid.

23 Ibid.

24 Ibid.

25 Ibid.

26 Ibid p. 3.

27 AEMC 2011, *Network Support and Control Ancillary Services*, Rule Determination, 7 April 2011, Sydney.

participants should not be set so high as to incentivise generators to withdraw capacity in order to be directed, resulting in abnormally high profits.²⁸

Adopting a principle of setting the payment at a fair price was seen to “offer a degree of comfort to parties concerned about abnormal profits being made out of directions”.²⁹

Current arrangements in the NER

Figure 2.1 below shows the current compensation framework following directions for other services, as set out in NER clauses 3.15.7, 3.15.7A and 3.15.7B. Clause 3.15.7A(a) requires AEMO to compensate directed participants for services other than energy and FCAS which are provided pursuant to a direction. If AEMO determines that no service is provided, then no compensation is payable under either clause 3.15.7A or 3.15.7B. The application of clause 3.15.7A(a1) determines whether a direction:

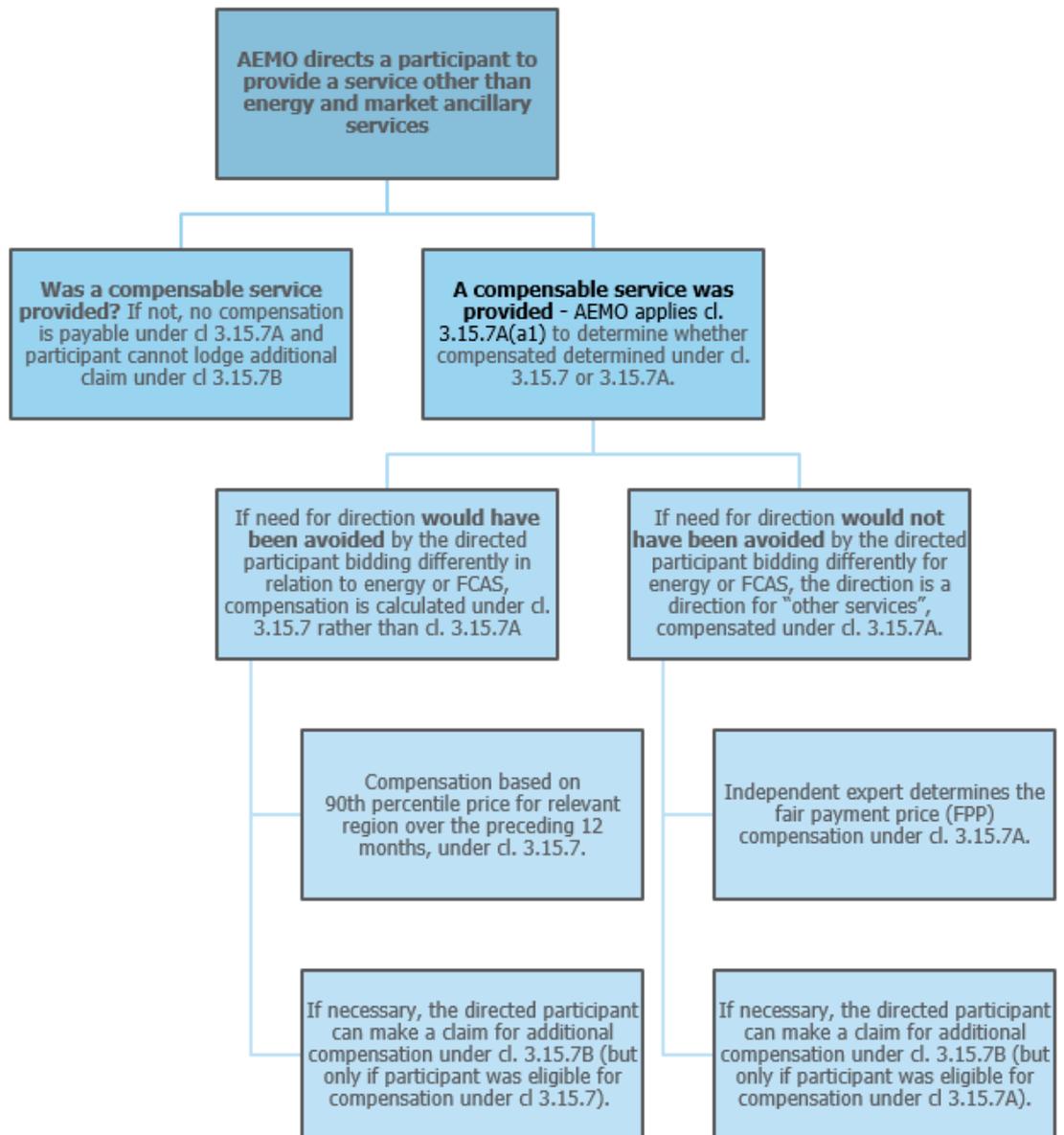
- is a direction for other services that may be compensated under NER clause 3.15.7A and, if necessary, clause 3.15.7B
- is not a direction for other services and instead should be compensated under NER clause 3.15.7 and, if necessary, 3.15.7B.

The current compensation framework is shown in Figure 2.1 below and explained further below.

28 NEMMCO and NECA, *Final Report - Power system directions in the National Electricity Market*, 2000, p. 1, p. 6 in AEMC, *Investigation into intervention mechanisms in the NEM*, Final Report, 15 August 2019, pp. 43-44.

29 Ibid.

Figure 2.1: Current compensation framework for directions for other services in the NER



Source: AEMC, based on NER clauses 3.15.7, 3.15.7A and 3.15.7B.

AEMO may only classify a direction as an "other" services direction if the need for the direction would not have been avoided by the directed participant submitting valid dispatch bids, dispatch offers or rebids for energy or FCAS.³⁰

³⁰ NER clause 3.15.7A(a1)

For example, if a synchronous generator bids available and is dispatched to generate energy, it would provide fault current (system strength), inertia and voltage control as a by-product of the generation of energy. This would avoid the need for AEMO to issue a direction to such a participant to provide fault current (system strength) or voltage control. Where such a generator does not bid available and AEMO needs to issue a direction to it, the test in clause 3.15.7A(a1) would be met and the directed participant would be compensated under clause 3.15.7 based on the 90th percentile energy or ancillary service for the 12 months immediately preceding the direction.³¹ In addition, the directed participant may apply for additional compensation through clause 3.15.7B.³²

Note that clause 3.15.7A(a1) was re-drafted to be defined by reference to the kind of service it is replacing (i.e. a service that could be "hypothetically offered"), rather than replacing an actual offer in place, by the Commission in 2010.³³

If the directed participant, bidding differently, could not have avoided the need for the direction, the direction is classified as an "other" services direction. In this case, the directed participant may receive compensation as follows:

- **Step 1 — Determine FPP:** Under clause 3.15.7A, AEMO must appoint an independent expert to determine the FPP compensation for the directed service. To determine the FPP, the independent expert must take into account:³⁴
 - (i) other relevant pricing methodologies in Australia and overseas, including but not limited to:
 - other electricity markets;
 - other markets in which the relevant service may be utilised; and
 - relevant contractual arrangements which specify a price for the relevant service; and
 - (ii) the following principles:
 - disregard the disinclination of the provider to provide the services and the urgency with which the services were needed;
 - treat the directed participant as willing to supply at the market price that would be expected to prevail for the service under similar supply and demand conditions; and
 - deem the FPP to be that which would prevail in a market for the service under similar supply and demand conditions.

The independent expert must publish a draft report that sets out its draft determination of the FPP, the methodology and assumptions used to determine the FPP and request submissions from interested parties.³⁵ The independent expert must then publish a final report that sets out the final determination of the FPP.³⁶ The FPP determined for that service is applied in all future occurrences, where there is a direction for the same

31 NER clause 3.15.7(c).

32 NER clause 3.15.7B(a2).

33 AEMC, *National Electricity Amendment (Cost Recovery for other services directions)*, 13 March 2010, p. 14.

34 NER clause 3.15.7A(c)(1)

35 NER clause 3.15.7A(c)(2)

36 NER clauses 3.15.7A(c)(3)

service, in the 12 calendar months from the date when the final determination was published.³⁷

- **Step 2 — Claim for additional compensation:** If a directed participant considers that, after the determination of the FPP in clause 3.15.7A it is still out of pocket as a result of the provision of the directed service, it may make a claim for additional compensation under clause 3.15.7B. In this case, clause 3.15.7B(a) confines compensation to:
 - the aggregate of the loss of revenue and additional net direct costs incurred by the directed participant in respect of a scheduled generating unit, semi-scheduled generating unit or scheduled network services, as the case may be, as a result of the provision of the service under direction; less
 - the amount notified to that directed participant pursuant to clause 3.15.7(c)³⁸ or clause 3.15.7A(f)³⁹; less
 - the aggregate amount the directed participant is entitled to receive in accordance with clause 3.15.6(c)⁴⁰ for the provision of a service rendered as a result of the direction.
- Where no compensation is payable under clause 3.15.7A, a directed participant cannot apply for additional compensation under clause 3.15.7B. This is because clause 3.15.7B(a) provides that, where a directed participant is entitled to compensation under clause 3.15.7 or 3.15.7A, it may seek additional compensation under clause 3.15.7B. Thus, if a directed participant is not entitled to compensation under clause 3.15.7 or 7A, it cannot seek additional compensation under clause 3.15.7B.

Compensation for other services directions is recovered from Market Customers, Market Generators, and Market Small Generation Aggregators in proportion to their customer energy, generator energy, and small generation aggregator energy respectively.⁴¹

2.2 Related projects

This section provides information on:

- the intervention review and rule changes completed by the Commission
- intervention related rule changes currently being considered by the Commission
- other rule changes that may interact with this rule change.

37 NER clause 3.15.7A(e)

38 Cl. 3.15.7(e) — AEMO must, in accordance with the intervention settlement timetable, advise each directed participant in writing of the amount the directed participant is entitled to receive pursuant to clause 3.15.7(c) or clause 3.15.7(d).

39 Cl. 3.15.7A(f) — Within 1 business day of calculating the compensation payable pursuant to clause 3.15.7A(a) by application of clause 3.15.7A(e) or pursuant to clause 3.15.7A(d), AEMO must advise the relevant directed participant in writing of the amount of compensation.

40 Cl. 3.15.6(c) — A directed participant is entitled to the trading interval amount resulting from any service, other than the service the subject of the AEMO intervention event, rendered as a consequence of that event.

41 NER clause 3.15.8(g)

2.2.1

Intervention review and rule changes completed by the Commission

This rule change is part of a wider Commission work program updating the interventions framework in the NEM. This work program commenced with the *Investigation into intervention mechanisms and system strength in the NEM*⁴² and a number of associated rule change requests which have been submitted to action the recommendations made in that investigation. These elements of the Commission's work program are introduced in this section.

Interventions investigation

In response to the increasing use of intervention mechanisms, the Commission commenced an investigation into intervention mechanisms and system strength in the NEM with the release of a consultation paper in April 2019.⁴³

The interventions investigation examined a number of issues relating to intervention mechanisms, including intervention pricing, compensation for directed and affected participants, mandatory restrictions, counteractions, the hierarchy of intervention mechanisms and price setting during RERT events. A final report, referred to in this paper as the *Interventions investigation final report (IIFR)*, was published in August 2019, with the Commission noting that further consultation would be undertaken when recommended rule change requests were submitted.⁴⁴

Rule changes recently completed by the Commission

A number of recommendations in the *Interventions investigation final report* have already been actioned. These include the following rule changes:

- **Application of the regional reference node test to the reliability and emergency reserve trader** — Changes to the regional reference node test set out in clause 3.9.3 of the NER were made in December 2019.⁴⁵ The RRN test is used to determine whether AEMO should implement intervention pricing. Under the revised RRN test, intervention pricing is to be implemented where an AEMO intervention event is for the purpose of obtaining a service for which there is a market price (i.e. energy or market ancillary services, or a service which is a direct substitute for these). Where the purpose of an intervention is to obtain a service for which a price is not determined by the dispatch algorithm — i.e. there is no market price (e.g. voltage control or system strength), intervention pricing will not apply. This recognises that, in such circumstances, there is no relevant market price signal to preserve.
- **Application of compensation in relation to AEMO interventions rule** — Changes were also made to the circumstances in which affected participant compensation is payable in connection with an intervention event. Under the revised approach, affected

42 AEMC, *Investigation into intervention mechanisms and system strength in the NEM, Consultation paper*, 4 April 2019.

43 AEMC, *Investigation into intervention mechanisms and system strength in the NEM, Consultation paper*, 4 April 2019.

44 AEMC, *Investigation into intervention mechanisms in the NEM, Final report*, August 2019.

45 AEMC, *Application of the regional reference node test to the reliability and emergency reserve trader, Rule determination*, 19 December 2019.

participant compensation is only payable in circumstances where an AEMO intervention event triggers intervention pricing in accordance with the revised RRN test.⁴⁶

- **Threshold for participant compensation following market intervention** — As part of the same package of rule changes, the compensation threshold applicable to compensation payable to directed participants and affected participants was also amended. Under the revised approach, the \$5,000 compensation threshold applies per intervention event rather than per trading interval (as was previously the case). This minimises the potential for directed and affected participants to incur loss as a result of AEMO intervention events.⁴⁷

2.2.2

Other intervention rule changes currently being considered by the Commission

In addition to the above changes, and the rule change request which is the subject of this consultation paper, AEMO has submitted a number of other rule change requests dealing with aspects of the interventions framework. These will be the subject of separate rule change processes.

- **Removal of intervention hierarchy**⁴⁸ — AEMO has proposed that the requirement for AEMO to exercise RERT before issuing directions or instructions should be removed from the Rules and replaced by a principle requiring AEMO to endeavour to minimise the costs and maximise the effectiveness of an intervention in the NEM.
- **Affected participant compensation for FCAS losses**⁴⁹ — AEMO has proposed to include FCAS prices amongst the compensable factors to be considered in determining additional compensation in a non-restrictive fashion.
- **Recovering affected participant compensation for RERT activation**⁵⁰ — AEMO has proposed changes to RERT cost recovery arrangements to recover costs associated with compensating participants affected by a RERT activation from market customers in the region in which the RERT was exercised, allocated in proportion to the energy consumed in a trading interval.
- **Compensation for scheduled loads affected by interventions**⁵¹ — AEMO has proposed changes to the formula for calculating Affected Participant compensation, specifically, changing the term of BidP in the formula for calculating affected participant compensation for a schedule load (market customer).
- **Removal of mandatory restriction framework**⁵² - AEMO has proposed the removal of the mandatory restriction framework from the NEM.

46 AEMC, *Application of compensation in relation to AEMO interventions, Rule determination*, 19 December 2019.

47 AEMC, *Threshold for participant compensation following market intervention, Rule determination*, 19 December 2019.

48 For further information, see <https://www.aemc.gov.au/rule-changes/removal-intervention-hierarchy>

49 For further information see <https://www.aemc.gov.au/rule-changes/affected-participant-compensation-fcas-losses>

50 For further information see <https://www.aemc.gov.au/rule-changes/recovering-affected-participant-compensation-rert-activation>

51 For further information see <https://www.aemc.gov.au/rule-changes/compensation-scheduled-loads-affected-interventions>

52 For further information, see <https://www.aemc.gov.au/rule-changes/removal-mandatory-restrictions-framework>

- **Removal of obligation to counteract during intervention**⁵³ — AEMO has proposed the removal of the current obligation on AEMO to counteract during AEMO intervention events from the NER.

The status of these rule change processes is as outlined below:

- On 28 May 2020, the AEMC initiated three rule change requests on *Recovering affected participant compensation for RERT activation*, *Removal of mandatory restrictions framework* and *Removal of obligations to counteract during intervention* through a consolidated and fast-tracked process.⁵⁴
- On 28 May 2020, the AEMC initiated the *Removal of intervention hierarchy* rule change through a fast-tracked process.⁵⁵
- On 11 June 2020, the AEMC initiated two rule change requests on *Compensation for scheduled loads affected by interventions* and *Affected participant compensation for FCAS losses* through a consolidated and standard rule change process.

2.2.3

Other relevant energy market developments

The following energy market developments that are being considered by the AEMC and/or the Energy Security Board (ESB) have the potential to impact the future application of intervention and compensation frameworks in the NEM. The AEMC will be mindful of these developments in the rule change process.

Post 2025 market design

In March 2019, the COAG Energy Council requested the Energy Security Board to advise on a long-term, fit for purpose market framework to support reliability, modifying the NEM as necessary to meet the needs of future diverse sources of non-dispatchable generation and flexible resources including demand side response, storage and distributed energy resource participation. The post 2025 program has been established to oversee and coordinate this program of work, bringing together multiple forward-looking reform initiatives to develop alternative market designs for recommendation to the COAG Energy Council.

There are seven core market design initiatives being progressed:

- Investment signals for reliability — this workstream is evaluating the case for introduction of a mechanism to incentivise investment in resources, and the pros and cons of specific mechanisms.
- Aging thermal generator strategy — the focus of this work will be on the market arrangements and regulatory approaches to ensuring that sufficient replacement capacity and system services are available to replace large, aging thermal generators as they exit the NEM over the coming decades.

53 For more information, see <https://www.aemc.gov.au/rule-changes/removal-obligation-counteract-during-intervention>

54 For more information, see <https://www.aemc.gov.au/rule-changes/changes-intervention-mechanisms>

55 For more information, see <https://www.aemc.gov.au/rule-changes/removal-intervention-hierarchy>

- Essential system services — the focus of this work will be to develop an enduring regulatory framework that will enable the market operator and participants to meet future system services needs
- Ahead markets — the ESB considers that security constrained economic dispatch of energy-only is, by itself, no longer sufficient to maintain system security. The ESB considers that new system services need to be established and remunerated and an ahead market is required to ensure system security going forward. The ESB will provide advice to COAG on a design for ahead market and timing of implementation by the end of 2020. An ahead mechanism for the NEM can take a range of forms.
- Two-sided markets — A two-sided market is a market model that promotes direct interaction between suppliers and customers. There are a number of benefits to consumers from progressively moving to a two-sided market, who will be better able to manage their consumptions and costs.
- DER markets — scope for this workstream is currently under development.
- COGATI review – this review will substantively address the key challenge of integrating variable renewable energy into the electricity system, by the proposal to implement locational marginal pricing and financial transmission rights.

The ESB is due to provide detailed analysis by the end of 2020, along with the final 2025 report.⁵⁶

There are interactions between these workstreams under 2025 and the interventions work program. The Commission and the ESB are coordinating on these pieces of work. For example, the recent paper on the ahead market workstream that was published, discussed an option of a unit commitment for security (UCS) process which would be used in the event that market responses as part of the pre-dispatch process are insufficient to provide required services. This would aim to provide confidence that critical resources will be available to deliver secure and reliable electricity supply in real-time.

The ESB notes that the need for the UCS is illustrated by the frequent use of directions to maintain system strength in South Australia.

The ESB paper notes that even if the UCS process was in place AEMO would still have the capability to issue an ad hoc intervention outside the process if an unexpected system gap arises. However, the implementation of the UCS process will likely greatly reduce the need of such ad hoc directions.⁵⁷

AEMC system services work program

In coordination with the ESB's work, the AEMC is progressing a number of rule change requests which focus on the issue of how best to procure and value system services such as system strength, inertia, frequency response and operating reserves. The development of mechanisms to value and procure system services is designed to facilitate an efficient and proactive approach to procuring required services, and reduce reliance on intervention

⁵⁶ Energy Security Board, *Moving to a two-sided market*, April 2020, p. i.

⁵⁷ *ibid*, pp 29-30.

mechanisms. Therefore, there are interactions between these rule changes and this piece of work, particularly in relation to "other services". Again, the AEMC is coordinating closely on these different pieces of work. It is likely that whatever future market design will occur intervention mechanisms will continue to be needed.

3 RULE CHANGE REQUEST

This chapter provides a summary of the issues and proposed solution in the rule change request, as outlined by the rule change proponent.

The rule change request does include a proposed rule.

The rule change request may be found on the AEMC website, www.aemc.gov.au.

3.1 Issues with the current arrangements

The proponent considers that there are issues with the current arrangements for compensation following directions for services other than energy and market ancillary services, as explained below.

AEMO considers that the two-step process is not necessary for participants to recover their costs. The first compensation stage involves an independent expert determining a FPP under clause 3.15.7A. If the directed participant considers that the FPP does not cover their out of pocket costs, they can make a claim for additional compensation through a second step under clause 3.15.7B.⁵⁸ AEMO notes that clause 3.15.7A(c)(2)(iv) states that the independent expert must produce a draft report on FPP and that it must request submissions from interested parties, which would include the directed participant.⁵⁹ AEMO suggests that, if the directed participant felt that the FPP draft determination did not recover their costs, the directed participant could make a submission to raise that concern, allowing the independent expert to factor this into its FPP final determination.⁶⁰

AEMO also considers that the current two stage compensation process delays the time to finalise compensation. AEMO notes that there is a risk that the independent expert may be unable to finalise compensation within the 30-week routine revision process.⁶¹

AEMO notes that the current wording of clause 3.15.7B invites directed participants to submit an additional claim for compensation if they consider that their costs have not been recovered through clause 3.15.7A. AEMO suggests that this provides participants directed for other services to have a second or third opportunity to raise concerns regarding their cost recovery. AEMO considers that the participant does not require this additional opportunity.⁶² AEMO suggests that, following receipt of submissions on the FPP draft determination, the independent expert will always have sufficient information to make the FPP final determination.⁶³ Therefore, inviting additional compensation claims in clause 3.15.7B would not resolve any difference of views between the directed participant and the independent expert on what constitutes a FPP.⁶⁴

58 AEMO, rule change request, p. 3.

59 AEMO, rule change request, p. 3.

60 Ibid, p. 3.

61 Ibid, pp. 3-4.

62 AEMO, rule change request, p. 3.

63 Ibid, p. 3.

64 Ibid, p. 3.

3.2 Proposed solution - remove additional compensation claims for services other than energy and market ancillary services

In order to address the issues raised in relation to the compensation framework following directions for other services, AEMO proposes to change the process for determining compensation for other services from two steps to one step, such that the FPP and additional compensation can be determined at the same time. AEMO's proposal is outlined below.

The current two-step compensation framework for other services directions would be replaced with a single step process, in which the FPP and additional compensation could be determined at the same time.⁶⁵

The proponent's proposed rule is intended to give effect to this change by removing references to clause 3.15.7A and clause 3.15.7A(f) from clause 3.15.7B(a).⁶⁶

The proponent suggests that its proposed rule would still allow a participant directed for other services to recover its costs.⁶⁷

The proponent suggests that the independent expert should receive the directed participant's cost and loss information in a new single step compensation process.⁶⁸ However, the Commission notes that the rule change request does not propose any amendments to clause 3.15.7A to allow for this as explained in chapter 6.2.1 of this consultation paper.

According to the proponent, the proposed changes would contribute to the NEO as they:⁶⁹

- strike a fair balance between the interests of market participants and consumers with respect to the cost of electricity
- maintain the efficient operation of electricity services for the long-term interests of consumers with respect to price and security of supply.

The proponent also considered that:⁷⁰

- if the rule change was made, AEMO could apply the proposed rule immediately as transitional provisions are not required
- there are no implementation costs for AEMO or market participants to implement the proposed rule.

The proponent included a proposed rule in its rule change request.⁷¹

65 AEMO, rule change request, p. 3.

66 Ibid, p. 4.

67 AEMO, rule change request, p. 3.

68 AEMO, rule change request, p. 3.

69 AEMO, rule change request, p. 4.

70 AEMO, rule change request, p. 4.

71 AEMO, rule change request, p. 5.

4 ASSESSMENT FRAMEWORK

The Commission's assessment of the rule change request on *Compensation following directions for services other than energy and market ancillary services* considers whether the proposed rule promotes the national electricity objective (NEO).

4.1 Achieving the NEO

Under the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).⁷² This is the decision making framework that the Commission must apply.

The NEO is:⁷³

To promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to -

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.

Based on a preliminary assessment of the rule change request, the Commission considers that the most relevant aspects of the NEO are the efficient investment in, and efficient operation and use of, electricity services with respect to the price and security of supply of electricity, and the security of the national electricity system.

4.2 Proposed assessment framework

To determine whether the rule change proposal is likely to promote the NEO, the Commission will assess the rule change request against an assessment framework.

At this stage, the Commission is seeking stakeholder views on its proposed assessment framework which includes the following criteria:

- **Transparency and predictability** — does the proposed approach provide clear and predictability arrangements for participants affected by interventions, thereby reducing uncertainty?
- **Efficiency** — is the proposed approach efficient in terms of administrative costs and timing for participants? Does it send clear operational and investment signals to participants?
- **Risk allocation** — risk allocation and the accountability for investment and operational decisions should rest with those parties best placed to manage them. Does the proposed approach appropriately allocate risk to those parties best able to manage them?
- **Consistency** — do the rules adopt a consistent approach where appropriate?

⁷² Section 88 of the NEL.

⁷³ Section 7 of the NEL.

QUESTION 1: ASSESSMENT FRAMEWORK

1. Is the assessment framework appropriate for considering the proposed rule change?
2. Are there other relevant considerations that should be included in assessing the proposed rule changes?

4.3 Making a more preferable rule

Under s. 91A of the NEL, the Commission may make a rule that is different (including materially different) to a proposed rule (a more preferable rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule will or is likely to better contribute to the achievement of the NEO.

4.4 Making a differential rule

Under the Northern Territory legislation adopting the NEL, the Commission may make a differential rule if, having regard to any relevant MCE statement of policy principles, a different rule will, or is likely to, better contribute to the achievement of the NEO than a uniform rule. A differential rule is a rule that:

- varies in its term as between:
 - the national electricity system, and
 - one or more, or all, of the local electricity systems, or
- does not have effect with respect to one or more of those systems

but is not a jurisdictional derogation, participant derogation or rule that has effect with respect to an adoptive jurisdiction for the purpose of s. 91(8) of the NEL.

As the proposed rule related to parts of the NER that currently do not apply in the Northern Territory, the Commission has not assessed the proposed rule against additional elements required by the Northern Territory legislation.⁷⁴

⁷⁴ From 1 July 2016, the NER, as amended from time to time, apply in the NT, subject to derogations set out in regulations made under the NT legislation adopting the NEL. Under those regulations, only certain parts of the NER have been adopted in the NT. (See the AEMC website for the NER that applies in the NT.) National Electricity (Northern Territory) (National Uniform Legislation) Act 2015.

5 ISSUES FOR CONSULTATION - CURRENT ARRANGEMENTS

This chapter identifies issues for consultation in relation to the current arrangements for compensation following directions for other services, relating to:

- the application of NER clauses 3.15.7A and 3.15.7B between 2016 and 2020
- the administrative efficiency of the current two-step compensation process for compensation following other services directions
- "second guessing" of the independent expert's FPP determination.

5.1 Application of clauses 3.15.7A and 3.15.7B between 2016 and 2020

Prior to the creation of the NSCAS framework in 2012, AEMO issued a large number of directions to obtain network support services (as discussed in chapter 2.1). More recently, there have been relatively few instances involving directions for services other than energy and FCAS. Table 5.1 below summarises directions for other services which have been the subject of independent expert reports between 2016 and 2020.

Table 5.1: Summary of “other services” directions between 2016-2020

DATE	PARTICIPANT	DIRECTION	FPP COMPENSATION UNDER CLAUSE 3.15.7A	ADDITIONAL CLAIM UNDER CLAUSE 3.15.7B
1 Dec 2016	Pelican Point power station (Engie/Mitsui)	Direction to largest operating SA generating unit to reduce output to level consistent with available contingency FCAS and maintain secure operating state.	Independent expert determined that no compensation was payable on the basis that no service had been provided.	Independent expert determined that a service had in fact been provided (a substitute for FCAS) and awarded \$254,703 compensation for loss of revenue for reduced energy and FCAS provision.
	Mortlake power station (Origin Energy)	Direction for Mortlake to shut down in order to restore the power system to a secure state.	No compensation was awarded as no service had been provided.	No service had been provided and thus no compensation was payable.
24 Jan 2019	Tumut 3 unit 2 (Snowy Hydro)	Direction to synchronise Tumut 3, unit 2 and remain in service as	Independent expert awarded compensation of \$16,874.30.	No claim was lodged for additional compensation under clause 3.15.7B.

DATE	PARTICIPANT	DIRECTION	FPP COMPENSATION UNDER CLAUSE 3.15.7A	ADDITIONAL CLAIM UNDER CLAUSE 3.15.7B
		synchronous condenser to provide voltage support.	Based on historical contract for service that had expired.	
16 Nov 2019	Canunda wind farm (Engie/Mitsui)	Direction for generator to reduce its output to zero and disconnect to stop a system strength constraint from binding during SA islanding event.	No compensation as participant didn't provide a service.	No additional compensation claim lodged under clause 3.15.7B.
Early 2020	Battery Energy Storage Systems	A number of directions to batteries to hold a state of charge (with 0 MW output) during SA islanding of January to February 2020.	AEMO has engaged independent experts to determine the FPP for these directions.	Once FPP has been determined for each direction, the directed participant may lodge a claim for additional compensation (but only if it is found to be eligible for compensation under clause 3.15.7A).
Early 2020	Non-scheduled wind farms in SA	23 directions to keep non-scheduled wind farms off-line during SA islanding of January of February 2020.	AEMO has not engaged an independent expert to determine FPP compensation as the participant did not provide a service.	Directed participants cannot claim additional compensation under clause 3.15.7B if they are not eligible for compensation under either clause 3.15.7 or 7A.

Source: AEMC, based on AEMO intervention reports. AEMO Communications, *Appointment of an independent expert*, 28 April 2020

Appendix A provides background information on, and a preliminary analysis of, the application of clauses 3.15.7A and 3.15.7B for other services directions between 2016 and 2020. This preliminary analysis identified issues that are relevant for this rule change request. These issues are summarised below.

Summary of issues related to determination of compensation for other services under clause 3.15.7A (for more information refer to Appendix A)

- Determining whether a directed participant provided a compensable service can be complex and involves detailed analysis of the specific circumstances of the direction
- It appears that previous determinations by independent experts that a direction was not compensable under clause 3.15.7A have been used as the basis of AEMO's recent decisions that a service was not provided by a participant directed for other services, and hence that no compensation is payable under clause 3.15.7A. Further information, that is not yet available, is required to clarify whether the conditions associated with each of the recent directions to non-scheduled wind farms during the islanding of South Australia were comparable with previous directions where it was determined that no service was provided and no compensation was allowed under clause 3.15.7A (e.g. the Canunda and Mortlake directions).

Summary of issues related to determination of compensation for other services under clause 3.15.7B (for more information refer to Appendix A)

- In relation to one direction, the independent expert's views changed as to whether a directed participant did or did not provide a compensable service (this reflected a re-interpretation of clause 3.15.7B(a)(1) which refers to additional compensation for *the provision of the service under direction*).
- In relation to one direction, an independent expert referred to factors for determining additional compensation (under clause 3.15.7B) as relevant to the calculation of the FPP (under clause 3.15.7A).
- In future, if the NER are amended as proposed in AEMO's rule change request, directed participants which are compensated under clause 3.15.7A would not have recourse to additional compensation claims under clause 3.15.7B. As a result, directed participants which are compensated under clause 3.15.7A rather than clause 3.15.7 will have their compensation calculated in a different way and will follow a different process (i.e. no second claim for additional compensation).

QUESTION 2: APPLICATION OF CLAUSE 3.15.7A(A1) TO DATE

Is clause 3.15.7A(a1) and its application clear?

Do stakeholders consider there could be benefit in amending NER clause 3.15.7A(a1) to clarify when a directed service is classified as an "other" service and compensated under clause 3.15.7A and when a directed service is not classified as an "other" service and is compensated under clause 3.15.7?

Is clause 3.15.7A(a1) appropriate for the current and changing mix of services provided by participants (i.e. combination of energy, FCAS and other services that can be provided by an individual participant)?

5.2 Administrative efficiency of current two-step compensation process

The rule change proponent suggests that the current two-step process for compensation following other services directions is not necessary for participants to recover their costs and delays the time to finalise compensation. More detail on the issues raised by the rule change proposal are set out in chapter 3 of this consultation paper.

The purpose of the directions compensation framework is to make participants whole (not out of pocket) in relation to services provided under direction. The current framework provides a two-step process where participants directed for other services can be compensated through the FPP process⁷⁵ and, if necessary, a claim for additional compensation (noting this is only available where the participant is eligible for compensation under clause 3.15.7A).⁷⁶

AEMO suggests that the directed participant does not need the ability to make an additional claim for compensation because, in the determination of the FPP, the directed participant has the ability to make submissions to the independent expert. If the directed participant considers that the FPP draft determination does not cover its full costs (i.e. leaves it out of pocket), it could raise this in submissions to the draft report, and the independent expert could consider factoring this into its FPP final determination.

Under current arrangements, the independent expert is not able to consider loss of revenue or net direct costs (if the directed participant provides them) in the determination of the FPP through clause 3.15.7A. Currently, loss of revenue and net direct costs can only be considered in the additional compensation claim process in clause 3.15.7B. In section 6.1 an alternative option is discussed of amending clause 3.15.7A to allow the independent expert to take into account loss of revenue and net direct costs.

AEMO notes that the two-step process delays the time to finalise compensation and that there is a risk that the independent expert is unable to finalise compensation within 30 weeks (this timeframe was amended in the final rule for the *National Electricity Amendment (Intervention compensation and settlement processes) Rule 2019* that commenced on 30 May 2019).⁷⁷

In terms of materiality, between 2016 and 2019 there were four directions for services other than energy or FCAS, as outlined in section 5.1. In 2020, due to the islanding of South Australia in January and February, there has been a large increase in the number of interventions where AEMO directed a participant other than in relation to energy or FCAS.

The Commission seeks stakeholder views on whether the current two stage process is necessary, administratively efficient and finalises compensation in a timely manner.

⁷⁵ NER clause 3.15.7A

⁷⁶ NER clause 3.15.7B

⁷⁷ AEMO, rule change request, p. 2.

QUESTION 3: ADMINISTRATIVE EFFICIENCY OF CURRENT ARRANGEMENTS

What are stakeholder views on the two stage process for other services direction compensation, including on its necessity and efficiency (both in terms of timeliness and cost)?

If there is an issue with the current arrangements, how material is it currently and how material could it be in future due to potential changes in the power system's conditions?

6 ISSUES FOR CONSULTATION - PROPOSED SOLUTION, ALTERNATIVE OPTIONS AND OTHER CONSIDERATIONS

This chapter identifies issues for consultation in relation to the proposed solution to remove claims for additional compensation for other services directions, alternative options and other considerations relating to the rule change request in this consultation paper.

6.1 Proposed solution to remove additional compensation claims for other services directions

To address the issues relating to the current arrangements for compensation following directions for other services, AEMO suggests:

- improving administrative efficiency by changing the process to determine compensation for other services directions from two steps to a single step, such that the FPP and additional compensation can be determined at the same time
- allowing the independent expert to take into account cost and loss information at the start of this new single step compensation process.

AEMO suggests that these changes would still allow a participant directed for other services to recover their out of pocket costs.⁷⁸

6.1.1 Administrative efficiency of proposed single step compensation framework

The Commission seeks stakeholder views on whether the proposal to combine the determination of the FPP and additional compensation into a single step process would be more administratively efficient (in terms of timeliness and administrative cost) than the current two-step compensation process for other services directions.

The proposal to remove this second step raises questions about what options a directed participant has to engage with AEMO if the participant does not agree with the position taken by AEMO under clause 3.15.7A (i.e. if AEMO determines that no service has been provided and hence there is no case to appoint an independent expert), or if a participant does not agree with the findings of an independent expert (if one is appointed). This will be particularly important for directed participants if they incur costs in the course of complying with the direction (even if they are found not to have provided a compensable service).

Three issues flow from this. First, it will be important that clause 3.15.7A(a1) is applied in a consistent and predictable manner (since its application will not only determine whether the 90th percentile price compensation framework under clause 3.15.7 is applicable, but also whether there will be an option to seek additional compensation under clause 3.15.7B).

Secondly, a question arises as to whether there should be a process in clause 3.15.7A by which AEMO determines whether a compensable service has been provided, and then

⁷⁸ AEMO, rule change request, p. 3.

publishes its determination. Clause 3.15.7A currently includes machinery provisions to promote transparency and make sure that information is provided to relevant directed participants, and such participants are also given the opportunity to provide input to the independent expert. However, these processes are not triggered in the event AEMO determines that no compensable service has been provided and thus there is no need to appoint an independent expert. It may be appropriate to formalise this process – for example by requiring AEMO to publish its determination that no compensable service has been provided. Consideration could also be given to allowing directed participants to provide input in relation to that determination.

Finally, where a directed participant is found not to have provided a compensable service, it may be appropriate to provide a process whereby it can still seek compensation if it has incurred costs in the course of complying with the direction. This could focus on costs incurred rather than loss of revenue; compensation for the latter would likely not be appropriate in circumstances where no service had been provided.

The potential for such a situation to arise was recognised by the independent expert in its FPP determination report relating to Pelican Point. While it found in that report that no service had been provided and hence no compensation was payable, it stated: "We are mindful that generators can incur costs as a result of reducing output or, particularly, shutting down. Most markets provide a mechanism whereby generators that are compelled to change their operations can recover the costs of so doing if market revenues are insufficient. The NER makes provision for this under clause 3.15.7B in the event that compensation under clause 3.15.7A does not cover the additional net direct costs of providing the services."⁷⁹

If recourse to clause 3.15.7B is removed, as proposed by AEMO, it may be appropriate to provide some other mechanism to allow a directed participant to recoup costs incurred while complying with a direction, even where no compensable service has been provided. This is important in relation to both compensation under clause 3.15.7 and clause 3.15.7A since no compensation is payable under clause 3.15.7B if the participant is not eligible for compensation under either clause 3.15.7 or 3.15.7A.

For example, if AEMO had applied clause 3.15.7A(a1) differently in relation to the direction to Tumut 3 to run in synchronous condenser mode and provide voltage support, compensation would have been payable under clause 3.15.7.⁸⁰ Under 3.15.7, compensation is calculated based on the amount of energy generated under direction, or the amount of FCAS enabled, multiplied by the 90th percentile price for the service over the preceding 12 months in the relevant region. Given that Tumut 3 was running as a synchronous condenser, it did not generate energy and hence compensation payable under this provision would have been zero.

79 Synergies Economic Consulting, *Final report on compensation related to directions that occurred on 1 December 2016*, June 2017, p. 22.

80 This would be on the basis that, had Tumut 3 bid differently with respect to energy or FCAS, the need for the direction would have been avoided as voltage support would have been provided as a by product of the generation of energy.

Due to the wording of clause 3.15.7B(a), Tumut 3 would not then have been able to claim additional compensation to recover its costs as it was not "entitled to compensation" under clause 3.15.7.

There have been other recent directions for other services where it was determined that the directed participant did not provide a service that could be compensated under clause 3.15.7A. For example, the direction to Mortlake power station in December 2016. In this case, the current wording of clause 3.15.7B(a) does not allow a directed participant which was not entitled to compensation under clause 3.15.7A to make a claim for additional compensation in clause 3.15.7B.

Under the current arrangements, NER clause 3.15.7B(a)(1) refers to compensation for loss of revenue and additional net direct costs incurred by the directed participant "as a result of the provision of the services under direction".

An alternative phrase to "as a result of the provision of the services under direction" could potentially be "as a result of compliance with the direction". This could recognise the point made by an independent expert that, while a directed participant may not provide services under direction, the directed participant may still incur costs in complying with a direction. For example, if AEMO needed a generator to desynchronise quickly in response to a direction, this could result in additional maintenance costs. Such costs could arguably be compensable, even if it was determined that no compensation was payable under clause 3.15.7A on the basis that no service was provided.

QUESTION 4: PROPOSED SOLUTION - SINGLE STEP COMPENSATION PROCESS

Would the proposal to combine the determination of the FPP and additional compensation into a single step process be more administratively efficient (in terms of timeliness and administrative cost) than the current two-step compensation process for other services direction?

Should there be a process in clause 3.15.7A by which AEMO determines whether a compensable service has been provided, and then publishes its determination?

Should there be a process by which a directed participant which has not provided a compensable service can still seek compensation for any costs incurred in the course of complying with the direction?

In clause 3.15.7B(a)(1) is the phrase "as a result of the provision of the service under direction" clear? If not, is "as a result of compliance with the direction" or another alternative preferable?

6.1.2

Incentives

The Commission is interested in whether changing to a single step process may change incentives for directed participants around the way in which they approach the compensation process, for example the information they choose to provide the independent expert. For

example, does it change participants' incentives to physical respond to provide services other than energy and/or market ancillary services?

QUESTION 5: INCENTIVES

Would the proposed single step process change incentives for directed participants?

6.1.3

Appropriate allocation of risk

The rule change proponent suggests that, for participants directed for other services, removing the ability to make a claim for additional costs under clause 3.15.7B would not leave the directed participant out of pocket. The proponent suggests that the proposed rule "strikes a fair balance between the interests of market participants and consumers in respect of the cost of electricity."⁸¹

The Commission notes two important matters relevant to the allocation of risk in the proposed rule.

Firstly, inconsistent application of clause 3.15.7A(a1). The way in which this clause is applied in practice determines whether or not a direction is classified as a direction for other services that is compensable under clause 3.15.7A. As explained in chapter 5, the application of clause 3.15.7A(a1) appears to have been somewhat inconsistent in recent years, which may create confusion for stakeholders as to how it would be applied. As discussed in section 6.1.1, its application will not only determine whether the 90th percentile price compensation framework under clause 3.15.7 is applicable, but also whether there will be an option to seek additional compensation under clause 3.15.7B. This is important when considering the interaction with the lack of clarity in the proposed rule over whether 'additional compensation' can be taken into account, as discussed below.

Secondly, lack of clarity over inclusion of cost and loss information in the proposed rule. In the rule change request, the proponent suggests that the independent expert should receive the directed participant's cost and loss information in a new single step compensation process.⁸² However, the rule change request does not propose any amendments to clause 3.15.7A, suggesting only amendments to clause 3.15.7B to remove the ability of "other services" directed participants to lodge a claim for additional compensation.⁸³ To reflect what appears to be the intent of the rule change request in the proposed rule, clause 3.15.7A is also likely to need to be amended to allow the independent expert to take into account 'loss of revenue and net direct cost' information so that the independent expert can determine 'additional compensation' at the same time as the FPP.

81 AEMO, rule change request, p. 4.

82 AEMO, rule change request, p. 3.

83 AEMO, rule change request, p. 5.

Each of the two matters above, by themselves and in combination, are likely to reduce the ability of participants to recover their out of pocket costs relating to directions for other services.

QUESTION 6: RISK ALLOCATION

Does AEMO's proposed rule appropriately allocate any risks for directed participants in recovering costs related to other services directions?

6.2 Alternative options

This section discusses some potential alternative options to address the issues raised in the rule change request, including:

- amending the information that needs to be considered by an independent expert in determining compensation for other services directions
- amending the parties that can determine compensation for other services directions
- other alternative options.

The Commission is raising these alternative options to invite stakeholder feedback on them. The Commission has not formed a view at this stage as to whether any of these alternative options are likely to better meet the NEO than the current arrangements or the rule change proposal. The Commission also welcomes other alternative options from stakeholders themselves.

6.2.1 **Alternative option to amend the information that needs to be considered by an independent expert**

A key purpose of the current compensation framework is that the directed participant is not out of pocket for the provision of the service under direction. The rule change proposal seeks to retain this purpose, while improving the administrative efficiency of the compensation process.

In the proposed single step compensation process, AEMO suggests that the independent expert should receive the directed participant's cost and loss information,⁸⁴ however it does not propose any amendments to clause 3.15.7A to allow for this.⁸⁵ AEMO suggests only amendments to clause 3.15.7B to remove the ability of "other services" directed participants to lodge a claim for additional compensation.⁸⁶ To reflect what appears to be the intent of the rule change request, clause 3.15.7A would also need to be amended to allow the independent expert to take into account 'loss of revenue and net direct cost' information so that the independent expert can determine 'additional compensation' at the same time as the FPP.

⁸⁴ AEMO, rule change request, p. 3.

⁸⁵ Instead the rule change request retains the current pricing methodologies for determining the FPP in clause 3.15.7A.

⁸⁶ AEMO, rule change request, p. 5.

If the compensation framework for other services directions is amended to be a single step process, amendments to the information that needs to be considered in determining compensation could be considered, as outlined below:

- **Allow compensation to be determined for 'loss of revenue and net direct costs' in clause 3.15.7A.** This could be similar to the calculation of additional compensation in clause 3.15.7B(a), however different in that it may not be 'additional' to compensation determined in clause 3.15.7A, if compensation is determined through a single step process. This means that instead of referring to 'the loss of revenue and additional net direct costs' it could refer to 'the loss of revenue and net direct costs'.
- **Remove existing pricing methodologies from clause 3.15.7A.** Currently, in determining the FPP, the independent expert is required to consider other pricing methodologies in Australia and overseas, including but not limited to:
 - other electricity markets
 - other markets in which the relevant service may be utilised, and
 - relevant contractual arrangements which specify a price for the relevant service.

There may be an administrative efficiency trade-off in relation to whether the independent expert needs to consider pricing methodologies in other electricity markets and other markets where the relevant service may be utilised.⁸⁷

On the one hand retaining these pricing methodologies⁸⁸ provides flexibility for the independent expert to determine the FPP using these principles, if they are relevant for a particular direction scenario. The independent expert took into account approaches in jurisdictions in the United States in determining the FPP for the direction to Tumut 3 but ultimately determined the FPP based on an earlier contract between AEMO and the participant.⁸⁹ In no case has regard for international pricing approaches been determinative of the amount of compensation payable.

On the other hand, requiring the independent expert to consider whether pricing methodologies in overseas and other markets are relevant adds complexity and administrative burden and could create perverse incentives. In two FPP determinations,⁹⁰ the independent expert concluded that pricing and compensation approaches used in other jurisdictions did not provide a strong case for compensating the directed participant in the NEM for those directions. The independent expert's reasons for this conclusion included that:⁹¹

- Australia has adopted a system based generally on not compensating constrained off generation, and there is no compelling evidence that the alternative would be superior at this time

⁸⁷ NER clauses 3.15.7A(c)(1)(A) and (B)

⁸⁸ Ibid.

⁸⁹ IES Advisory Services, AEMO Direction to a NSW participant on 24 Jan 2019 to operate a unit as a synchronous condenser, Final report, 17 July 2019, p. 7.

⁹⁰ Synergies, *Final report on compensation relating to directions that occurred on 1 December 2016, June 2017 and Synergies, Independent Expert Report - Compensation for Directions 16 November 2019*, Final Report, 3 March 2020, p. 18.

⁹¹ Synergies, *Independent Expert Report - Compensation for Directions 16 November 2019*, Final report, 3 March 2020, p. 18.

- where compensation is paid, it is important that other measures are in place to minimise the extent of the compensation, not all of which are currently in place in Australia
- concern that paying compensation for generation that is constrained off due to a direction could widen the scope for generator gaming in ways that are difficult to predict.

This last point is important. Applying an approach adopted in another market to the particular context of the NEM entails risk. The regulatory frameworks governing the NEM, and the physical characteristics of the Australian power system, are unique. Transplanting pricing approaches from other market frameworks into the NEM, via the FPP compensation framework, risks creating perverse incentives. For example, some markets compensate participants for the provision of operating reserves but this is not currently a feature of the NEM. Under the current arrangements, an independent expert could determine FPP compensation for the provision of such services in the NEM based on approaches in other markets, and that FPP would then apply to other participants directed to provide the same service in the ensuing 12 months. This could encourage participants to withdraw from the market in order to be compensated more favourably under the FPP framework. This could undermine system reliability and security and increase costs to consumers, contrary to the NEO.

The other pricing methodology in clause 3.15.7A(c)(1)(i)(c), referring to 'relevant contractual arrangements which specify a price for the relevant service' was considered and applied in relation to the determination of the FPP for the direction to Tumut 3.⁹² This principle is useful: for example, contracts for the provision of System Restart Ancillary Services (SRAS) or Voltage Control Ancillary Services (VCAS) specify a price for the relevant service and appear to be relevant in determining FPP compensation in the event that a direction is used to obtain such a service.

Stakeholder views are sought on whether it is appropriate to retain the current requirement to consider relevant pricing methodologies in determining compensation for other services directions. If the right to claim additional compensation under clause 3.15.7B is removed as proposed, then a key consideration in determining FPP compensation under clause 3.15.7A will need to be the costs incurred by the participant as a result of the direction. Requiring an independent expert to consider both other pricing approaches and specific costs incurred by a directed participant creates a potential tension for the independent expert to resolve (involving time and expense). This tension is evident in the independent expert reports described in chapter 5; while the reports discuss approaches in other markets, the decision as to compensation quantum has ultimately been made in each case based on the specific circumstances of the direction.

Particularly if the right to claim additional is removed, consideration of international pricing approaches may be considered less important than having regard for the costs incurred by the directed participant.

⁹² The Commission notes that, while the contract between AEMO and Tumut 3 had expired and was no longer current, it was the basis on which the independent expert determined the FPP compensation for Tumut 3. See chapter 5 for more detail.

QUESTION 7: INFORMATION USED TO DETERMINE COMPENSATION

What information (i.e. pricing methodologies and/or cost and loss information) should be able to be considered in determining compensation following directions for other services in clause 3.15.7A?

Is there benefit in streamlining the compensation process by removing the requirement to consider international pricing approaches and approaches in other markets?

6.2.2

Alternative option to amend the parties that can determine compensation

Under current clause 3.15.7A, if AEMO determines that a direction is a direction for other services and a compensable service has been provided, it must appoint an independent expert to determine the FPP.⁹³ Under current clause 3.15.7B, if a claim for additional compensation is equal to or greater than \$20,000 and the additional intervention claim that includes that claim is equal to or greater than \$100,000, it must refer the claim to an independent expert.⁹⁴ Claims that do not exceed these thresholds are processed in house by AEMO. The cost of engaging an independent expert flows through to customers and therefore relates to the issue of administrative efficiency raised in the rule change request.

If additional claims are removed and the information that needs to be taken into account to determine compensation is simplified to remove the need to consider pricing methodologies in other Australian and overseas markets, and instead only needs to take into account loss of revenue and net direct costs, the determination of compensation would be easier. In this case, it may provide flexibility and reduce administration costs to provide AEMO with the option, but not the obligation, to determine compensation following other services directions.

This is the approach adopted in the market suspension compensation framework that was established by the Commission in 2018. Under clause 3.14.5B(f) of the NER, AEMO has the option but not the obligation to refer market suspension compensation claims to an independent expert if the claim is equal to or greater than \$50,000. This allows AEMO to deal in-house with claims which, while large, are not so complex as to warrant engaging an independent expert.

If such an option were to be implemented it may need to be balanced with adequate provisions to provide transparency over the process to determine compensation following other services directions. AEMO currently has a role in applying clause 3.15.7A(a1) and this alternative option would expand AEMO's role by also allowing AEMO to determine the amount of compensation following directions for other services. At present, all FPP compensation payments are public because all independent expert reports are required to be published. However, there is no equivalent requirement on AEMO to publish details of compensation determinations that are processed in-house.

⁹³ NER clause 3.15.7A(b1).

⁹⁴ NER clause 3.15.7B(c)(2).

In the *Interventions investigation final report*, the Commission made a recommendation to increase transparency regarding post-directions reporting and compensation payments to directed and affected participants. If a change were to be made to the party responsible for processing FPP compensation claims, it would be important to maintain the level of transparency currently afforded by the requirement to appoint independent experts.

QUESTION 8: ENTITY THAT DETERMINES COMPENSATION

If additional claims are removed and only loss of revenue and net direct costs are considered, is the independent expert required or could AEMO be provided with the option, but not the obligation, to determine compensation claims "in-house"?

6.2.3 Other alternative options

The Commission is interested in any other options that address the issues in the rule change request and could provide a better solution than the current arrangements, rule change proposal and the alternative solutions outlined above.

QUESTION 9: OTHER ALTERNATIVE OPTIONS

Are there any other options that could better address the issues raised in the rule change request?

6.3 Other considerations

This section discusses other considerations related to the compensation framework for other services directions that may be considered as part of this rule change process:

- application of FPP for same service for period of 12 months
- eligibility to seek additional compensation under clause 3.15.7B
- provision of service or compliance with direction basis for additional compensation in clause 3.15.7B

6.3.1 Application of FPP for same service for period of 12 months

Under the current arrangements, a FPP determined for a service applies to all future occurrences where the same service is directed within the next 12 calendar months.⁹⁵

The rule change request proposes amending the compensation framework to be a single step process. As discussed in section 6.2.1, the Commission considers that this will require other changes to clause 3.15.7A to enable consideration of 'loss of revenue and net direct costs' so that the directed participant is not out of pocket. Under this approach, the

⁹⁵ NER clause 3.15.7A(e)

compensation amount would be determined having regard for the loss of revenue and net direct costs incurred by the first participant directed for that service in that 12-month period. These costs and losses may or may not closely reflect the loss of revenue and net direct costs of a different participant directed for the same service in the next 12-month period. This could leave the second directed participant out of pocket, contrary to the purpose of the compensation framework.

Alternatively, it could result in the second participant being over-compensated, at the expense of consumers. In addition, if the first participant to be directed in a 12-month period had high costs, this could create perverse incentives for other providers of the same service to withdraw from the market and await direction in order to receive generous FPP compensation.

QUESTION 10: APPLICATION OF FPP FOR SAME SERVICE FOR 12 MONTHS

If the alternative option in section 6.2.1 is applied (where compensation is based on loss of revenue and net direct costs), could this option co-exist with a requirement for the same compensation to apply for the same service directed in the ensuing 12-month period?

6.3.2

Suitability of 'market price' phrase in clause 3.15.7A(c)(ii)

At present, an independent expert appointed to determine FPP compensation is required to consider a number of factors. As well as considering pricing approaches in other markets etc, the expert is required to take into account the following two principles (amongst others):

- the directed participant is to be treated as willing to supply at the market price that would otherwise prevail for the directed services the subject of the direction in similar demand and supply conditions; and
- the FPP is the market price for the directed services the subject of the direction that would otherwise prevail in similar demand and supply conditions.

The Commission notes that, at present, energy and market ancillary services are the only services in the NEM for which prices are set on a dynamic basis, reflecting the supply demand balance at any given time. Given that the focus of clause 3.15.7A is to calculate compensation for services other than energy and market ancillary services, it is not clear what value is added to the process by the inclusion of the above principles (which have not been relevant in any past independent expert reports regarding FPP compensation).

The Commission seeks stakeholder feedback on whether these principles should be retained.

QUESTION 11: OTHER CONSIDERATIONS

Is it appropriate for clause 3.15.7(c)(1)(ii)(C) and (D) to refer to the 'market price' for the service when, by definition, if the service is a service other than energy and market ancillary

services, there is no market price?

7 LODGING A SUBMISSION

Written submissions on the rule change request must be lodged with Commission by **16 July 2020** online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code ERC0287.

The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions on rule change requests.⁹⁶ The Commission publishes all submissions on its website, subject to a claim of confidentiality.

All enquiries on this project should be addressed to Andrew Pirie on (02) 8296 7867 or andrew.pirie@aemc.gov.au.

⁹⁶ This guideline is available on the Commission's website www.aemc.gov.au.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
COAG	Council of Australian Governments
Commission	See AEMC
FCAS	Frequency Control Ancillary Services
FPP	Fair Payment Price
NECA	National Electricity Code Administrator
NEL	National Electricity Law
NEMMCO	National Electricity Market Management Company Limited
NEO	National electricity objective
NSCAS	Network Support and Control Ancillary Services
MCE	Ministerial Council of Energy
RERT	Reliability and Emergency Reserve Trader
SRAS	System Restart Ancillary Services
VNI	VIC-NSW interconnector

A APPENDIX

This Appendix provides background information on, and a preliminary analysis of, the application of clauses 3.15.7A and 3.15.7B for other services directions between 2016 and 2020. This preliminary analysis identifies issues that are relevant for this rule change request. These issues are also summarised in section 5.1 of this report.

This appendix includes:

- directions to Pelican Point and Mortlake on 1 December 2016
- direction to Tumut 3 on 24 January 2019
- direction to Canunda on 16 November 2019
- directions during islanding of South Australia in January and February 2020.

A.1 Directions to Pelican Point and Mortlake on 1 December 2016

Box 1 describes the directions to Pelican Point and Mortlake power stations on 1 December 2016 and the independent expert's compensation determinations in relation to these directions.

BOX 1: DIRECTIONS TO PELICAN POINT AND MORTLAKE POWER STATIONS ON 1 DECEMBER 2016

On 1 December 2016, AEMO issued a number of directions in South Australia and Victoria. The directions followed a South Australia separation event. Under islanded operation, all FCAS requirements for South Australia have to be supplied by local generation within South Australia. The islanding event resulted in a shortage of available FCAS. To manage this, AEMO issued a number of directions.

Four directions were issued and subsequently cancelled on 1 December 2016, which led to four claims for compensation. Two of the directions were for other services at Pelican Point (South Australia) and Mortlake (Victoria) power stations, as detailed below:

- **Pelican Point power station was directed to reduce output to minimum load.** Pelican Point was the largest generating unit online at the time and thus determined the level of fast start raise FCAS required in South Australia to manage the largest single credible contingency (being the loss of Pelican Point).
- **Mortlake power station was directed to desynchronise.** Following the restoration of the Heywood interconnector, some lines remained out of service and South Australia remained at risk of separation from the rest of the NEM. To manage this, AEMO imposed flow limits on the interconnector. When Mortlake power station synchronised, it caused voltage unbalance and FCAS constraint equations to violate, resulting in Heywood interconnector flow limits being exceeded. To restore system security, AEMO directed Mortlake to desynchronise.

Compensation determinations for Pelican Point

In relation to the direction to Pelican Point to reduce output to minimum load, the independent expert concluded *in the final determination of the FPP* under clause 3.15.7A that no compensation was payable on the basis that no service had been provided. It was considered that the generator had been constrained off due to a transmission constraint, meaning no compensation was payable.

However, *in the final determination of additional compensation* under clause 3.15.7B the same independent expert reached a different conclusion. It determined that a service had been provided (a substitute for FCAS) and awarded \$254,703 compensation for loss of revenue for reduced energy and FCAS provision.

Compensation determinations for Mortlake

In relation to the direction to Mortlake to de-synchronise and reduce generation to zero, the independent expert concluded *in the final determination of the FPP* that no compensation was awarded as no service had been provided. It was considered that the generator had been constrained off due to transmission constraints, meaning no compensation was payable.

In the *final determination of additional compensation* the conclusion was the same, that no service had been provided and no compensation was payable.

Source: AEMO, *Final report - South Australian separation event - 1 December 2016*, 28 February 2017.

Source: Synergies, *Final report on additional compensation claims arising from AEMO directions on 1 December 2016*, An independent expert report prepared for AEMO, August 2017.

A preliminary analysis of the independent experts' compensation determinations in relation to the Pelican Point and Mortlake directions indicates the following matters that are related to this rule change.

The independent experts' views changed over whether a directed participant did or did not provide a service due to a re-interpretation of clause 3.15.7B(a)(1). The determination of whether a service was provided by Pelican Point changed between the determination of the FPP (no service provided) and claim for additional compensation (service was provided). The independent expert ultimately concluded that a better interpretation of the phrase "provide services under direction" (clause 3.15.7B(a)(1)) is that the Pelican Point direction was a substitute for the provision of market ancillary services by normal means. On this basis, it should be regarded as constituting a relevant service for the purpose of assessing compensation under clause 3.15.7B.⁹⁷

Determining whether a directed participant has provided a compensable service can be complex and dependent on the specific circumstances of the direction. The independent expert initially concluded that, notwithstanding that the reduction in generation by Pelican Point and Mortlake were executed by means of AEMO directions, they are both

⁹⁷ Synergies, *Final Report on additional compensation claims arising from AEMO directions on 1 December 2016*, p. 13.

examples of generators being constrained off⁹⁸ As the NEM does not compensate generators for being constrained off due to network constraints, no FPP compensation was awarded to either Pelican point or Mortlake.

Subsequently, the independent expert decided the following:

- The constraints violated by Pelican Point were not strictly transmission constraints, but rather they were insufficient supply of FCAS lower in South Australia. As a result, compensation was awarded to Pelican Point.
- The direction to Mortlake was considered a direction for system security alone as the directed participant did not "provide services under the direction", as required by clause 3.15.7B(a)(1). The directed participant was constrained off in direct response to transmission constraints arising from the outage of the Moorabool-Tarrone 500 kV line.⁹⁹
- There is a distinction between directions that cause directed participants to provide services that are critical for maintaining the system (i.e. direction to Pelican Point) and directions that require directed participants to cease operation in circumstances where their continued operation would imperil system security (i.e. direction to Mortlake).¹⁰⁰

A.2 Direction to Tumut 3 on 24 January 2019

Box 2 below describes the direction to Tumut 3 power station on 24 January 2019 and the independent expert's analysis and conclusion on compensation for this direction.

BOX 2: DIRECTION TO TUMUT 3 ON 24 JANUARY 2019

On 24 January 2019, south-eastern Australia experienced hot temperatures and high energy demand. These elevated temperatures, coupled with supply conditions and limitations on southern flows through the VIC-NSW interconnector (VNI), resulted in consistent forecasts of low reserves on the afternoon of 24 January 2019 in South Australia and Victoria. Insufficient market response was provided to alleviate the forecast reserve shortfalls. AEMO managed the reserve shortfalls by:

- activating the RERT in South Australia and Victoria
- directing unit 2 at Tumut 3 Power station in synchronous condenser mode - the voltage support provided by Tumut 3 allowed power flow through the VNI to increase (thus reducing the amount of load shedding required) without rendering the system insecure
- instructing the transmission service provider in Victoria to shed load as a result of a shortfall in available capacity reserves.

Independent expert's analysis

⁹⁸ To allow for the secure operation of the system (i.e. to allow the system to operate without any constraints being violated). Ibid, p. 10.

⁹⁹ Synergies, *Final Report on additional compensation claims arising from AEMO directions on 1 December 2016*, p. 13.

¹⁰⁰ Synergies, *Final Report on additional compensation claims arising from AEMO directions on 1 December 2016*, p. 12.

The independent expert report noted that, in order for a direction to be classified as a direction for services other than energy and market ancillary services it must satisfy subsequent clause 3.15.7A(a1) "...the need for the direction could not have been avoided by the central dispatch process had there been a dispatch bid, dispatch offer or rebid made consistent with the requirements [of specified clauses] for dispatch of plant relevant to that direction for one or more of..." energy and a market ancillary service.

AEMO has informed IES that "[i]nsufficient market response was provided to alleviate the forecast reserve shortfalls." Based on the above, AEMO's direction is consistent with clause 3.15.7A(a1).

The independent expert considered that "the NER contemplates the compensation to comprise the loss of revenue, additional net direct costs and a reasonable return on the capital employed to provide the service, clause 3.15.7B(a). A directed participant may rely on this clause to claim additional costs in the case where they believe they are entitled to an amount larger than the determined compensation. This clause provides relevant guidance as to the compensation a directed participant is entitled to in the absence of relevant market based benchmarks for the FPP. Since there is no loss of revenue to the directed participant in this case, the remaining components are the additional net direct costs and reasonable rate of return. Clause 3.15.7B(a3) provides detail on the cost components that can be reasonably included in arriving at the additional net direct cost.

Compensation determination

Fair payment price: In relation to the direction to Tumut 3 to reduce output to minimum load, the independent expert determined a fair payment price of \$16,874.30 for providing the voltage control service. This was based on a network support and control ancillary services (NSCAS) contract that had been in place between the directed participant and AEMO between 2013 and 2018, but which had expired at the time of the direction.

The independent expert concluded that "the pricing mechanism in Schedule 3 of the NSCAS Agreement is a reasonable basis for determining the fair payment price, based on additional net direct costs, to which the directed participant is entitled under NER clause 3.15.7A for complying with the direction. The independent expert noted that the "NER contemplates compensation for the service provided based on additional net direct costs incurred by the Directed Participant....this approach is consistent with that followed in overseas markets."

Additional compensation: The directed participant did not lodge a claim for additional compensation under clause 3.15.7B.

Source: AEMO, *NEM Event - Direction 24 January 2019*, October 2019.

Source: IES Advisory Services, *AEMO direction to a NSW participant on 24 January 2019 to operate a unit as a synchronous condenser*, Final report, 17 July 2019.

A preliminary analysis of the FPP compensation determination in relation to the direction to Tumut 3 indicates the following issues related to this rule change request.

AEMO's application of clause 3.15.7A(a1) differs to AEMO's application of this clause for other directions for voltage control. In the direction to Tumut 3, AEMO and the independent expert considered that Tumut 3 had provided voltage control services and could be compensated for "other services" under clause 3.15.7A. This differs from several directions to Victorian generators to provide voltage control services that were instead compensated under clause 3.15.7.¹⁰¹ This is on the basis that, while the directions are to obtain a service other than energy and FCAS, the carve out test in clause 3.15.7A(a1) is met: that is, if the relevant generators had bid available to provide energy or FCAS, the need for the direction actually issued could have been avoided.

The independent expert referred to factors for determining additional compensation (under clause 3.15.7B) as relevant to the calculation of the FPP (under clause 3.15.7A). The independent expert determined the FPP on the basis of net additional direct costs,¹⁰² which are not included in the determination of the FPP in clause 3.15.7A, but rather may be considered in the calculation of a claim for additional compensation under clause 3.15.7B. The independent expert noted that consideration of net direct costs incurred by the participant is consistent with approaches followed in overseas markets.¹⁰³ Approaches in overseas market are relevant to the determination of the FPP due to clause 3.15.7A(c)(1)(i). In this way, the manner in which the claim was determined in relation to the Tumut 3 direction is similar to the approach proposed by AEMO in its rule change request, whereby the two processes (determining FPP compensation and, subsequently, additional compensation) are combined into one process.

A.3 Direction to Canunda on 16 November 2019

Box 3 below describes the direction to Canunda wind farm to reduce its output to zero on 16 November 2019 and the independent expert's analysis and conclusion on compensation for this direction.

BOX 3: DIRECTION TO CANUNDA ON 16 NOVEMBER 2019

On 16 November, South Australia became separated from the rest of the NEM. Due to low system strength conditions in the South Australian island, and the relatively remote connection points of the generation, the Lake Bonney (Stage 1, 2, and 3) and Canunda Wind Farms are not permitted to generate when South Australia is islanded. Generators operating in the Victorian region are an important source of fault current to these connection points, provided this current can be transferred via the interconnector.

¹⁰¹ Voltage control directions were issued to Newport and Mortlake in November 2018; Newport was again directed for voltage control twice in September 2019; Mortlake was directed once for voltage control in March 2020. In all cases, compensation was calculated in accordance with 3.15.7.

¹⁰² IES Advisory Services, *AEMO Direction to a NSW participant on 24 Jan 2019 to operate a unit as a synchronous condenser*, Final report, 17 July 2019, p. 8.

¹⁰³ *Ibid*, p. 8.

When SA became islanded, and fault current could not be transferred via the interconnector, a direction was issued to Canunda Wind Farm to restore and maintain power system security by reducing output to zero and disconnecting.

Independent expert's analysis

The independent expert referred to the similar situation that arose on 1 December 2016 when Mortlake was directed to reduce output to zero when its synchronisation caused voltage unbalances. In that instance, the independent expert concluded that the NEM does not compensate generators that are constrained off in accordance with the provisions of clause 3.8 governing the dispatch process, and that there was no clear exception to this principle whether the instruction to reduce output or shut down results from a direction or from the process of implementing central dispatch.

However, the independent expert noted that the facts in the case of the Mortlake direction of 1 December 2016 were different. The generator in that case was a scheduled generator and the binding constraints were of a type expressly provided for in rule 3.8 of the NER. The independent expert did not consider the possibility of a constraint that could not be neatly characterised as a network constraint. Nor did it consider the implications of a direction to a non-scheduled generator where the dispatch process provided for by rule 3.8 might not be determinative as to the types of constraints able to be considered.

In view of these differences, the independent expert considered that determining whether the direction was (a) a direction to unbind a constraint acting on the output of the directed generator or (b) a direction for other services, first required the expert to consider the nature of the constraint that AEMO sought to manage by issuing the direction.

The report noted that, in the case of the Canunda direction, the relevant constraint (based on the transfer limit advice for system strength) was a "system constraint" rather than a network or generation constraint – that is, it is a function of both available fault current (provided by generators) and the capacity of the transmission network to transfer this fault current to critical nodes. The *Transfer Limit - System Strength specifies* that the generating unit must disconnect when the SA region is operating as an island. The independent expert notes that this type of limitation is not explicitly provided for in the NER definition of a constraint.

The independent expert considered the direction to Canunda wind farm as a direction for system security and not a direction within the dispatch process. This interpretation addresses any argument that the constraint reflected in the constraint equation SA_ISLE_STRENGTH_LB needs to fit into any of the constraint categories listed in rule 3.8. In turn, the independent expert considered the direction was necessary to unbind a constraint acting on the output of Canunda wind farm and therefore was not a direction for other services.

Compensation determination

Fair payment price: The direction to the directed participant to reduce its output to zero and disconnect was a direction to unbind a constraint acting on the output of the generating unit. On this basis, the independent expert considered that the directed participant did not

“provide services under the direction” as required by 3.15.7A(a1). On this basis, the independent expert concluded that no compensation is payable to the directed participant. The Canunda wind farm is to be regarded as having been constrained off because the constraint in question was of a type provided for within the system security framework of Chapter 4 of the NER.

Additional compensation: No claim for additional compensation was made.

Source: Transfer limit advice relates to the requirements for system strength in South Australia and Victoria. Limit equations describe the capability of the power system under both system normal and outage conditions. AEMO, *Transfer Limit Advice - System Strength*, February 2020.

Source: AEMO, *Preliminary Report Non-Credible Separation Event South Australia - Victoria on 16 November 2019*, December 2019, p. 22.

Source: Synergies, *Independent expert report - Compensation for direction 16 November 2019*, Final report, 3 March, p. 7.

A preliminary analysis of the FPP compensation determination in relation to the direction to Canunda wind farm indicates the following matters related to this rule change request.

The independent expert determined that the direction was not a direction for "other services" and that no compensable service had been provided. In relation to the Canunda direction, the relevant constraint (based on the transfer limit advice for system strength) was a “system constraint” rather than a network or generation constraint – that is, it is a function of both available fault current (provided by generators) and the capacity of the transmission network to transfer this fault current to critical nodes.¹⁰⁴

The decision that the service was not compensable involved detailed consideration of the nature of the constraint and the status of the directed participant.

A.4 Directions to participants during islanding of South Australia in January and February 2020

Box 4 below describes the numerous directions to plant in January and February 2020 related to the electrical islanding of South Australia and the independent experts' analysis and conclusion on compensation for this direction.

BOX 4: DIRECTIONS RELATED TO SOUTH AUSTRALIAN ISLANDING IN JANUARY AND FEBRUARY 2020

On 31 January 2020, South Australia was separated from the rest of the NEM when a severe thunderstorm with destructive winds resulted in the loss of at least six transmission towers. Subsequently, AEMO and other stakeholders developed a plan to restore supply to the Portland aluminium smelter (APD) using output from Mortlake power station in western Victoria. The plan involved:

¹⁰⁴ Synergies, *Independent expert report - Compensation for direction 16 November 2019*, Final report, 3 March 2020, p. 3.

- Using Mortlake generation to supply the APD load.
- Portland, Macarthur, Canunda and Lake Bonney wind farms to be out of service to ensure control over flows on the Victoria - South Australia (Heywood) interconnector.
- Constraining the Victoria to South Australia flow on the Victoria – South Australia (Heywood) interconnector to a maximum of 100 MW.
- Lake Bonney, Dalrymple and Hornsdale batteries being constrained to zero MW output but remaining at a state of charge sufficient to allow provision of raise and lower contingency frequency control ancillary services (FCAS).

South Australia remained electrically islanded from the rest of the NEM from 31 January 2020 until 17 February 2020. During this period of time there were 33 directions for other services, as outlined below:

- a number of directions for batteries to hold a state of charge (usually at 0 MW output). Decisions on FPP compensation under clause 3.15.7A are still to be determined.
- 23 directions to non-scheduled wind farms to stay offline.

Compensation decisions

AEMO has advised that:

- in relation to the numerous directions to batteries noted above, decisions on FPP compensation under clause 3.15.7A are still to be determined. AEMO has engaged independent experts to determine the FPP for each direction.
- in relation to the directions to the non-scheduled wind farms noted above, the directed participants did not provide a service that is compensable under clause 3.15.7A(a). Directed participants cannot claim additional compensation under clause 3.15.7B if they are not eligible for compensation under either clause 3.15.7 or 7A.

Source: Information provided by AEMO to the AEMC.

Source: AEMO, *Preliminary Report - Victoria and South Australia Separation Event*, 31 January 2020, p. 10.

Source: AEMO, *Renewable Integration Study - Stage 1 report*, April 2020, pp. 34-36.

Source: AER, *Electricity Report*, 16-22 February 2020, p. 1.

Based on preliminary information and analysis, these directions indicate the following matters that are relevant for this rule change request.

A large number of participants (23) were directed for other services and AEMO has determined that no service was provided that is compensable under clause 3.15.7A. AEMO's view that no compensable service was provided appears to reflect previous independent expert determinations relating to the directions to:

- Canunda wind farm - that no compensable service was provided. The relevant constraint, based on the transfer limit advice for system strength, was a "system constraint", and
- Mortlake power station - that the directed participant did not "provide services under the direction" but rather was constrained off in direct response to transmission constraints.

Accordingly, AEMO has not appointed independent experts to determine FPP compensation for the more recent directions during the SA islanding.

Further information on these directions is required to understand whether the system conditions were comparable to those related to either the Canunda or Mortlake directions. This is important as AEMO has decided that the 23 non-scheduled wind farms directed during the SA islanding of January and February 2020 did not provide a service that is compensable under clause 3.15.7A. This also means that the participants are not able to make a claim for additional compensation under clause 3.15.7B (given that such claims may only be made if a participant is eligible for compensation under either clause 3.15.7 or 3.15.7A).