

Australian Energy Market Commission

DRAFT RULE DETERMINATION

NATIONAL ELECTRICITY AMENDMENT (REMOVAL OF INTERVENTION HIERARCHY) RULE 2020

PROPONENT

AEMO

18 JUNE 2020

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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SUMMARY

1 On 18 June 2020, the AEMC has made a draft determination to remove the current hierarchy for the use of intervention mechanisms, to improve AEMO's ability to manage the power system efficiently and flexibly.

2 Currently the National Electricity Rules (NER) arrangements set out that in times of "supply scarcity", after dispatching all valid bids and offers, the Australian Energy Market Operator (AEMO) must use reasonable endeavours to first activate or dispatch the Reliability and Emergency Reserve Trader (RERT) and then, if necessary, issue either directions or instructions. This draft determination replaces this requirement with a principle that AEMO must use reasonable endeavours to select effective intervention mechanisms that minimise direct and indirect costs.

Background

3 This draft determination actions a recommendation made by the Commission in its *Interventions investigation final report*.¹ The Commission recommended introducing a new principle to guide AEMO in prioritising the use of RERT, directions and clause 4.8.9 instructions. This principle would reflect that prioritisation should minimise direct and indirect costs and maximise effectiveness of the intervention.

4 Following this report, AEMO submitted a rule change request on 28 November 2019 to action this recommendation. AEMO considers the rule change request will provide the flexibility to deploy the least cost and most effective suite of options if it becomes necessary to intervene during times of supply scarcity. AEMO considers that the existing clause which prescribes a hierarchy of intervention mechanisms does not allow AEMO the greatest flexibility to intervene in a way that minimises expected costs. AEMO also considers the existing hierarchy to limit its ability to intervene in a way that maximises anticipated effectiveness by reducing the number of options available to AEMO.

The draft rule

5 The Commission has determined to make a more preferable draft rule that largely reflects the rule proposed by AEMO (noting that the rule change request did not include drafting). The draft rule replaces the existing requirement for AEMO to use reasonable endeavours to intervene using RERT prior to issuing directions or instructions with a principle that AEMO must use reasonable endeavours to choose the intervention mechanism, or combination of intervention mechanisms, that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervention. The draft rule also extends transparency and accountability arrangements to encompass AEMO's decision-making on the selection of intervention mechanisms.

6 The Commission has determined a more preferable draft rule that varies from AEMO's rule change request by including: a requirement for AEMO to consider both direct and indirect

¹ AEMC, *Investigation into intervention mechanisms in the NEM, Final report, August 2019*. The final report is referred to in this determination as the *Interventions investigation final report* or *IIFR*.

costs; arrangements for transparency and accountability; and a requirement for AEMO to select the intervention mechanism(s) that are effective in addressing the need to intervene in the market while minimising direct and indirect costs, rather than adopting the dual objectives of maximising effectiveness and minimising cost to consumers.

- 7 These changes do not materially alter the intent of the Commission's recommendation from the investigation into intervention mechanisms or the policy position reflected in the rule change request. However, the draft rule provides more clarity than the proposed rule change on the objective and operation of clause 3.8.14. The Commission has determined that these changes will better contribute to the achievement of the NEO by promoting more efficient operation of electricity services with respect to price.
- 8 The draft rule will advance the NEO as it will enhance efficiency. By contrast, a prescriptive hierarchy as currently set out in the Rules does not provide AEMO with the flexibility to select the most efficient option to achieve the required outcome. The Commission considers existing requirements that preference the use of RERT to preclude lower cost and more effective options for intervention, under some circumstances leading to higher costs for consumers.
- 9 The draft rule also requires AEMO to minimise both direct and indirect costs when selecting the intervention mechanism, or combination of mechanisms to use. Failure to consider indirect costs, such as a reduction in market efficiency arising from AEMO's intervention, or reduction in end user utility from load shedding, may lead to inefficient outcomes and higher overall costs for consumers.

Transparency and accountability

- 10 The draft rule applies transparency and accountability requirements to cover the flexibility provided to AEMO on the choice of intervention mechanisms. The draft rule requires AEMO to: develop, consult on, and publish procedures setting out its method and assumptions in selecting effective interventions that minimise the direct and indirect costs borne by consumers; and accountability by extending existing reporting obligations to cover the basis on which AEMO determined the mechanisms to be used.
- 11 The Commission considers that requirements for AEMO procedures and reporting are necessary given the additional discretion provided to AEMO under the Commission's draft rule. The Commission considers that market participants and other stakeholders should have an ability to reasonably predict how AEMO will intervene and that AEMO should explain why it has chosen a particular intervention mechanisms ex post, in order to aid transparency. Such predictability will provide market participants with a basis on which to account for AEMO's interventions when making investment and operational decisions.

Implementation

- 12 The draft rule includes transitional arrangements that provide for AEMO to publish an interim procedure prior to preparing and consulting on a final procedure in consultation with stakeholders under the Rules consultation procedures. Supply scarcity conditions predominantly occur during summer. Therefore, the Commission considers it would advance the NEO for the rule to come into effect prior to summer 2020-21. For this reason, the draft rule requires AEMO to publish interim procedures by 19 October 2020. By 3 May 2021, AEMO

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must publish its final procedures in accordance with the Rules consultation procedures.

Submissions on the draft determination and draft rule are invited by 30 July 2020 via the AEMC website (see section 1.4). A final determination is due on 10 September 2020.

Table 1: Commission draft more preferable rule

| RULE ELEMENTS | DRAFT RULE REQUIREMENTS |
|---|---|
| Replace the existing requirement in clause 3.8.14 to use RERT first (before directions or instructions) with a lowest cost principle based approach | <p>During times of supply scarcity:</p> <ul style="list-style-type: none"> AEMO must use its reasonable endeavours to ensure all valid and physically realisable dispatch bids and dispatch offers are dispatched, including those priced at the market price cap. If AEMO determines that it will be necessary, after dispatching all valid and physically realisable dispatch bids and dispatch offers to intervene in the market, AEMO must determine which intervention mechanism, or combination of intervention mechanisms, to use in accordance with the principle below and AEMO's procedures. <p>When determining which intervention mechanism, or combination of intervention mechanisms, to use, AEMO must use its reasonable endeavours to choose the mechanism(s) that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market.</p> |
| Requirement for AEMO to develop, consult on, and publish procedures for the selection of intervention mechanisms. | <ul style="list-style-type: none"> AEMO must develop, publish on its website, and may amend from time to time, procedures that set out its approach to determining its choice of intervention mechanism(s). Such procedures must include details of the methodology AEMO will use, and the assumptions AEMO may make. AEMO's procedures must take into account any applicable guidelines issued by the Reliability Panel. AEMO must develop its procedures in accordance with the Rules consultation procedures but may make minor or administrative changes without complying with the Rules consultation procedures. AEMO may develop and publish the procedures as part of other relevant procedures AEMO is required to develop under these Rules. |
| Include examples of types of direct costs and indirect costs to be considered by AEMO | <p>Without limitation, examples of the types of direct costs include:</p> <ul style="list-style-type: none"> Pre-activation and activation costs payable under RERT contracts if AEMO activates or dispatches RERT |

| RULE ELEMENTS | DRAFT RULE REQUIREMENTS |
|---|---|
| | <ul style="list-style-type: none"> any compensation paid in respect of an AEMO intervention event. <p>Without limitation, examples of the types of indirect costs include:</p> <ul style="list-style-type: none"> distortionary effects on the operation of the market the implied value of lost load when load shedding occurs as a result of a clause 4.8.9 instruction. |
| Require AEMO to report on its selection of intervention mechanisms. | <p>AEMO is to report on:</p> <ul style="list-style-type: none"> the basis on which AEMO determined which intervention mechanism, or combination of intervention mechanisms to use how AEMO chose the mechanism(s) that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market whether AEMO complied with Rule requirements and its procedures and if it did not, the reason for not following those procedures. <p>AEMO is to report in accordance with the reporting timelines set out for each of the intervention mechanisms (as applicable).</p> |
| New Chapter 10 term 'intervention mechanism' | <p>'Intervention mechanism' is defined to mean the following mechanisms:</p> <ul style="list-style-type: none"> exercising the reliability and emergency reserve trader in accordance with rule 3.20 by: <ul style="list-style-type: none"> dispatching scheduled generating units, scheduled network services or scheduled loads in accordance with any scheduled reserve contract; or activating loads or generating units under any unscheduled reserve contract; issuing a direction in accordance with clause 4.8.9; issuing a clause 4.8.9 instruction in accordance with clause 4.8.9. |

Source: AEMC

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1 THE RULE CHANGE REQUEST

On 28 November 2019, the Australian Energy Market Operator (AEMO) (proponent) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) proposing that the requirement for AEMO to exercise the Reliability and Emergency Reserve Trader (RERT) before issuing directions or instructions should be removed from the National Electricity Rules (NER or Rules) and replaced by a principle requiring AEMO to endeavour to minimise the costs and maximise the effectiveness of an intervention in the NEM.² AEMO submitted this rule change request in response to a recommendation made by the Commission in its investigation into intervention mechanisms in the NEM final report (IIFR).³

AEMO consider the rule change request would provide the flexibility to deploy the least cost and most effective suite of options if it becomes necessary to intervene during times of supply scarcity.

The rule change request is available on the AEMC website.⁴ Information on the Commission's investigation into intervention mechanisms may also be found on the Commission's website.⁵

1.1 AEMO's rule change request

This section presents:

- AEMO's proposed change to the Rules
- issues identified by AEMO with current arrangements, and
- how AEMO considers the changes will address the identified issues.

1.1.1 AEMO's proposed change to the rules

AEMO proposes that clauses 3.8.14(b) and (c) of the NER, which currently set out the requirement for AEMO to exercise RERT before issuing directions or instructions, should be removed from the NER and replaced by a clause requiring AEMO to use reasonable endeavours to minimise the costs and maximise the effectiveness of exercising RERT or issuing directions or instructions during an AEMO intervention event.⁶

AEMO's rule change proposes continuing to dispatch all valid bids and offers from scheduled plant before intervening.

1.1.2 Rationale for the rule change request

AEMO considers existing arrangements which preference the RERT to directions or instructions reflect the nature of RERT (contract market) arrangements where participants

² AEMO, Rule change request - removal of intervention hierarchy rule change request, 28 November 2019.

³ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, 15 August 2019.

⁴ <https://www.aemc.gov.au/rule-changes/removal-intervention-hierarchy>

⁵ <https://www.aemc.gov.au/market-reviews-advice/investigation-intervention-mechanisms-and-system-strength-nem>

⁶ AEMO, rule change request, p. 4.

negotiate with AEMO to supply emergency reserves, whereas directions and instructions are obligatory to respond to (subject to safety concerns).⁷

AEMO's rule change request notes that the AEMC's review of intervention mechanisms in the NEM questioned whether minimising the costs and maximising the effectiveness of interventions might be a more important goal than preferring voluntary to involuntary interventions in the NEM. As AEMO notes, the AEMC final report sided with minimising costs and maximising effectiveness during intervention. In its rule change request AEMO agreed with the Commission's conclusion.⁸

AEMO's rule change request identified the following issues as justifying the rule change.

The current Rules might not minimise costs to consumers

AEMO identified that prescribing the use of RERT before directions or instructions limits the number of available options for AEMO to manage supply scarcity, with AEMO considering the smaller the number of available options, the less likely that AEMO can select the option that minimises expected costs.⁹

AEMO identifies that RERT can be more expensive than directions or instructions and notes in the rule change request that the Commission recognised the high cost of RERT in making its enhancement to the RERT rule.¹⁰ The enhancement to the RERT rule added an additional principle that the costs of the RERT should not exceed the estimated average value of customer reliability (VCR) – providing guidance to AEMO to consider whether the cost of entering into emergency reserve contracts is reasonable.¹¹

While acknowledging that exercising RERT before issuing directions or instructions does not necessarily mean that the intervention will be more expensive, AEMO considers it to increase the likelihood.¹²

The current Rules might not maximise effectiveness

AEMO's rule change request considers that just as prescribing a hierarchy of intervention mechanisms does not allow AEMO the greatest flexibility to intervene in a way that minimises expected costs, it also limits AEMO's ability to intervene in a way that maximises anticipated effectiveness, again by reducing the number of options available to AEMO.¹³

AEMO considers that a requirement to actually exercise RERT resources (once they have been procured) may not be the most effective option for intervention in some circumstances as pre-activation times for emergency reserves under the RERT may be longer than recall times for directions, meaning that AEMO might need to intervene earlier than desirable, when forecast information is less reliable. Alternatively, minimum activation times for emergency

7 AEMO, rule change request, p. 2.

8 Ibid.

9 AEMO, rule change request, p. 3.

10 National Electricity Amendment (Enhancement to the Reliability and Emergency Reserve Trader) Rule 2019 - more information can be found at: <https://www.aemc.gov.au/rule-changes/enhancement-reliability-and-emergency-reserve-trader>

11 Ibid, p. 3.

12 Ibid, p. 4.

13 Ibid.

reserves may be longer than the duration of the forecast shortage of supply, resulting in AEMO potentially needing to intervene for longer than necessary.

While acknowledging that exercising emergency reserves before issuing directions or instructions does not necessarily mean that the intervention will be less effective and/or efficient, AEMO considers it does increase the likelihood.¹⁴

The current Rules might not be sufficiently adaptable

AEMO's rule change request sets out that it considers that the current Rules assume intervention by AEMO involves a projected choice between:¹⁵

- RERT contracts for plant that sits outside the energy market
- directions in respect of scheduled plant or market generating units, and
- clause 4.8.9 instructions to shed load.

AEMO considers the changing structure of the NEM, including the development of distributed resources and virtual power plants (VPPs), mean that this range of options, while still valuable, may not be sufficiently adaptable.¹⁶

AEMO's rule change request uses VPPs as an example of why arrangements need to be more adaptable. Depending on how they register, or what registration options are available to them, VPPs may choose to sit outside the market (making them available for RERT), inside the market and scheduled (making them available for directions), or outside the market and not contracted for RERT (making them available for load shedding under a clause 4.8.9 instruction). In these circumstances, and with further potential for unforeseen developments, AEMO considers maintaining a hierarchy between different forms of intervention could become increasingly untenable.¹⁷

1.1.3

How AEMO considers the rule change will address identified issues

AEMO considers removing the hierarchy of intervention mechanisms from the Rules would provide AEMO with the flexibility to deploy the least cost and most effective suite of options if it becomes necessary to intervene during times of supply scarcity.¹⁸

AEMO considers that its rule change request advances the NEO as:¹⁹

- The costs of intervention must ultimately be paid by electricity consumers. Therefore, anything that has the potential to reduce the costs of intervention by giving AEMO greater flexibility in its choice of intervention mechanisms also has the potential to contribute to the NEO.

¹⁴ Ibid.

¹⁵ Ibid, p. 4

¹⁶ In this regard, the Commission notes that, while instructions have typically been used in the past to implement load shedding, they are not limited to load shedding and can be used to require a registered participant to take any action (other than in relation to scheduled plant or a market generating unit) that AEMO considers necessary for system security, reliability or public safety: clause 4.8.9(a1)(2).

¹⁷ Ibid.

¹⁸ AEMO, rule change request, p. 5.

¹⁹ Ibid.

- Similarly, anything that has the potential to increase the effectiveness of intervention by giving AEMO greater flexibility in its choice of intervention mechanisms also has the potential to contribute to the NEO by increasing the efficient operation of electricity services.

AEMO does not identify any obvious costs associated with removing the hierarchy of intervention mechanisms other than the rule change process itself and corresponding changes to AEMO operational procedures.²⁰

1.2 Interventions investigation recommendation

In response to the increasing use of intervention mechanisms, the Commission commenced an investigation into intervention mechanisms in the NEM with the release of a consultation paper in April 2019.²¹

The investigation into intervention mechanisms in the NEM 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 was published in August 2019, the *Interventions investigation final report* (IIFR), with the Commission recommending stakeholders submit rule change requests to implement a range of changes recommended in the report.²²

The hierarchy of interventions was considered in the Commission's interventions investigation consultation paper which consulted on:²³

- the ideal hierarchy of intervention mechanisms, such as the order in which AEMO should use the RERT, directions and instructions to shed load
- whether the current hierarchy of intervention mechanisms should be changed so that the RERT is no longer preferred to directions, and
- whether a reasonable endeavours "least cost" principle should inform the hierarchy of intervention mechanisms.

Following consultation, the Commission considered that, given the cost of using emergency reserves under the RERT relative to other mechanisms, existing arrangements that prescribe the use of RERT in preference to directions or instructions may produce inefficient cost impacts in some circumstances. In the IIFR, the Commission recognised that there are instances where scheduled plant remain available to direct, which may be lower cost than activating the RERT. In such instances, a requirement for AEMO to dispatch emergency reserves in preference to directing available generation would likely lead to higher costs for consumers.²⁴

²⁰ Ibid.

²¹ AEMC, *Investigation into intervention mechanisms and system strength in the NEM*, Consultation paper, 4 April 2019.

²² AEMC, *Investigation into intervention mechanisms in the NEM*, Final report, August 2019. The final report is referred to in this determination as the *Interventions investigation final report* or IIFR.

²³ Ibid, p. 36

²⁴ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. vii.

In order to promote a cost minimisation approach, the Commission considered that it would be appropriate to replace the existing hierarchy with one which is based on a principle of minimising direct and indirect costs to consumers. Box 1 sets out the Commission's IIFR recommendation on the hierarchy of intervention mechanisms.²⁵

AEMO's rule change request is substantively consistent with the Commission's recommendation made in the IIFR. Chapter 4 of this draft determination will address one point of difference which is the treatment of direct and indirect cost.

BOX 1: COMMISSION'S RECOMMENDATION IN THE IIFR

The Commission recommended introducing a new principle to guide AEMO in prioritising the use of RERT, directions and clause 4.8.9 directions. The principle would reflect that prioritisation should minimise direct and indirect costs and maximise effectiveness of the intervention.

Specifically, the Commission recommended that AEMO would need to have regard to the following principles when choosing which intervention mechanism to use in times of supply scarcity:

- actions taken should be those which AEMO reasonably expects to minimise direct costs to consumers of electricity
- actions taken should be those which AEMO reasonably expects to have the least distortionary effect (i.e. minimise indirect costs) on the operation of the market
- actions taken should aim to maximise effectiveness of the intervention

This would be implemented through amending clause 3.8.14 to reflect that AEMO must use its reasonable endeavours to ensure that:

- AEMO is to dispatch all valid bids and offers first (no change from status quo)
- all other actions are to be prioritised based on the above principles.

The recommendation is to introduce flexibility in the way that AEMO prioritises which intervention mechanism to use, in order to minimise direct and indirect costs to consumers, who ultimately bear the costs of the RERT and directions. Flexibility would minimise the risk of inefficient and expensive outcomes, while the introduction of a clear principle would promote cost minimisation.

1.3

The rule change process and fast tracking

AEMO's rule change request asked the Commission to fast track the proposal as it responds to a request from an AEMC review.²⁶

²⁵ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. 103.

²⁶ AEMO, rule change request, p. 2.

The AEMC has elected to progress this rule change through a fast-tracked process because it arises out of a recommendation made in the Commission's Interventions investigation during which the issues and solution were subject to public consultation.²⁷ The rule making process can be fast tracked if the request arises from an AEMC review and there has been adequate public consultation on the content of the relevant recommendation or relevant conclusion during the AEMC review.²⁸ Under the fast-track process, there is only one round of consultation on a draft rule and determination.

1.4 Consultation

The Commission invites submissions on this draft rule determination, including a draft rule, by **30 July 2020**.

Any person or body may request that the Commission hold a hearing in relation to the draft rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than **25 June 2020**.

Submissions and requests for a hearing should quote project number ERC0291 and may be lodged online at www.aemc.gov.au.

²⁷ On 28 May 2020, the Commission published a notice advising of its intention to commence the rule making process in respect of the rule change request under s96 of the National Electricity Law (NEL).

²⁸ Section 96A(1)(b)(ii) and (2)(b)(ii) NEL.

2 BACKGROUND

This chapter introduces the intervention mechanisms and frameworks that are relevant to the Commission's draft determination on the rule change request. Background and context is provided in the following areas:

- intervention mechanisms
- the existing hierarchy of interventions, and
- the Commission's interventions work program.

2.1 Intervention mechanisms

Intervention mechanisms are tools available to AEMO to be used as a last resort when market responses are inadequate to maintain a reliable and secure power system, or when unexpected events occur. This section introduces each of the intervention mechanisms which are the subject of the hierarchy of interventions during times of supply scarcity.²⁹ These intervention mechanisms include the reliability and emergency reserve trader (RERT)³⁰, directions and instructions.³¹

AEMO may use interventions to maintain the power system in a secure, satisfactory and reliable state. System security involves maintaining the power system in a stable state with key system parameters remaining within acceptable boundaries following a disturbance to the system. A reliable power system is where there is enough generation, demand response, and network capacity to supply customers with the energy that they demand with a very high degree of confidence.

The Commission's draft determination involves changes to the order in which the intervention mechanisms are to be used (the "hierarchy") when there are supply scarcity conditions, i.e. a lack of 'capacity' available to meet demand. This rule change therefore primarily relates to intervention by AEMO to maintain reliability, although reliability issues can also arise in response to system security incidents (such as the trip of a generating system or network element).

Each of the intervention mechanisms are described below.

2.1.1 RERT

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.³² At present, AEMO can contract for reserves from three hours to twelve months ahead of the

²⁹ Clause 3.8.14 of the NER

³⁰ Rule 3.20 of the NER.

³¹ Clause 4.8.9 of the NER.

³² 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.

projected shortfall.³³ AEMO can dispatch these reserves to ensure reliability of supply and maintain power system security, where practicable.³⁴ AEMO may contract only with resources that are 'out-of-market'. Examples include a back-up diesel generator or emergency demand response.

There are three types of RERT based on how much time AEMO has to procure the RERT prior to the projected reserve shortfall occurring. These are:³⁵

- long-notice RERT: between ten weeks' and twelve months' notice of a projected reserve shortfall.³⁶
- medium-notice RERT: between ten weeks' and one week's notice of a projected reserve shortfall.
- short-notice RERT: between seven days' and three hours' notice of a projected reserve shortfall.

Typically, AEMO sets up a panel of providers for both the medium-notice and short notice RERT and only triggers the procurement contracts when it has identified a potential shortfall and after seeking offers from RERT panel members. There is no panel for the long-notice RERT; rather, contracts are signed following the close of a public tender process.

AEMO's dispatch of emergency reserves under the RERT has increased in recent years. As the supply and demand balance has tightened this has led to increased instances of forecast un-served energy occurring at certain times of the year, most notably during summer. Figure 2.1 shows the increasing use of emergency reserves by AEMO. RERT comes at a cost to consumers of electricity given that consumers pay for these resources.

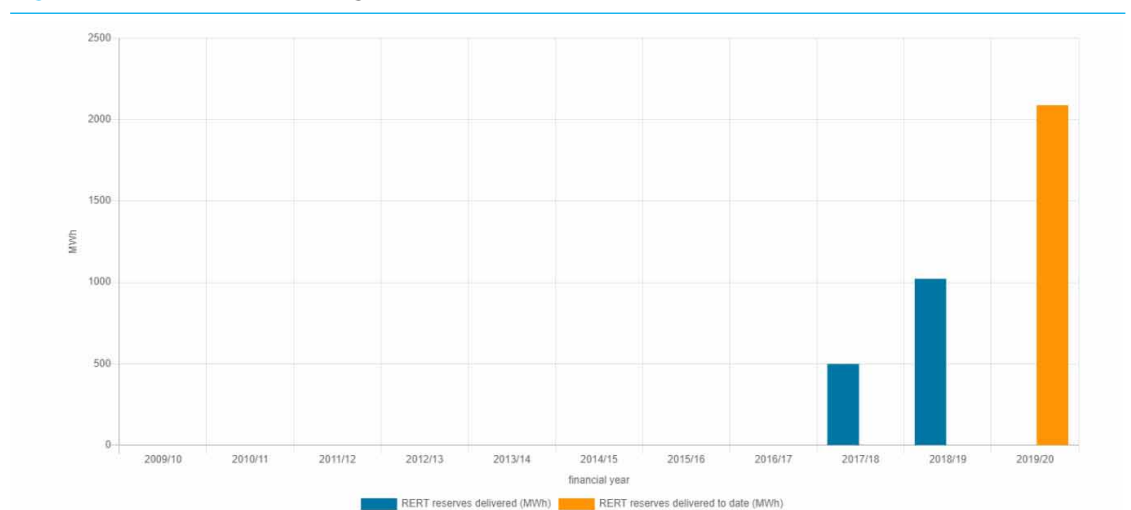
33 On the 12 March 2020 the Commission made a final rule to enable multi-year contracting of emergency reserves under certain circumstances in Victoria for up to 3 years.

34 Clause 3.20.7(a) of the NER

35 Reliability Panel, RERT Guidelines, p. 11.

36 In March 2020, following advice from the Energy Security Board (ESB), COAG Energy Council 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). These measures, which the ESB is currently developing, would allow AEMO to procure reserves for contract terms of up to three years, replacing the long notice RERT. They aim to keep unserved energy to no more than 0.0006% in any region in any year. COAG Energy Council, Meeting communique, 20 March 2020, p. 1, accessed at: <http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/EC%20-%20communique%20-%2020200320.pdf>.

Figure 2.1: AEMO's increasing use of RERT



Source: AEMC Reliability Panel, Annual Market Performance Report, 2019, p. 75

2.1.2

Directions

In addition to the dispatch of emergency response under the RERT, clause 4.8.9 of the NER provides AEMO with the ability to direct a registered participant in respect of scheduled plant or market generating unit or issue a clause 4.8.9 instruction. AEMO can issue directions or instructions to certain registered participants to increase (or decrease) their output or a scheduled load to decrease (or increase) its consumption. Clause 4.8.9 of the NER provides for AEMO to require a registered participant to 'do any act or thing' when AEMO is satisfied that it is necessary to do so to maintain or return the power system to a secure, satisfactory or reliable operating state.³⁷ Clause 4.8.9 instructions are addressed in detail in section 2.1.3 below.

With directions, 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.³⁸

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

- energy
- market ancillary services
- system strength, and
- other services.

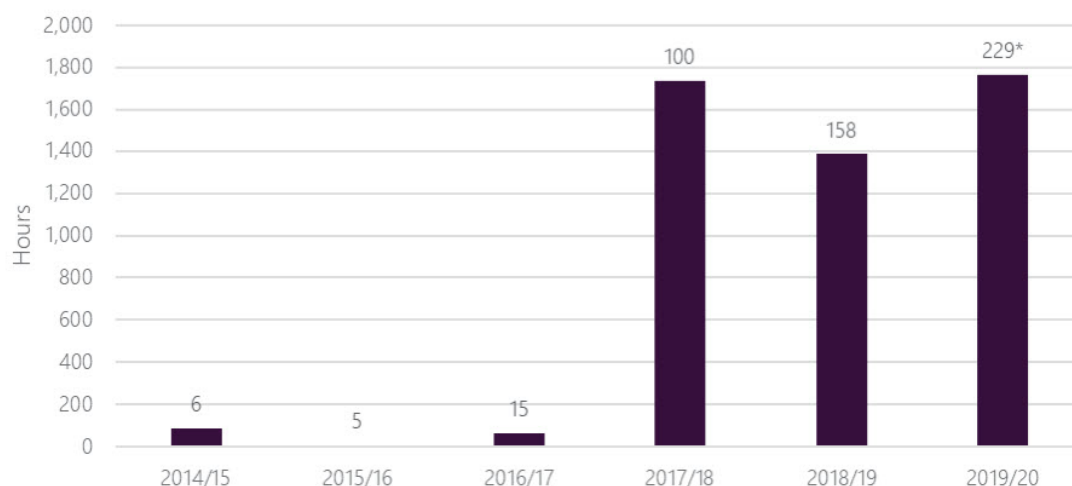
³⁷ Clause 4.8.9(a1)(1) of the NER.

³⁸ Clause 4.8.9(c) of the NER.

AEMO now regularly directs generators with their use of directions for system security having increased significantly in recent years to address system strength issues in South Australia. Figure 2.2 shows AEMO's increasing use of directions. Historically, AEMO has rarely used directions to manage reliability-related events. The Commission is aware of only five occasions on which AEMO has directed for reliability purposes in the period since 2010. These occasions have all occurred in the last 3.5 years and include:

- two directions to Pelican Point in February and March 2017
- a direction to Colongra to bid available on 1 February 2020, and
- two directions for generators to service essential loads during the SA islanding event from January 31 to March 3, 2020 (details on the specific generators directed are not available at this point).³⁹

Figure 2.2: Historic number and duration of directions in the NEM



*Incomplete year; data current at 5 March 2020.

Note: values above each column represent number of directions issued.

Source: AEMO, Renewable integration study, stage 1 report, April 2020, p. 34, available at: <https://aemo.com.au/-/media/files/major-publications/ris/2020/renewable-integration-study-stage-1.pdf?la=en>

The existing hierarchy of interventions, that is the subject of AEMO's rule change request, requires AEMO to use reasonable endeavours to dispatch RERT prior to issuing a direction for reliability purposes.⁴⁰ A practical implication of AEMO's rule change request to remove the hierarchy of interventions may be a potential increase in directions for reliability where those directions are more effective and lower cost than dispatching RERT. However, this potential is limited by the fact that, during periods of supply scarcity, participants are typically

39 Further information is available in AEMO's Preliminary Report – Victoria and South Australia Separation Event, 31 January 2020: https://aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/power_system_incident_reports/2020/preliminary-report-31-jan-2020.pdf?la=en

40 Clause 3.8.14(b) of the NER.

incentivised to participate in the market voluntarily as spot prices at such times are generally near the market price cap.⁴¹ Generators may however still be available to direct under such conditions. Such conditions arise in circumstances such as when unit start up costs and anticipated prices make committing some generating systems un-economic.

The directions of Pelican Point on 9 February and 1 March 2017 and direction to Colongra on 1 February 2020 are three such circumstances. These directions occurred in relation to generating systems that were physically available to direct despite supply scarcity conditions.⁴²

BOX 2: HISTORIC DIRECTIONS FOR RELIABILITY

Directions to Pelican Point

- On 9 February and 1 March 2017, AEMO issued a direction to Engie in respect of its Pelican Point Power Station (Pelican Point).
- On both occasions, AEMO directed Engie to synchronise and dispatch Pelican Point to maintain the power system in a reliable operating state in South Australia.
- These directions were made in response to a forecast Lack of Reserve level 2 (LOR 2) condition declared in the SA region on 9 February and the potential impact of multiple risks present following an actual lack of reserve (LOR 1) condition on 1 March 2017.

Direction to Colongra

- On 1 February 2020, Snowy Hydro bid Colongra Power Station (Colongra) unavailable due to uneconomic start costs. Snowy Hydro however indicated to AEMO that Colongra was physically available for direction.
- AEMO directed Colongra to bid available for reliability purposes. AEMO's direction did not require Colongra to synchronise and generate.

Source: AEMO.

2.1.3

Instructions

Clause 4.8.9(a1) of the NER 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).⁴³

Clause 4.8.9 instructions have traditionally been used for load shedding and applied as a last resort action once all other options have been exhausted. AEMO may instruct a network

⁴¹ Under clause 3.15.7 of the NER, participants directed to provide energy or market ancillary services are compensated based on the 90th percentile price for the relevant region over the preceding 12 months. They do not receive the spot price when providing services under direction and this may account for the small number of reliability directions issued in the last ten years.

⁴² For further information see: AEMO, *NEM event - direction to South Australia generator - 1 March 2017*, January 2017; AEMO, *NEM event - direction to South Australia generator - 9 February 2017*, July 2017; AEMO, Electricity market notice, MN 73369.

⁴³ 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'.

service provider to commence involuntary load shedding to avoid the risk of a wider system blackout, or damage to generation or network assets. Although AEMO is expected to do all in its power to avoid load shedding, there will be times when involuntary load shedding will be unavoidable in order to return the power system to a secure state.

The cost of load shedding accrues to end users who are not able to enjoy the consumption of electricity as a result. The value of this lost enjoyment is reflected in monetary terms as the value of customer reliability (VCR). If a customer has their electricity supply interrupted, when they were willing to pay to consume electricity, they will face costs e.g. lost production if it is a business; or a colder / hotter home for residential customers with air conditioning. The VCR varies by location, season, and end user type and is generally much higher than the electricity market price cap and cost of RERT.⁴⁴

While historic practice has been for AEMO to instruct for involuntary load shedding, clause 4.8.9 provides for AEMO to instruct any non-scheduled plant or non-market generating unit.⁴⁵ Clause 4.8.9 instructions are not limited to involuntary load shedding, and the rules provide scope for AEMO to issue instructions to registered participants with respect to a non-scheduled plant which may include instructions to distributed batteries, solar PV and any other non-scheduled plant.

2.1.4

Intervention pricing and compensation frameworks

If the "regional reference node test" set out in clause 3.9.3 is met,⁴⁶ 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 intervention through the dispatch of RERT or 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. It should be noted that intervention pricing may be used in connection with AEMO's use of RERT and directions but not clause 4.8.9 instructions. When a clause 4.8.9 instruction is used to implement load shedding, the spot price is automatically set to the market price cap. This is designed to signal scarcity of supply (similar to the objective of intervention pricing).

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

⁴⁴ The AER publishes estimates of the value of customer reliability for different end user types, locations, and times of year. More information is available at: <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/values-of-customer-reliability/decision>

⁴⁵ Clause 4.8.9(a1)(2) of the NER.

⁴⁶ The Commission changed the regional reference node test in December 2019 to clarify that intervention pricing applies where: where the intervention responds to a region wide scarcity of a market traded commodity, the circumstances in which a localised deficiency of a market traded commodity should trigger intervention pricing, that intervention pricing should not apply in circumstances where the reason for the intervention is to obtain a service that is not traded in the market, and the approach to be adopted when multiple intervention events coincide. For more information see: <https://www.aemc.gov.au/rule-changes/application-regional-reference-node-test-reliability-and-emergency-reserve-trader>.

which is directed to provide services.⁴⁷ Broadly speaking, affected participants are those who are dispatched differently due to activation of the RERT or issuance of a direction.⁴⁸

2.2 Hierarchy of interventions

The rule change that is the subject of this draft determination involves the hierarchy of intervention mechanisms set out in clause 3.8.14 of the NER. This hierarchy specifies the sequence in which AEMO is required to use the different intervention mechanisms.

Clause 3.8.14 of the NER establishes a two-level hierarchy for the use of intervention mechanisms. In times of "supply scarcity", after dispatching all valid bids and offers required to meet demand (and accounting for market reserves), AEMO must use reasonable endeavours to first activate or dispatch⁴⁹ RERT and then, if necessary, carry out 'any further corrective actions' by issuing directions or instructions, as illustrated in figure 2.3.⁵⁰ While the word 'supply' is defined in chapter 10 of the NER, the term "supply scarcity" is not defined and is used only in clause 3.8.14. As such, the term is to be read with its plain meaning: namely, periods during which there is a shortage or shortfall of supply.⁵¹

⁴⁷ 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.

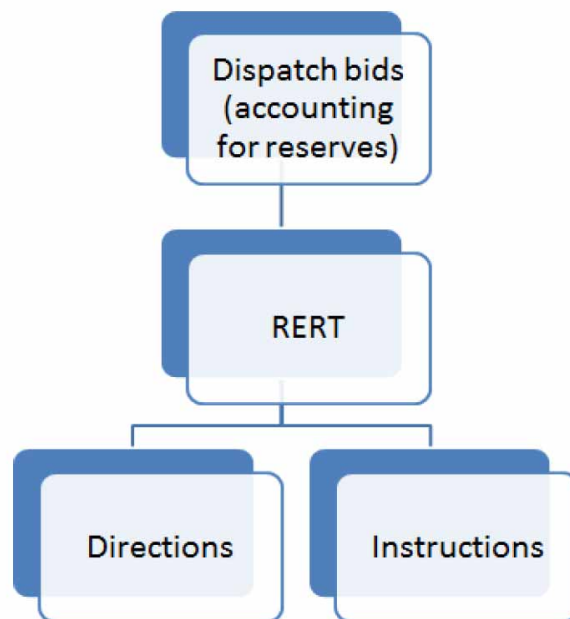
⁴⁸ Chapter 10 of the NER defines "affected participant" as a scheduled generator or scheduled network service provider which is dispatched differently as a result of an intervention event. The definition also includes "eligible persons", being settlement residue distribution (SRD) unit holders who are 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.

⁴⁹ Unscheduled emergency reserves are said to be activated while scheduled emergency reserves are said to be dispatched. The terms are used interchangeably in this review.

⁵⁰ The sequence to be followed under clause 3.8.14 is as follows: all valid dispatch bids and offers submitted by scheduled generators, semi-scheduled generators and market participants should be dispatched (including those priced at the market price cap); then, after all such bids and offers are exhausted, AEMO may exercise the RERT (i.e. dispatch/activate scheduled and unscheduled reserves in accordance with rule 3.20); and finally, if necessary, implement any corrective action under clause 4.8.5B and 4.8.9 (i.e. issue directions and clause 4.8.9 instructions).

⁵¹ The term "supply" is defined under Chapter 10 of the NER as "the delivery of electricity".

Figure 2.3: Hierarchy of interventions



Source: AEMC

Clause 3.8.14 of the NER does not specify a priority between directions (which require registered participants to take action in relation to scheduled plant and market generating units) and instructions (which require registered participants to take action other than in relation to scheduled plant and market generating units). The criterion for triggering the use of directions and instructions is the same for each mechanism: "to maintain or re-establish the power system to a secure operating state, a satisfactory operating state, or a reliable operating state".⁵² In practice, however, AEMO uses directions first (for example, to manage an actual or forecast LOR2 condition) and instructions to shed load only very rarely (as a last resort to maintain system security when a LOR3 condition occurs).⁵³

AEMO's obligation to follow this sequence of steps is a "reasonable endeavours" obligation. That is, AEMO will be taken to have satisfied its obligation under the clause if it can demonstrate it has taken all action that is reasonable for it to take in the circumstances to follow the sequence under clause 3.8.14. The obligation to dispatch all valid bids and offers, and to dispatch or activate reserves, is subject to "any adjustments which may be necessary to implement action under paragraph (c)" and "any plant operating restrictions associated

⁵² Clause 4.8.9(a)(1) of the NER.

⁵³ AEMO will inform the market of 'lack of reserve' (LOR) conditions to encourage a response from market participants. See clause 4.8.4 of the NER. LOR notices come in three tiers: LOR 1 conditions are declared by AEMO when it considers the probability of load shedding to be more than remote, LOR 2 is declared when available reserve is less than the largest credible contingency or largest credible risk as determined by AEMO in accordance with its reserve level declaration guidelines, LOR 3 is declared when load shedding is imminent or under way.

with a relevant AEMO intervention event". This qualification is included to account for required adjustment to dispatch to make interventions physically realisable.

2.3 Related Commission work

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 NEM⁵⁴ which has led to a number of associated rule change requests to action the recommendations made in that investigation. These elements of the Commission's work program are introduced in this section.

2.3.1 Rule changes recently completed by the Commission

A number of recommendations in the IIFR have already been actioned. These include the following:

- **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 2019.⁵⁵ 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 participant compensation is only payable in circumstances where an AEMO intervention event triggers intervention pricing in accordance with the revised RRN test.⁵⁶
- **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.⁵⁷

⁵⁴ AEMC, *Investigation into intervention mechanisms and system strength in the NEM, Consultation paper*, 4 April 2019.

⁵⁵ AEMC, *Application of the regional reference node test to the reliability and emergency reserve trader, Rule determination*, 19 December 2019.

⁵⁶ AEMC, *Application of compensation in relation to AEMO interventions, Rule determination*, 19 December 2019.

⁵⁷ AEMC, *Threshold for participant compensation following market intervention, Rule determination*, 19 December 2019.

2.3.2

Rule changes currently being considered by the Commission

In addition to the above changes, and the rule change which is the subject of this draft determination, AEMO has submitted a number of other rule change requests dealing with aspects of the interventions framework. These are the subject of separate rule change processes.

- **Compensation following directions for services other than energy and market ancillary services.**⁵⁸ - AEMO has proposed removing the current two-step process to determining compensation following directions for services other than energy and market ancillary services and has proposed an alternative one-step process in its place.
- **Affected participant compensation for FCAS losses**⁵⁹ - AEMO has proposed to include FCAS prices amongst the compensable factors to be considered in determining additional compensation in a non-restrictive fashion.
- **Compensation for scheduled loads affected by interventions**⁶⁰ - 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 scheduled load (market customer).
- **Recovering affected participant compensation for RERT activation**⁶¹ - 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.
- **Removal of mandatory restriction framework**⁶² - AEMO has proposed the removal of the mandatory restriction framework from the NER.
- **Removal of obligation to counteract during intervention**⁶³ - 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.⁶⁴
- 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.

58 For more information see: <https://www.aemc.gov.au/rule-changes/compensation-following-directions-services-other-energy-and-market-ancillary-services>

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

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

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

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

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

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

- On 11 June 2020, the AEMC initiated the rule change request on *Compensation following directions for services other than energy and market ancillary services* through a standard rule change process.

3 DRAFT RULE DETERMINATION

This chapter sets out the Commission's draft determination with a summary of reasons. Commission considerations described in Chapter 4 provide additional details supporting the Commission's decision. The following is presented in this chapter:

- the Commission's draft rule determination
- the rule making test
- assessment framework
- summary of reasons, and
- transitional arrangements.

3.1 The Commission's draft rule determination

The Commission's draft rule determination is to make a draft more preferable rule. The draft rule made by the Commission is published with this draft rule determination. The key features of the draft rule are:

- It replaces the existing requirement for AEMO to use reasonable endeavours to intervene using RERT prior to issuing directions or instructions with a principle that AEMO must use reasonable endeavours to choose the intervention mechanism, or combination of intervention mechanisms, that is effective in addressing the need to intervene in the market while minimising direct and indirect costs.
- It extends transparency and accountability arrangements applying to the individual intervention mechanisms to AEMO's decision-making on the selection of intervention mechanisms.

The key features of the Commission's draft more preferable rule are set out in the table below. A summary of reasons is set out in section 3.4 and the Commission's more detailed considerations in making this draft determination are set out in Chapter 4. A summary of the transitional arrangements in the draft rule is also set out in section 3.5 below.

Table 3.1: Commission draft more preferable rule

| RULE ELEMENTS | DRAFT RULE REQUIREMENTS |
|--|--|
| Replace the existing requirement in clause 3.8.14 to use RERT first (before directions or instructions) with a lowest cost principle based approach. | <p>During times of supply scarcity:</p> <ul style="list-style-type: none"> • AEMO must use its reasonable endeavours to ensure all valid and physically realisable dispatch bids and dispatch offers are dispatched, including those priced at the market price cap. • If AEMO determines that it will be necessary, after dispatching all valid and physically realisable dispatch bids and dispatch offers to intervene in the market, AEMO must determine which intervention mechanism, or combination of intervention mechanisms, to use in accordance with the principle below and AEMO's procedures. |

| RULE ELEMENTS | DRAFT RULE REQUIREMENTS |
|--|--|
| | <p>When determining which intervention mechanism, or combination of intervention mechanisms, to use, AEMO must use its reasonable endeavours to choose the mechanism(s) that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market.</p> |
| <p>Requirement for AEMO to develop, consult on, and publish procedures for the selection of intervention mechanisms.</p> | <ul style="list-style-type: none"> • AEMO must develop, publish on its website, and may amend from time to time, procedures that set out its approach to determining its choice of intervention mechanism(s). Such procedures must include details of the methodology AEMO will use, and the assumptions AEMO may make. • AEMO's procedures must take into account any applicable guidelines issued by the Reliability Panel. • AEMO must develop its procedures in accordance with the Rules consultation procedures but may make minor or administrative changes without complying with the Rules consultation procedures. • AEMO may develop and publish the procedures as part of other relevant procedures AEMO is required to develop under these Rules. |
| <p>Include examples of types of direct costs and indirect costs to be considered by AEMO.</p> | <p>The rule specifies examples of direct and indirect costs for the purpose of AEMO applying the principle.</p> <p>Without limitation, examples of the types of direct costs include:</p> <ul style="list-style-type: none"> • costs payable under RERT contracts if AEMO activates or dispatches RERT • costs in paying compensation in respect of an AEMO intervention event. <p>Without limitation, examples of the types of indirect costs include:</p> <ul style="list-style-type: none"> • distortionary effects on the operation of the market • the implied value of lost load when load shedding occurs as a result of a clause 4.8.9 instruction. |
| <p>Require AEMO to report on its selection of intervention mechanisms.</p> | <p>AEMO is to report on:</p> <ul style="list-style-type: none"> • the basis on which AEMO determined which intervention mechanism, or combination of intervention mechanisms to use • how AEMO choose the mechanism(s) that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the |

| RULE ELEMENTS | DRAFT RULE REQUIREMENTS |
|--|---|
| | <p>market</p> <ul style="list-style-type: none"> whether AEMO complied with Rule requirements and its procedures and if it did not, the reason for not following those procedures. <p>AEMO is to report on the above matters in accordance with the existing reporting timelines set out for each of the intervention mechanisms (as applicable).</p> |
| New Chapter 10 term 'intervention mechanism' | <p>The following mechanisms are defined to be 'intervention mechanisms' in Chapter 10:</p> <ul style="list-style-type: none"> exercising the reliability and emergency reserve trader in accordance with rule 3.20 by: <ul style="list-style-type: none"> (1) dispatching scheduled generating units, scheduled network services or scheduled loads in accordance with any scheduled reserve contract; or (2) activating loads or generating units under any unscheduled reserve contract; issuing a direction in accordance with clause 4.8.9; issuing a clause 4.8.9 instruction in accordance with clause 4.8.9. |

Source: AEMC

3.2 Rule making test

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).⁶⁵ This is the decision-making framework that the Commission must apply.

The NEO is:⁶⁶

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.

The Commission has identified that the relevant aspects of the NEO are the efficient operation and use of, electricity services with respect to price, the reliability of supply of electricity, and reliability of the national electricity system because:

⁶⁵ Section 88 of the NEL.

⁶⁶ Section 7 of the NEL.

- The objective of AEMO's selection of intervention mechanisms is to address supply scarcity providing for the maintenance of reliability, and
- The direct and indirect costs of intervention can be significant and are ultimately paid for by consumers through higher prices for electricity.

3.2.1

Making a more preferable rule

Under section 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 requests, the more preferable rule will or is likely to better contribute to the achievement of the NEO. In this instance, the Commission has made a more preferable rule.

In making its draft determination and more preferable draft rule, the Commission made some changes to the proposed rule submitted by the proponent.

These changes do not materially alter the intent of the Commission's recommendation from the IIFR or to the policy position reflected in the rule change request. However, the draft rule is different in some aspects to the proposed rule in order to provide further clarity and improve transparency and accountability under a principle-based approach. In summary, the changes are:

- requiring AEMO to consider direct and indirect costs, rather than just costs, and providing examples of the types of direct and indirect costs that can be relevant for an intervention
- modifying the principle-based requirement for AEMO to maximise effectiveness and minimise cost with a requirement to choose the mechanism(s) that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market
- including arrangements for transparency and accountability by requiring AEMO to develop, consult on, and publish procedures and report on how it applies this principle-based requirement during times of supply scarcity.

The Commission considers these changes will better contribute to the achievement of the NEO by promoting more efficient operation of electricity services with respect to price. More detail is provided in the summary of reasons set out in section 3.4.

Further information on the legal requirements for making this final rule determination is set out in Appendix A.

3.2.2

Fast-track process

The Commission carried out its assessment of the rule change request under a fast track process.⁶⁷ The rule making process can be fast tracked if the request arises from an AEMC review and there has been adequate public consultation on the content of the relevant recommendation or relevant conclusion during the AEMC review.⁶⁸

⁶⁷ In accordance with section 96A(1)(b)(ii) of the NEL.

⁶⁸ Section 96A(1)(b)(ii) and (2)(b)(ii) NEL.

The Commission elected to fast track the rule change given the public consultation on the hierarchy of interventions undertaken in the Interventions investigation. Under the fast-track process, there is only one round of consultation on a draft rule and determination as this helps progress the rule faster than under the standard rule change process.

3.3 Assessment framework

In assessing the rule change request against the NEO the Commission has considered the following principles:

- **Efficiency:** The costs associated with the provision of energy should be minimised and assessed against the value to consumers of having a reliable and secure supply. Intervention frameworks should seek to minimise market distortions in order to promote efficient investment and functioning of the market.
- **Transparency and predictability:** Intervention frameworks should promote transparency as well as being predictable, so that market participants can make efficient investment and operational decisions.
- **Risk allocation:** Risk allocation and the accountability for investment and operational decisions should rest with those parties who are best placed to manage them and have the information, skills, and experience to make efficient decisions. The decision-making party should be accountable for outcomes arising from its decisions.
- **Consistency:** Rules should adopt a consistent approach with other parts of the regulatory framework where appropriate in order to encourage predictability and reduce uncertainty.

3.4 Summary of reasons

The Commission has elected to make a draft more preferable rule on the basis that the more preferable rule will or is likely to better contribute to the achievement of the NEO. In making its draft rule determination and more preferable draft rule, the Commission made some changes to the proposed rule submitted by the proponent. These changes are in order to provide further clarity and improve transparency and accountability under a principle-based approach (see section 3.2.1).

This section summarises the Commission's reasons for making the draft more preferable rule including consideration of how it better contributes to the achievement of the NEO than the proposed rule.

Reasons are summarised for each of the principles applied by the Commission in assessing the rule change request against the NEO. Further detail on the Commission's reasons for making the draft rule in each of these areas are presented in Chapter 4.

Efficiency

Existing requirements that preference the use of RERT may preclude lower cost options under some circumstances leading to less efficient interventions and higher costs for consumers. The Commission has determined that the draft more preferable rule, which provides flexibility for AEMO to choose the mechanism(s) that is effective in addressing the

need to intervene in the market while minimising the direct and indirect costs of intervening in the market, is likely to lead to more efficient outcomes with lower costs for consumers.

The type of costs that are considered in AEMO's selection of intervention mechanism(s) is important for achieving an efficient outcome. The draft rule requires AEMO to minimise direct and indirect costs when selecting the intervention mechanism, or combination of mechanisms to apply. Failure to consider indirect costs, such as a reduction in market efficiency arising from AEMO's intervention, or reduction in end user utility from load shedding, may lead to inefficient outcomes. For this reason, the Commission's draft more preferable rule requires AEMO to minimise both direct and indirect costs when selecting the intervention mechanism, or combination of mechanisms to use.

Transparency and predictability

The draft more preferable rule applies transparency requirements to cover the flexibility provided to AEMO under the draft rule on the choice of intervention mechanisms. These transparency measures provide predictability for stakeholders, to the extent reasonably practicable, by requiring AEMO to develop, publish, and consult on procedures setting out its methods and processes in choosing the mechanism(s) that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market.

The Commission considers that arrangements for transparency will better promote the NEO as they will provide parties (market participants and end users) with better information to inform efficient investment and operational decisions. Transparency helps to improve market confidence in AEMO's intervention processes because it provides the market with greater understanding of the basis on which AEMO selects specific intervention mechanisms.

Risk allocation

The draft more preferable rule places responsibility for selecting the approach to intervention with AEMO as the party with the skills, information, and experience to choose the mechanism(s) that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market. The draft rule also makes AEMO accountable for its decisions by extending existing reporting obligations to cover the basis on which AEMO determined the mechanisms to be used. The Commission considers these arrangements to promote the NEO as decision-making, and the accountability for decisions, is placed with the party best placed to manage the risk arising from those decisions.

Consistency

The draft more preferable rule removes any explicit preference in the rules for intervention via a specific mechanism. A consistent approach is also taken to reporting and procedures required under the draft rule. The Commission considers this to promote the NEO as it provides for each mechanism to be considered on a consistent basis.

3.5 Transitional arrangements

Supply scarcity conditions predominantly occur during summer. Each occasion on which AEMO has dispatched RERT, or directed for reliability has been during summer or early autumn. Therefore, the Commission considers it would promote the NEO for the rule to come into effect prior to summer 2020-21.

The draft rule requires AEMO to publish procedures established in accordance with the Rules consultation procedures, which are set out in rule 8.9 of the NER. The Rules consultation procedures specify a rigorous two stage public consultation process which takes around 6 months to complete. Waiting for AEMO to complete this consultation would delay the rule taking effect until after summer 2020-21.

For this reason, the draft rule sets out transitional arrangements which will require AEMO to publish interim procedures by 19 October 2020 without following the Rules consultation procedures. By 3 May 2021, AEMO must publish its final procedures in accordance with the Rules consultation procedures.

A summary of the transitional arrangements are set out in Box 3 and are set out in detail in Schedule 3 of the draft rule.

BOX 3: TRANSITIONAL ARRANGEMENTS

- By 19 October 2020, AEMO must develop and publish on its website, interim procedures to apply until the procedures are made and published in accordance with the Rules consultation procedures.
- AEMO is not required to use the Rules consultation procedures for the interim procedures, but must still take into account the requirements set out in the Amending Rule.
- AEMO's interim procedures will cease to apply after 3 May 2021, when AEMO must, in accordance with the Rules consultation procedures, develop and publish the final procedures.
- Until the final procedures apply, references in the rules to the procedures are taken to refer to the interim procedures.

4 COMMISSION CONSIDERATIONS

This chapter provides further details on the Commission's decision. The Commission's considerations are divided into the following sections:

- removing the intervention hierarchy
- transparency and accountability.

4.1 Removing the intervention hierarchy

This section presents the Commission's considerations for removing the intervention hierarchy. AEMO's rule change request⁶⁹ and the Commission's IIFR final report⁷⁰ both considered replacing the existing hierarchy of interventions with flexibility for AEMO as promoting efficiency and effectiveness consistent with the NEO.

4.1.1 Proponent's view and IIFR recommendation

AEMO's view

AEMO justifies the rule change request in terms of efficiency and effectiveness. AEMO considers the existing hierarchy of interventions that prescribes use of RERT before directions or instructions to limit the number of options available for AEMO to manage supply scarcity. AEMO considers removing the hierarchy of intervention mechanisms from the Rules would provide the flexibility to deploy the least cost and most effective suite of options if it becomes necessary to intervene during times of supply scarcity.⁷¹

AEMO considers prescribing the use of RERT before directions or instructions to limit their ability to select the option that maximises the effectiveness of an intervention. AEMO notes that pre-activation times for RERT may be longer than recall times for directions, meaning that AEMO might need to intervene earlier than desirable, when forecast information is less reliable. Alternatively, minimum activation times for RERT may be longer than the duration of the supply scarcity, meaning that AEMO might need to intervene for longer than desirable. In certain circumstances, other forms of intervention may be more effective than exercising emergency reserves under RERT. AEMO does not consider a requirement to exercise emergency reserves under RERT before issuing directions or instructions necessarily means that the intervention will be less effective, but notes that it increases the likelihood.⁷²

AEMO also considers that the smaller the number of available options, the less likely that AEMO can select the option that minimises expected costs. AEMO identifies the RERT as a high cost intervention mechanism, and that a requirement to exercise RERT before issuing directions or instructions increases the likelihood of higher costs ultimately being borne by

⁶⁹ AEMO, rule change request, p. 5.

⁷⁰ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. 103.

⁷¹ AEMO, rule change request, p. 5.

⁷² AEMO, rule change request, p. 4.

consumers.⁷³ AEMO therefore considers the rule change request to promote the NEO by increasing the efficient operation of electricity services.⁷⁴

Commission's view in the IIFR

In its IIFR, the Commission considered that the existing hierarchy of interventions may produce inefficient cost impacts on consumers in some circumstances. While the Commission acknowledged that, during a period of supply scarcity, most if not all generators will typically participate in the market voluntarily and therefore not be available to direct, the Commission recognised that there can also be instances where units remain available to direct, which may be lower cost than activating the RERT. In order to promote a cost minimisation approach, the Commission considered that it would be appropriate to replace the existing hierarchy with one which is based on a principle of minimising direct and indirect costs to consumers.⁷⁵

The Commission also considered intervention mechanisms to have factors that limit their effectiveness and that AEMO should factor considerations such as minimum start up times, fuel availability, minimum run times, and lack of precision in load shedding into its selection of the mechanism to use.⁷⁶

On this basis, the Commission recommended AEMO submit a rule change request to introduce a new principle to guide AEMO in prioritising the use of RERT, directions and instructions. The principle would reflect that prioritisation should minimise direct and indirect costs and maximise the effectiveness of the intervention.⁷⁷

4.1.2

Stakeholder submissions

This rule change request is being fast tracked,⁷⁸ on the basis that consultation on the issue and proposed solution was conducted through the interventions investigation review done by the Commission in 2019. Relevant submissions from that process are summarised below.

The interventions investigation consultation paper sought stakeholders' views on:⁷⁹

1. What stakeholders consider to be the ideal hierarchy of intervention mechanisms, i.e. the order in which AEMO should use the RERT, directions and instructions to shed load?
2. Should the current hierarchy of intervention mechanisms be changed so that the RERT is no longer preferred to directions?
3. Should a reasonable endeavours 'least cost' principle inform the hierarchy of intervention mechanisms?

⁷³ Ibid, p. 4.

⁷⁴ AEMO, rule change request, p. 5.

⁷⁵ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. vii.

⁷⁶ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. 98.

⁷⁷ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. viii.

⁷⁸ The fast track process is utilised when sufficient consultation on both the issue and solution has occurred as part of an AEMC rule review.

⁷⁹ AEMC, *Investigation into intervention mechanisms in the NEM*, consultation paper, p. 36.

There was considerable support from stakeholders for applying a least cost principle to AEMO's choice of intervention mechanism.⁸⁰ AEMO, Powerlink, PIAC and ERM Power also considered that a prescriptive hierarchy is unlikely to deliver lowest-cost outcomes to consumers in all circumstances and any hierarchy should aim to deliver the lowest cost and lowest market impact.⁸¹

- Powerlink viewed the current requirement to prioritise use of the RERT ahead of directions and instructions as potentially inefficient and therefore considered it should be removed. Powerlink considered that AEMO should be obliged to use reasonable endeavours to minimise the cost to consumers of an intervention and use whichever mechanism or combination of mechanisms will best achieve this objective. They considered this assessment should be based on the information reasonably available to AEMO at the time of the intervention.⁸²
- Origin considered that "interventions should minimise costs to the system. With this in mind, the market operator should first look to utilise resources within the market through directions, before deploying RERT or the use of instructions".⁸³
- PIAC proposed that, in determining the hierarchy of intervention mechanisms, efficiency (providing necessary system security services at least cost) should be treated as a more fundamental goal than creating or replicating a market-based outcome.⁸⁴

There were however mixed views among stakeholders as to the ideal order in which AEMO should apply the intervention mechanisms.

Snowy Hydro, Engie, AGL and the Australian Energy Council (AEC) favoured the use of the RERT ahead of directions and instructions.⁸⁵ The AEC noted that the RERT, though limited in its market-based characteristics, is closer to a market-based approach than either directions or instructions.⁸⁶

By contrast, Energy Queensland and Powershop were in favour of applying directions (and/or instructions) ahead of the RERT.⁸⁷ They considered that prioritising directions and instructions ahead of the RERT is appropriate on the basis that a small amount of load shedding should be acceptable in the context of the reliability standard. Origin also supported prioritising directions ahead of the RERT and instructions, except in instances where RERT costs have already been borne (e.g. if pre-activated at a cost).⁸⁸

AGL and Snowy Hydro both supported the principle that AEMO interventions should aim to minimise costs and market impacts. However, they supported retaining the current priority

80 Submissions to the intervention investigation consultation paper: AEMO, Energy Queensland, Powershop, Powerlink, TasNetworks, PIAC, ERM Power, Origin, AGL and SnowyHydro.

81 Submissions to the interventions investigation consultation paper: AEMO, Powerlink, PIAC, ERM Power.

82 Powerlink, submission to the interventions investigation consultation paper, pp. 3-4.

83 Origin, submission to the interventions investigation consultation paper, p. 1.

84 PIAC, submission to the interventions investigation consultation paper, pp 3-4.

85 Submissions to the interventions investigation consultation paper: Snowy Hydro, Engie, AGL.

86 AEC, submission to interventions investigation consultation paper, p. 2.

87 Submissions to the interventions investigation consultation paper: Energy Queensland and Powershop.

88 Origin, submission to the interventions investigation consultation paper, p. 2.

afforded to RERT at times of supply scarcity as they considered this hierarchy to minimise costs, while giving AEMO flexibility to choose between directions and instructions.⁸⁹

The South Australian Government stated that the direct costs of a RERT event as well as the counterfactual (i.e. the cost to consumers if load shedding had eventuated) should be taken into account.⁹⁰ It considered that changing the hierarchy to direct or instruct participants before using the RERT would seem contrary to recent changes to the RERT such as a longer procurement lead time (which dictates how far ahead of a shortfall AEMO can procure emergency reserves) and a RERT principle on costs.⁹¹

4.1.3

Efficiency of the different intervention mechanisms

The Commission has made a more preferable draft rule that replaces a prescriptive hierarchy that requires RERT to be used in preference to directions and instructions, with flexibility for AEMO to select effective interventions that minimise direct and indirect cost. In this section, the Commission considers the efficiency of each of the three intervention mechanisms in coming to its view that there are efficiency gains achieved by providing AEMO with this flexibility.

This discussion substantially reflects the Commission's analysis in coming to the recommendation on the hierarchy of interventions in the IIFR.⁹²

RERT

The existing hierarchy requirement to use RERT first reflects the nature of the RERT relative to the other intervention mechanisms. RERT is a mechanism in which participants voluntarily participate and reveal their costs through contract negotiations. This is a market based approach to procurement which provides AEMO with high quality information on the costs of dispatching the RERT thereby allowing AEMO to minimise the cost of dispatching the resources procured as RERT resources.

RERT can be a high cost mechanism. This reflects that those resources that participate in RERT are out of market.

The RERT also has the potential to impose costs associated with investment and operational price distortions, albeit limited by the design of the mechanism. To help address the distortions caused by RERT, intervention pricing (subject to the regional reference node test) is used to set the market price to the level it would have been had the intervention not occurred. Compensation is also payable to participants affected by the RERT (and directions) to put them in the position they would have been in but for the intervention. In addition, the Commission's enhancement of the RERT final determination also introduced a number of other provisions that seek to minimise any distortions on the wholesale market from the use of the RERT.⁹³

⁸⁹ AGL, submission to the interventions investigation consultation paper, p. 1; Snowy Hydro, submission to the interventions investigation consultation paper, p. 4.

⁹⁰ South Australian Government, submission to the interventions investigation consultation paper, pp. 4-5.

⁹¹ Ibid.

⁹² AEMC, *Investigation into intervention mechanisms in the NEM*, final report, pp. 99-102.

⁹³ AEMC, *Enhancement to the RERT rule change*, final determination, p. 33.

In its enhancement to the RERT rule, the Commission balanced the advantages of a longer lead time for AEMO to procure long-notice RERT with the increased potential for market distortion to arise. To minimise the chance of distortions, the final rule strengthens the out of-market provisions, as well as introducing an additional RERT principle aimed at minimising cost. The new RERT principle requires AEMO to consider the principle that the average amount payable by AEMO under reserve contracts for each MWh of reserves should not exceed the estimated average VCR for the relevant region,⁹⁴ and out of market provisions were strengthened to specify that scheduled reserve providers cannot participate in RERT if they have been in the market for the past 12 months.⁹⁵

As a higher cost mechanism, RERT may be a less efficient option for intervention than directions or instructions under certain circumstances. The Commission is therefore of the view that efficiency benefits which advance the NEO are achievable by removing the existing requirement to use RERT first. While RERT is a mechanism which provides revealed cost information to AEMO, the Commission does not consider this justifies the potential reduction in efficiency from higher costs being borne by consumers.

Directions

Directions are an "in-market" intervention as only scheduled plant and market generating units are able to be directed.⁹⁶

In contrast to RERT, directions under clause 4.8.9 of the NER must be followed. Market participants must comply with a direction from AEMO irrespective of commercial considerations. A Registered Participant must use its reasonable endeavours to comply with a direction unless to do so would, in the Registered Participant's reasonable opinion, be a hazard to public safety, or materially risk damaging equipment, or contravene any other law.⁹⁷

Registration in the NEM requires a participant to comply with the NER, which includes the rules that set out AEMO's powers to issue directions. Market participants have therefore agreed to be participants in the NEM, fully aware that powers of direction are available to AEMO.

The information AEMO has to assess the costs of direction may be limited based on the circumstances that apply during a supply scarcity event. Clause 4.8.5A of the NER sets out a process to be followed by AEMO prior to directing which includes requesting information from market participants on plant status, outages, and estimates of relevant costs to be incurred if directed.⁹⁸ This information gathering process however is constrained by time available and may not be practicable in all circumstances.⁹⁹

⁹⁴ AEMC, *Enhancement to the RERT rule change*, final determination, p. 28.

⁹⁵ Ibid, p. 162.

⁹⁶ Clause 4.8.9(a1)(1) of the NER apply to scheduled plant or market generating units. Scheduled plant refers to scheduled and semi scheduled generating units, scheduled network services and scheduled loads. The only potential exception to this would be mothballed generation, which, depending on its classification category, may continue to be directed by AEMO despite being essentially unavailable to the market.

⁹⁷ Clause 4.8.9(c) of the NER.

⁹⁸ Clause 4.8.5A(e) of the NER.

⁹⁹ Supply scarcity events which arise in response to a system security event such as the trip of a generating unit or network

Directions are likely to be a lower cost option than RERT when available. In-market generation will generally be larger and more technically efficient than RERT resources. In the first instance, under clause 3.15.7(c) of the NER, generators who are directed to provide energy or market ancillary services are compensated for the services they provide at the 90th percentile price, which in NSW in 2019 was \$118/MWh, far below the market price cap and so expected RERT costs. However, directed participants are also able to claim for additional compensation to reflect costs incurred as a result of the direction so that they are not out-of-pocket.¹⁰⁰

Similarly to RERT, directions have the potential to reduce efficiency of the market as a whole. To address these distortions, intervention pricing (subject to the regional reference node test) is used to set the market price to the level it would have been had the intervention not occurred. Compensation is also payable to participants affected by the RERT (and directions) to put them in the position they would have been in but for the intervention. Unlike RERT however, as directions apply to in-market resources directions do not have the same potential to reduce efficiency through distortions to investment in the wholesale market.

The resources available to be directed are also likely to be flexible. Flexible generation is not subject to long start up times, high minimum generation levels, and may have relatively short minimum run times. Directing flexible generation therefore allows AEMO to quickly bring on directed generating systems to closely reflect the timing and extent of the supply scarcity condition. This flexibility provides for AEMO to delay the latest time to intervene for as long as possible to maximise opportunity for the market to resolve the supply scarcity condition without intervention. AEMO is also required to revoke a direction as soon as it is no longer required.¹⁰¹ In contrast, RERT is subject to minimum notice and run times which may not provide as much flexibility thereby reducing opportunity for a market response and potentially increasing overall costs for consumers.¹⁰²

If available, directions could potentially offer a more efficient lower cost option for intervention than RERT, depending on the particular circumstances at the time. The Commission however notes that prices would typically be sufficiently high when supply is scarce to incentivise generating units to offer capacity into the market, including at the market price cap, making them unavailable to direct. Generally speaking, when units are available to be directed, there are other concerns at play, such as the ability and lead time to obtain fuel. The Commission however considers that should the circumstances allow, it should be open to AEMO to direct rather than use higher cost RERT resources. An example which illustrates the potential benefits of allowing AEMO the flexibility to direct lower cost generation over higher cost RERT is illustrated below.

element may require intervention on time frames which make the information gathering process under clause 4.8.5A impractical. The Commission however understands that AEMO also maintains a central record of cost related information for the purpose of estimating the cost of options to direct.

100 In practice, such claims for additional compensation following direction have been infrequent.

101 For example, the reliability directions that have been issued to date have typically been of short duration. The direction to Pelican Point in February 2017 lasted around 4 hours, the direction to the same station in March 2017 lasted 3 hours, the direction to Colongra unit 4 lasted 25 minutes (at which point the unit participated in the energy market voluntarily) and the directions to Colongra units 1-3 were cancelled after around 2.5 hours. By contrast, the RERT is often dispatched for a minimum run time of around 6 hours.

102 AEMO, submission to the intervention investigation consultation paper, pp. 3-4.

BOX 4: EXAMPLE OF DIRECTING URANQUINTY

- The potential savings associated with providing AEMO flexibility to select effective interventions that minimise cost is illustrated by the possible option of directing Uranquinty to resolve a supply scarcity issue that occurred on 30 December 2019.
 - On 30 December 2019, in an environment of high temperatures, demand, and bushfires, AEMO activated 4 RERT contracts due to a forecast Lack of Reserve Condition 2 (LOR 2) in Victoria. The LOR 2 condition occurred following a trip of the Wagga to Lower Tumut 330kV line which was subsequently removed from service. Following this event, AEMO forecast a shortfall in reserves of up to 346 MW within 45 minutes, sustained over the next three hours.
 - In line with the existing hierarchy of interventions, AEMO activated 283 MWh (92 MW capacity) of RERT at a cost of \$3.72 million. No directions or clause 4.8.9 instructions followed the activation of RERT.
 - Under the conditions that applied following the Wagga to Tumut line trip, the Commission understands that the constraints applying to interconnector flows from NSW would have been alleviated by directing the Uranquinty power station.
 - The Commission understands that directing 2 Uranquinty units would have alleviated the LOR 2 condition in Victoria at a far lower cost than 3.72 million for RERT.
 - This example illustrates the rationale for the rule change as the hierarchy of interventions, as it currently stands, may have precluded AEMO taking this action.

Clause 4.8.9 instructions

RERT is an out of market mechanism in which participants reveal their costs through contract negotiations. Directions are partially voluntary as market participants agree to participate in the market knowing that AEMO has powers to direct. Clause 4.8.9 instructions apply to plant other than scheduled plant and market generating units.¹⁰³ Unlike directions, clause 4.8.9 instructions are issued to registered participants but typically impact parties who have not voluntarily agreed to market rules which provide for AEMO's powers to intervene. To the extent that they involve load shedding, which is not always the case, clause 4.8.9 instructions are completely involuntary with no element of ex-ante consent by the affected party.

AEMO also has limited information with which to assess the costs associated with issuing a clause 4.8.9 instruction. Unlike RERT, for which AEMO has revealed cost information and directions for which AEMO may have cost information provided through the process under clause 4.8.5A, AEMO has no ex-ante information on the specific costs borne by end users as a result of an instruction to load shed.

Load shedding creates costs for end users. The implied value of lost load for end users is associated with their value of customer reliability (VCR). The RERT is considered more efficient than instructions as only those with a VCR of less than the cost of load shedding

¹⁰³ Clause 4.8.9(a1)(2) of the NER.

would participate in the RERT.¹⁰⁴ Load shedding, on the other hand, continues to be based on a high-level priority list set by each jurisdiction which, while it takes VCR into account at a high level, does not allow for individual VCR preferences to be taken into account.¹⁰⁵ The value of lost load is an example of an 'indirect' cost associated with an instruction to shed load. Further discussion on the treatment of 'indirect' costs associated with load shedding is provided in section 4.1.5.

Distortions to market pricing associated with RERT or directions are addressed through the application of intervention pricing. Intervention pricing is however not applied to clause 4.8.9 instructions. Therefore, any distortion to market pricing associated with a clause 4.8.9 instruction is not neutralised through intervention pricing. Instead, spot prices are set to the market price cap when AEMO instructs for load shedding. Additional costs may therefore be imposed through a reduction in the allocative efficiency of the market through load shedding.¹⁰⁶

In its interventions investigation, the Commission considered that the RERT should continue to be used ahead of load shedding (i.e. clause 4.8.9 instructions to TNSPs to shed load) as activating or dispatching emergency reserves before issuing an instruction to shed load can be expected to deliver more efficient outcomes and minimise costs to consumers.¹⁰⁷

While the traditional application of clause 4.8.9 instructions for the purposes of addressing supply scarcity has been for generalised load shedding, there have also been instances when AEMO has instructed large industrial loads to reduce consumption to maintain system security.¹⁰⁸

There may be future scope for AEMO to issue targeted instructions to parties for which AEMO has information regarding their VCR. Consider an example where AEMO has instructed a large energy user to reduce load. Costs arising from such an intervention will include those borne by the energy user itself, at the level of their VCR. Following appropriate consideration of these costs, there may be circumstances in the future where such costs are sufficiently low to make a targeted instruction an appropriate approach. In such situations, more flexibility may be appropriate for AEMO to make decisions that reflect any known VCR (to the extent that the large energy user's VCR is known).¹⁰⁹

¹⁰⁴ Clause 3.20.2(b)(3) of the NER includes a principle requiring RERT costs to be less than the cost of load shedding.

¹⁰⁵ Clauses 4.8.9(j) and 4.3.2(f) of the NER.

¹⁰⁶ Allocative efficiency relates to the allocation of energy services to those who value them the most. In energy markets this means that the community's demand for energy services is met by the lowest cost combination of demand and supply side options. When faced with a set of prices, consumers and businesses will choose the services that they value most, and resources will be allocated accordingly. A market with a distorted price signal is one which has lower levels of allocative efficiency as resources are not flowing to their highest value use.

¹⁰⁷ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. 99.

¹⁰⁸ As an example, on 1 December 2016, AEMO issued an instruction to ElectraNet to reduce consumption at Olympic Dam (the largest load in South Australia) to manage limited availability of frequency control services in the SA region. Further information may be found at - AEMO, Preliminary report non-credible separation event South Australia - Victoria on 16 November 2019: https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2019/Preliminary-Incident-Report---16-November-2019---SA---VIC-separation.pdf

¹⁰⁹ The Commission however notes that currently, it is unlikely that AEMO would have sufficient information on an individual customer's VCR.

The Commission does not consider it likely that clause 4.8.9 instructions will be a more efficient or desirable option than directing or dispatching RERT. The Commission however considers that AEMO, as the party with the skills, experience, and knowledge to determine effective lowest cost approaches to intervention should have scope to consider the use of instructions where appropriate. The Commission also notes that the existing hierarchy of interventions does not make a distinction between directions or instructions and considers that this flexibility should remain.

Rationale for decision

The Commission's draft more preferable rule is consistent with the assessment framework principle of efficiency as it provides for AEMO to select effective approaches to intervention that minimise cost. In contrast, existing arrangements that require AEMO to dispatch RERT in preference to issuing directions or instructions may lead to higher costs for consumers. Therefore, the Commission's draft rule is consistent with the principle of efficiency as set out in the Commission's assessment framework and promotes the NEO by enhancing the efficient operation and use of, electricity services for the long term interests of consumers of electricity.

4.1.4

Direct and indirect costs

This section considers AEMO's treatment of direct and indirect costs when selecting between the different intervention mechanisms. The assessment framework principle of efficiency considers the costs associated with the provision of energy resources should be minimised and assessed against the value to consumers of having a secure supply. The type and scope of costs that are considered in AEMO's selection of intervention mechanisms is therefore important to achieve an efficient outcome.

The Commission's recommendation in the IIFR and AEMO's rule change request differed on the following relevant point:

- The Commission's IIFR recommended introducing a new principle to guide AEMO in prioritising the use of RERT, directions and instructions. The principle is that prioritisation should minimise direct and indirect costs.
- AEMO's rule change request was materially in line with the Commission's IIFR recommendation but AEMO proposed that 'costs' be minimised without reference to direct or indirect costs.

An overall efficient outcome is achieved when all goods and factors of production in an economy are allocated to their most valuable uses, and waste is eliminated or minimised. Therefore, an efficient outcome is the lowest cost outcome, for a given output, considering the costs incurred by all parties affected by an AEMO intervention. These costs include loss of end user utility from load shedding and costs arising from a reduction to the efficiency of the electricity market.

Costs can be divided into direct and indirect cost categories. Together, direct and indirect costs capture the costs incurred by all parties affected by an AEMO intervention necessary to achieve an efficient outcome. While the reference to 'cost' in the AEMO rule change request

may be viewed as encompassing both direct and indirect costs, the Commission considers that clarity on this point is necessary to facilitate efficient decisions, and provide predictability and market confidence on AEMO's choice of intervention mechanisms under the draft rule. In line with its recommendation in the IIFR, the Commission therefore considers it necessary for AEMO to assess both direct and indirect costs when selecting the lowest cost approach to intervention.

There is currently no definition of the terms direct and indirect cost in the NER. Direct cost is a term currently used in clauses 3.12.2, 3.14.6 and 3.15.7B of the NER for directed and affected participant compensation, market suspension compensation and compensation due to the application of an administered price cap or floor price. The context in which direct cost is used in clause 3.8.14 of the NER is however different to other parts of the rules that use the term. Indirect cost is not a term currently used in the NER. The Commission has therefore determined it is necessary to provide some guidance on the types of costs that should be considered when assessing direct and indirect costs under clause 3.8.14 of the NER.

The Commission has determined to use an example based approach to provide guidance to AEMO on the costs that should be assessed as direct and indirect costs.¹¹⁰ This approach sets out a non-exhaustive list of examples of indirect and direct costs to be considered by AEMO in identifying the lowest cost option for intervention.¹¹¹ These costs are aligned with those identified in the Commission's IIFR and are set out below:¹¹²

- Direct costs
 - pre-activation and activation costs payable under reserve contracts if AEMO dispatches or activates reserves¹¹³
 - paying compensation to a Directed Participant, Affected Participant and Market Customer that is entitled to compensation under clause 3.12.2.
- Indirect costs
 - distortionary effects on the operation of the market
 - the implied value of lost load when load shedding occurs as a result of a clause 4.8.9 instruction, the value of which may be determined by AEMO having regard to the value of customer reliability.

It should be noted that these lists are non-exhaustive. AEMO would be able to consider other direct and indirect costs as appropriate.

Rationale for decision

The Commission has made a more preferable draft rule that requires minimisation of both direct and indirect costs. The Commission considers a requirement for AEMO to consider the

¹¹⁰ See clause 3.8.14A(b) and (c) of the draft Amending Rule.

¹¹¹ This approach is utilised in other areas of the rules including the definitions for credible contingency event in 4.2.3 which provides a non-exhaustive list of examples of types of events which are deemed to be contingency events.

¹¹² AEMC, *Investigation into intervention mechanisms in the NEM*, final report, pp. 97-98.

¹¹³ The categories of cost (availability, pre-activation and activation) that are typically incurred in procuring RERT contracts are not defined in the NER. Instead, they are used by convention by AEMO. Pre-activation costs are incurred in the lead up to activation of the RERT, while activation costs are incurred when the RERT is activated.

costs accruing to all parties affected by an AEMO intervention, supported by guidance on the type of direct and indirect costs to be considered, to be consistent with the assessment framework principle of efficiency thereby better promoting the NEO than AEMO's proposed rule.

4.1.5

Effectiveness

The Commission's IIFR recommendation and AEMO's rule change request both proposed a principle of maximising effectiveness while also minimising cost. In considering the rule change request, the Commission has determined not to include a requirement to maximise effectiveness as such an approach alongside a requirement to also minimise cost involves a dual objective function – that is, a requirement to comply with two competing objectives. The Commission considers that such an approach could be difficult to implement and create uncertainty.

The Commission's more preferable draft rule instead requires AEMO to use reasonable endeavours to choose the intervention mechanism, or combination of intervention mechanisms, that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening. This approach increases clarity and certainty as to how the principle should be implemented.

The principle requiring AEMO to maximise efficiency and minimise cost was intended to provide AEMO with the flexibility to address a tension between effectiveness and cost. Under certain circumstances it may not be prudent to select the lowest cost option for intervention if that intervention is insufficiently effective. The prudent option may be for AEMO to select a more effective option for intervention which has higher costs. The Commission considers that policy objective can be achieved without reference to a dual objective.

The Commission's draft rule will not require AEMO to select the lowest cost intervention option irrespective of effectiveness. The draft rule requirement is for AEMO to use reasonable endeavours to choose the intervention mechanism, or combination of intervention mechanisms, that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market. This will provide AEMO with scope to select an appropriately effective approach, noting that other provisions in the NER provide the context within which this principle will be implemented. In particular, AEMO has obligations to maintain the system in a secure, satisfactory and reliable state. As such, it will select the intervention mechanism or mechanisms required to achieve these objectives.¹¹⁴

Interpreting 'effectiveness'

This section sets out what the Commission considers 'effectiveness' to mean in the context of considering a choice between intervention mechanisms and describes the approach taken in the more preferable draft rule.

The term effectiveness is not currently defined in the rules. Neither the IIFR nor AEMO's rule change request proposed defining the meaning of effectiveness. The Commission notes that

¹¹⁴ For example, under clause 4.8.9, AEMO can issue directions or instructions if it is satisfied that it is necessary to do so to maintain or reestablish the power system to a secure operating state, a satisfactory operating state, or a reliable operating state.

considerations related to effectiveness will vary significantly depending on the circumstances that apply and AEMO, as the party with the skills, experience and knowledge to evaluate the specific intervention mechanisms is best placed to determine their effectiveness.

In its rule change request, as an example of effectiveness, AEMO noted that pre-activation times for RERT may be longer than recall times for directions, meaning that AEMO might need to intervene earlier than desirable, when forecast information is less reliable. Alternatively, minimum activation times for RERT may be longer than the duration of the supply scarcity, meaning that AEMO might need to intervene for longer than desirable. In certain circumstances, other forms of intervention may be more effective than exercising RERT. AEMO does not consider a requirement to exercise RERT before issuing directions or instructions necessarily mean that the intervention will be less effective, but notes that it increases the likelihood.¹¹⁵

The interventions investigation identified a range of practical considerations of relevance of the question of effective options for intervention. It noted that intervention mechanisms typically have limitations that limit their effectiveness or that should be factored into AEMO's decision-making including:¹¹⁶

- Plants can only be directed by AEMO if they are physically capable of generating (e.g. they have sufficient fuel) and if they are able to synchronise in time. This is particularly true during a supply scarcity event as the units that may be available for direction would likely be offline
- Emergency reserves have lead times as well, but also have minimum run times
- Involuntary load shedding is generally not precise in terms of the amount shed and sensitive loads cannot be shed.

Minimum run times have important implications for the cost of the RERT. It may be for example, that the RERT is dispatched to address a small number of trading intervals in which AEMO has forecast an LOR2 condition. However, given the obligation to dispatch the RERT for a minimum period of time, the RERT may be a relatively blunt tool for addressing such a shortfall (compared with a direction to a generator, should one be available). The minimum run time will also impact the amount of compensation that must be paid to affected participants since in-market generators which would otherwise provide power voluntarily in the market must be constrained down so as to accommodate the effect of the RERT for the duration of the minimum run time. The amount of compensation paid to affected participants affects the costs of RERT. For example, on 31 January 2020, the RERT was activated in both NSW and Victoria. The total costs associated with these activations was \$18.47m of which more than a quarter (\$4.74m) was paid in compensation to affected participants.¹¹⁷

This disconnect between the duration of the shortfall and the minimum RERT run time is illustrated in the box and figure below.

¹¹⁵ AEMO, rule change request, p. 4.

¹¹⁶ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. 98.

¹¹⁷ AEMO, Reliability and Emergency Reserve Trader (RERT) Quarterly Report Q1 2020, May 2020, p. 32.

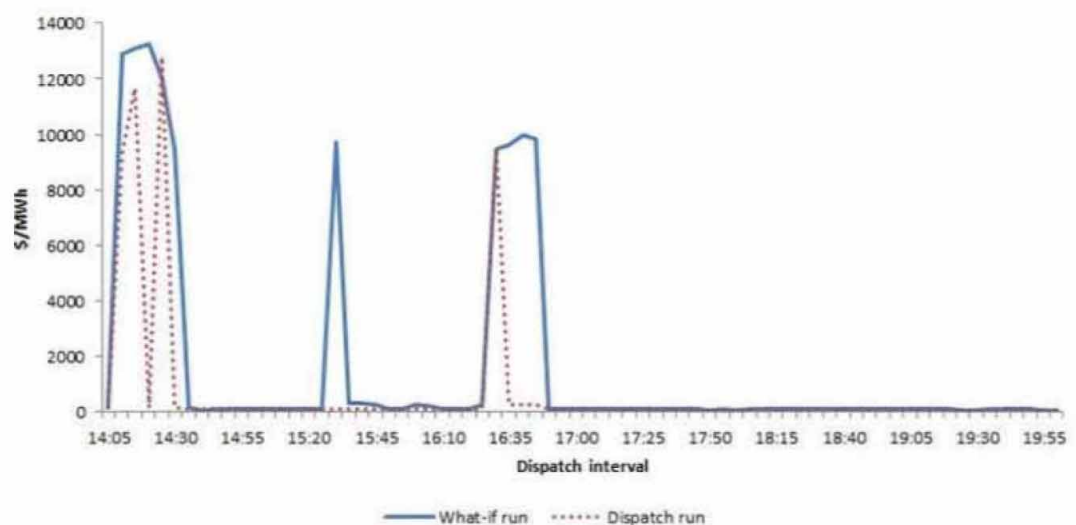
BOX 5: JANUARY 2018 EVENT

On 19 January 2018, AEMO activated emergency reserves for six hours. The what-if pricing run in the figure below shows how the market was priced on 19 January. These prices would be expected to be high due to the tight demand-supply balance as the what-if run ignores the effect of dispatching RERT (i.e. it assumes the demand and supply balance remained tight). The dispatch run shows what prices would have been if intervention pricing was not being used, taking into account the effect of dispatching emergency reserves. These prices would be expected to be lower as dispatching RERT involves contracted parties reducing demand (or providing supply from out-of-market generating units). Prices were higher in the what-if run on a number of occasions but not consistently high throughout the intervention event.

It could be inferred from the chart below that the emergency reserves were not needed for the entirety of the intervention event (as consistently high prices would be expected in the what-if run if the RERT had been needed for the entire six hours). However, this was likely known by AEMO, with reserves dispatched for longer than strictly required due to minimum running times specified in contracts, as well as limitations such as activation lead times. These operational complexities associated with the use of the RERT are likely unavoidable given the nature and limitations associated with out-of-market reserves, and the challenge of procuring and dispatching reserves ahead of real time, at which point better information is available.

Source: AEMC, IIFR final report

Figure 4.1: Prices on 19 January 2018 - Victoria



Source: AEMC analysis based on MMS data

The Commission agrees with AEMO that effectiveness involves consideration of the characteristics of individual resources available via the different intervention mechanisms.

These characteristics include technical considerations such as minimum start and run time constraints, forecast and unit delivery risk and uncertainty, and location in the network. The Commission therefore considers effectiveness, in the context of clause 3.8.14 of the NER, to be a multifaceted concept that includes different elements such as:

- an effective option for intervention is one that is able to respond - resources which are unable or have limited ability to respond when directed for practical reasons such as fuel availability would not be considered an effective option
- an effective option is one that is flexible and maximises the market's ability to respond - effectiveness in this regard speaks to the constraints applying to use of the resource. Start up times, minimum stable generation levels, and minimum run times are examples of such constraints. As noted by AEMO, use of a flexible generating unit, with short start up times, effectively maximises the market's opportunity to respond in accordance with the market design principle set out in Clause 3.1.4(a)(1).¹¹⁸
- an effective option for intervention involves using reliable resources – effectiveness in this regard speaks to the chance of the resource breaking down or otherwise not delivering when called upon.
- an effective option is not subject to network constraints - effectiveness in this regard speaks to being able to use the network to deliver electricity to the market thereby addressing the supply scarcity condition.
- an effective option for intervention is one which enables AEMO to meet its obligations in respect of reliability and system security. The Commission notes that AEMO is required to maintain the system in a secure operating state¹¹⁹ and has the power to intervene in the market in order to maintain or re-establish the system to a satisfactory or reliable operating state. These obligations play an important role in determining what constitutes an effective intervention.¹²⁰

As these factors are technical and specific to the circumstances that apply to the intervention, the Commission has determined not to provide a definition or detailed guidance for AEMO on its assessment of effectiveness in the draft rule.

Rationale for decision

The Commission had determined to make a more preferable draft rule that does not require minimisation of cost and maximisation of effectiveness as such an approach requires AEMO to comply with two competing objectives. The assessment framework principle of consistency considers the rules should adopt an approach in order to encourage predictability and reduce uncertainty. Consistent with this principle, the Commission considers the draft more preferable rule, which requires AEMO to use reasonable endeavours to choose the intervention mechanism, or combination of intervention mechanisms, that is effective in addressing the need to intervene in the market while minimising direct and indirect costs will better contribute reduce uncertainty as it is an unambiguous requirement with a clear basis

¹¹⁸ Market design principle (a)(1) - minimisation of AEMO decision-making to allow Market Participants the greatest amount of commercial freedom to decide how they will operate in the market.

¹¹⁹ Clause 4.2.6(b) of the NER.

¹²⁰ Clause 4.8.9(a) of the NER.

for compliance. The Commission therefore considers the draft rule to better promote the NEO as AEMO's approach could be difficult to implement and reduce predictability about AEMO's likely selection of intervention mechanisms.

4.1.6

Summary and conclusion

The Commission has determined that replacing the existing prescriptive hierarchy of intervention mechanisms with a principle of minimising direct and indirect costs would promote the NEO. The Commission considers the more preferable draft rule to enhance the efficiency and effectiveness of AEMO interventions contribute to achieving the principles set out in the assessment framework and will, or are likely to, better contribute to the achievement of the NEO than the proposed rule for the reasons set out in the sections above.

The Commission's draft determination is to make a more preferable rule with the following key changes from the proposed rule:

- AEMO will be required to minimise both direct and indirect costs.
- The proposed requirement for AEMO to minimise cost and maximise effectiveness has been modified with a requirement for AEMO to use reasonable endeavours to choose the intervention mechanism, or combination of intervention mechanisms, that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market.¹²¹

During times of supply scarcity, the following more preferable draft rule requirements are relevant to efficiency and effectiveness:

- AEMO must use its reasonable endeavours to ensure all valid and physically realisable dispatch bids and dispatch offers submitted by Scheduled Generators, Semi-Scheduled Generators or Market Participants are dispatched, including those priced at the market price cap.¹²²
- If AEMO determines that it will be necessary, after dispatching all valid and physically realisable dispatch bids and dispatch offers to intervene in the market, AEMO must determine which intervention mechanism, or combination of intervention mechanisms, to use in accordance with the principle below and the procedures developed by AEMO.¹²³
- When determining which intervention mechanism, or combination of intervention mechanisms, to use, AEMO must use its reasonable endeavours to choose the intervention mechanism, or combination of intervention mechanisms, that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs of such intervention.¹²⁴

¹²¹ See clause 3.8.14(c) of the draft Amending Rule.

¹²² See clause 3.8.14(a)(1) of the draft Amending Rule.

¹²³ See clause 3.8.14(a)(2) of the draft Amending Rule.

¹²⁴ See clause 3.8.14(b) of the draft Amending Rule.

The more preferable draft rule specifically sets out a list of examples of direct costs and indirect costs to be considered by AEMO when selecting the intervention mechanisms that minimise direct and indirect costs:¹²⁵

- Without limitation, examples of the types of direct costs include:
 - Pre-activation and activation costs payable under reserve contracts if AEMO activates or dispatches reserves
 - compensation costs payable to directed participants, affected participants and market customers entitled to compensation under clause 3.12.2.
- Without limitation, examples of the types of indirect costs include:
 - distortionary effects on the operation of the market
 - the implied value of lost load when load shedding occurs as a result of a clause 4.8.9 instruction, the value of which may be determined by AEMO having regard to the value of customer reliability.

4.2 Transparency and accountability measures

This section presents the Commission's determination regarding transparency and accountability requirements.

4.2.1 AEMO's view and IIFR recommendation

The Commission did not recommend any specific transparency and accountability requirements in its IIFR. Similarly, AEMO did not propose any specific transparency or accountability measures in its rule change request although it identified a need to amend its internal processes and operating procedures to implement the proposed rule.¹²⁶

The IIFR recommendation and AEMO's rule change request instead focussed on the substantive policy objective of achieving efficiency gains by providing AEMO with flexibility to select the approach to intervention that minimises costs and maximises effectiveness.

4.2.2 Stakeholder views

The interventions investigation consultation paper did not seek feedback on arrangements for transparency and accountability specific to removal of the hierarchy of interventions. However, a number of stakeholders expressed general views on the importance of transparency regarding AEMO's interventions. These views included:

- Energy Australia supported changes to improve the transparency and information available to participants around intervention events but also noted the significant amount of work required from AEMO to report on these, especially when they often occur.¹²⁷
- Uniting Communities considered much greater transparency regarding AEMO's actions to be urgently needed. Uniting Communities was also a strong supporter of greater

¹²⁵ See clause 3.8.14A(b) and (c) of the draft Amending Rule.

¹²⁶ AEMO, rule change request, p. 5.

¹²⁷ EnergyAustralia, submission to interventions investigation consultation paper, p. 3.

transparency and greater engagement with end consumers in relation to costs. They considered transparency should include reporting, most probably on a quarterly basis but at least annually, on all intervention pricing and compensation payments made on a generator by generator basis.¹²⁸

- Energy Queensland did not support commercially sensitive information being made public, but did support an approach that provides as much transparency as possible, given customers ultimately pay compensation.¹²⁹
- Engie noted that there is relatively little data in the public domain to assist stakeholders in considering issues related to AEMO's use of the intervention mechanisms. For those reports that are available (noting some older ones have been removed) it is not always clear which generators have been the subject of directions, the quantum of the impact of the direction, the amounts paid to different parties under each clause of the rules and so on.¹³⁰
- PIAC identified transparency on the costs and effects of interventions as a guiding principle. They considered market bodies, consumers and consumer advocates should have access to information as a means of promoting accountability on the framework and its application. PIAC also considered the criterion of transparency and predictability would benefit from additional clarification to acknowledge the value of transparency, not only as an input to commercial decisions, but as a key mechanism for regulatory bodies, consumers and their advocates to seek accountability on how interventions are managed in the NEM.¹³¹
- Snowy Hydro believed the current lack of transparency is problematic. They considered increased and enhanced transparency in reporting to improve the ability of retailers, consumer groups, governments and policy-makers to explain the costs and benefits of the intervention to consumers.¹³²

4.2.3

Commission's approach to requirements for transparency and accountability

The Commission has determined that arrangements for transparency and accountability promote the NEO, and will or are likely to better promote the NEO than the proposed rule, for the following reasons:

- arrangements for transparency and accountability will help parties (market participants and end users) make efficient investment and operational decisions by providing sufficient information to inform their decision-making
- transparency helps to improve market confidence in AEMO's intervention processes because it provides the market with greater understanding of the basis on which AEMO selects specific intervention mechanisms

¹²⁸ Uniting Communities, submission to the intervention investigation consultation paper, p. 14.

¹²⁹ Energy Queensland, submission to the intervention investigation consultation paper, p. 2.

¹³⁰ Engie, submission to the interventions investigation consultation paper, p. 6.

¹³¹ PIAC, submission to the interventions investigation consultation paper, p. 3.

¹³² Snowy Hydro, submission to the intervention investigation consultation paper, p. 5.

- greater transparency places an increased level of accountability on AEMO's decision-making, and
- reporting allows lessons to be learned from each occasion on which AEMO intervenes in the market.

Net benefits from transparency and accountability requirements only arise if total benefits are greater than the costs associated with providing increased transparency and accountability. The only potential cost in this case is the added administrative burden on AEMO, since AEMO will need to devote resources to develop procedures and fulfil regular reporting requirements. For this reason, the Commission has determined that the draft rule should include measures that provide transparency and accountability for stakeholders while also minimising the administrative burden on AEMO.

Transparency and accountability arrangements are already in place for each of the individual intervention mechanisms. These arrangements include the following elements:

- requirements for AEMO to develop, publish, consult on, and follow procedures setting out how AEMO will use its decision-making authority
- minimum requirements for AEMO procedures
- a requirement, or provision, for Reliability Panel guidelines
- periodic reporting requirements.

To minimise the administrative costs incurred by AEMO, the Commission's approach is for any additional requirements to be aligned with, and delivered through, existing arrangements to the extent possible. The Commission has therefore determined that additional requirements for transparency and accountability arrangements should be applied only to those areas not addressed by the existing reporting frameworks for RERT, directions, and instructions.

4.2.4

Requirement for AEMO to develop procedures

The Commission has determined that the intervention frameworks should promote transparency as well as being predictable. A transparent framework is important for market efficiency in line with the NEO since it assists market participants and end users to understand AEMO's decision-making thereby helping them to make informed operational and investment decisions.

AEMO's rule change request removes prescription currently in clause 3.8.14 of NER to be replaced by operational flexibility for AEMO to select the lowest cost intervention mechanisms. While this change is likely to enhance efficiency, removing prescription in the rules may also reduce the transparency and predictability of AEMO's actions for market participants and other stakeholders.

To provide information to the market, frameworks for the individual intervention mechanisms require AEMO to publish and follow procedures setting out its methods and processes. Requirements for each of the intervention mechanisms are summarised below:

- **For directions** - Clause 4.8.9(b) requires AEMO to develop, and amend from time to time, in accordance with the Rules consultation procedures, procedures for the issuance

of directions. Clause 4.8.9(b) also sets out a list of principles that AEMO's procedures must reflect.

- **For RERT** - Clause 3.20.7(e) requires AEMO to develop, publish, and amend from time to time, in accordance with the Rules consultation procedures, procedures for the exercise of the RERT that take into account the RERT principles and RERT guidelines.
- **For instructions** - Clause 4.10.1 requires AEMO to develop load shedding procedures. Clause 4.3.2(h) requires AEMO to develop, update and maintain a set of procedures for each participating jurisdiction under which loads will be shed (by means other than an emergency frequency control scheme (EFCS) included in an EFCS settings schedule) and restored in accordance with the priorities set out in the schedules for that participating jurisdiction. Clause 4.3.2(j) sets out a set of requirements which AEMO must include in its load shedding procedures.

The Commission considers that any procedures required under the draft rule should address a clearly identified gap in existing arrangements. Existing arrangements for procedures applying to the individual intervention mechanisms are specific to those mechanisms. Existing arrangements do not address AEMO's methods and processes for selecting between the different mechanisms on the basis of cost and effectiveness. Minimum requirements for AEMO's procedures therefore address this gap.

Requirement for AEMO to make procedures

The Commission has determined to require AEMO to develop, and amend from time to time, in accordance with the Rules consultation procedures, procedures that include details of the method and assumptions that AEMO will use to apply the principle-based approach to intervention (i.e. to select the intervention that is effective while minimising cost).¹³³ The more preferable draft rule requires AEMO to take into account any applicable guidelines issued by the Reliability Panel and any other relevant procedures or guidelines published by AEMO when developing these procedures.¹³⁴

As the party with the necessary skills, experience, and information, AEMO is best positioned to specify the method and assumptions it will use for deciding on the mix of intervention mechanisms to use during conditions of supply scarcity. To promote understanding of, and confidence in AEMO's processes, the more preferable draft rule requires AEMO to set out a method, including any relevant assumptions, that it will use when selecting the intervention mechanism, or combination of mechanisms that is effective while minimising direct and indirect costs. Such information should provide stakeholders with the ability to understand the basis of AEMO's decisions thereby enhancing predictability and market confidence in AEMO's interventions.

The Commission's more preferable draft rule requires AEMO's procedures to take into account any applicable guidelines published by the Reliability Panel. The Reliability Panel is the party with responsibility for making standards and guidelines for power system security and reliability. Related frameworks for directions and RERT provide for, or require, AEMO's

¹³³ See clause 3.8.14A(a) of the draft Amending Rule.

¹³⁴ See clause 3.8.14A(d) of the draft Amending Rule.

procedures to take into account Panel guidelines. In relation to the RERT, the NER requires the Panel to make guidelines while, in relation to directions, the NER allow but do not require the Panel to issue guidelines.¹³⁵

Unlike provisions relating to the RERT, the Commission's draft rule does not require the Reliability Panel to make guidelines applying to AEMO's selection of intervention mechanisms under clause 3.8.14 of the NER. The Commission does not consider Panel guidelines are required at this time. However, the Commission's more preferable draft rule enables the Panel to issue guidelines if, at a future time, the Panel considers it necessary or desirable for AEMO's procedures to consider specific matters or contain additional detail on the operation of this clause of the NER. This is in line with the existing approach for directions in clause 4.8.9(b)(3) of the NER and is consistent with the Panel's role as maker of standards and guidelines for reliability and system security.

Consultation requirements applying to AEMO's procedure

The Commission has determined to require AEMO to consult with stakeholders on their methods and assumptions for determining effective and lowest cost intervention mechanism(s).¹³⁶

- Consultation will be required in accordance with the Rules consultation procedures set out in rule 8.9 of the NER
- AEMO may make minor and administrative amendments to the procedure without complying with the Rules consultation procedures.

The Rules consultation procedures sets out a process to be followed by AEMO in consulting with all registered participants and interested parties via written submissions.¹³⁷ Consultation via this process is important to provide all stakeholders and other interested parties with the opportunity to have their views considered in the development of AEMO's procedures. Public consultation is particularly important in respect of procedures setting out AEMO's method and assumptions as end users will ultimately bear the costs associated with AEMO's selection of intervention mechanism(s).

On occasion, however, AEMO will need to make minor and administrative amendments to its procedures. The Commission does not consider it proportionate to require AEMO to consult according to the Rules consultation procedures on such changes. Therefore, and in line with a number of similar procedures, the more preferable draft rule does not require consultation by AEMO on minor and administrative changes to its procedure.¹³⁸

Requirements for the publication of AEMO's procedures

The Commission considers that AEMO should have flexibility as to where it publishes its procedures. This flexibility will provide AEMO with scope to publish procedures alongside those published for relevant intervention mechanisms. This approach may assist to minimise

¹³⁵ Note, the Panel has not made any guidelines applying to directions at this point.

¹³⁶ See clause 3.8.14A(a) and Schedule 3 of the draft Amending Rule.

¹³⁷ Rule 8.9 of the NER.

¹³⁸ See clause 3.8.14A(d)(2) of the draft Amending Rule.

costs associated with implementation and administration by AEMO and is consistent with the current arrangements applying to directions.¹³⁹ Therefore, the draft more preferable rule does not specify a location for these procedures. Instead, this is left up to AEMO thereby promoting flexibility.

Rationale for decision

The Commission has determined to make a more preferable draft rule that requires AEMO to develop and consult on procedures setting out the method and assumptions used to select effective interventions that minimise direct and indirect costs. The Commission considers this requirement to be consistent with the assessment framework principles of transparency and predictability as it provides information to allow market participants to understand how AEMO selects effective and lowest cost intervention mechanism(s). The Commission also considers the draft rule will better advance the NEO than AEMO's proposed rule, which lacked a requirement for procedures to be made, as it will provide information to the market to enhance the efficiency of stakeholder decision-making.

4.2.5

Reporting requirements

The Commission has determined that, to balance the greater discretion conferred on AEMO by the draft rule, it is appropriate to impose reporting requirements to provide transparency and accountability as to the implementation of the rule in line with the NEO.

Ex-post reporting is an accountability mechanism required for each of the intervention mechanisms. These arrangements include:

- **For directions** - Clause 3.13.6A of the NER requires AEMO to, as soon as reasonably practicable after issuing a direction, publish a report meeting a set of minimum requirements including: describing the circumstances giving rise to the need for the direction, details of the change in dispatch outcomes due to the direction, the processes implemented by AEMO to issue the direction, and following issuance of a settlement statement, AEMO must publish detailed information on the compensation paid to registered participants.¹⁴⁰
- **For RERT** - Clause 3.20.6 of the NER requires AEMO to, as soon as reasonably practicable after activating RERT, publish a report meeting a set of minimum requirements including: describing the circumstances giving rise to the need for activation of RERT, details of the change in dispatch outcomes due to activation of RERT, the processes implemented by AEMO to activate RERT, information on RERT payments and cost recovery.
- **For instructions** - Clause 4.8.15 of the NER designates an event where AEMO issues a clause 4.8.9 instruction for load shedding to be a reviewable operating incident.¹⁴¹ Reporting obligations for reviewable operating incidents require AEMO to conduct a review in order to assess the adequacy of the provision and response of facilities or

¹³⁹ Clause 4.8.9(b) of the NER.

¹⁴⁰ Clause 3.13.6A of the NER.

¹⁴¹ Clause 4.8.14(a)(1)(v)

services and the appropriateness of actions taken to restore or maintain power system security.¹⁴²

Minimum requirements for AEMO's reporting

The Commission considers any reporting obligations should be integrated with existing obligations to the extent possible. Such an approach will allow AEMO to report the choice of intervention mechanisms as part of its existing reporting on the use of those intervention mechanisms. This approach minimises any increase in AEMO's overall reporting burden associated with the more preferable draft rule.

The Commission's draft determination sets out a process for AEMO to report on issues which are not addressed by existing frameworks. In particular the basis on which AEMO selects effective intervention mechanisms that minimise direct and indirect costs. This includes reporting on the direct and indirect costs identified in selecting the lowest cost approach to intervention as well as any considerations regarding 'effectiveness' that led to the option being selected.

The requirement for AEMO to follow the procedures it develops is a reasonable endeavours requirement.¹⁴³ Should circumstances make it unreasonable for AEMO to follow or use all aspects of the method or assumptions it has set out in its procedures, the Commission's more preferable draft rule includes reporting requirements for AEMO to provide reasons why it was not able to follow its procedures.¹⁴⁴ This provision provides transparency and accountability with flexibility for AEMO to address situations where circumstances make it unreasonable to follow their procedures.

Timing of reporting

The Commission's draft determination is for AEMO to report on each of the following three points as an additional part of its existing reporting under each existing intervention mechanism reporting requirement:¹⁴⁵

- the basis on which AEMO determined which intervention mechanism, or combination of intervention mechanisms, to use under clause 3.8.14
- how AEMO applied the principle to use its reasonable endeavours to select the intervention mechanism, or combination of intervention mechanisms, that is effective while minimising the direct and indirect costs of intervening in the market
- whether AEMO followed its procedures, and if it did not, the reason for not following those procedures.

Aligning reporting on the selection of intervention mechanisms with existing reporting on the use of those intervention mechanisms will minimise administrative costs for AEMO.

The timing of reporting on the choice of intervention mechanisms will therefore reflect the timing required under existing arrangements.

¹⁴² Clause 4.8.15(b) of the NER.

¹⁴³ See clause 3.8.14(b) of the draft Amending Rule.

¹⁴⁴ See clause 3.8.14A(e)(3) of the draft Amending Rule.

¹⁴⁵ See clause 3.8.14A(e) of the draft Amending Rule.

In its interventions investigation final report, the Commission recommended that the AER submit a rule change request to impose a clear requirement on AEMO to publish its market event reports within a clearly defined period.¹⁴⁶ Following receipt of the AER's rule change request to action this recommendation, the Commission will consult on and consider the costs and benefits of different options for reporting timelines.

Rationale for decision

The Commission has determined to make a more preferable draft rule that sets out a process for AEMO to report on issues which are not addressed by existing frameworks. Consistent with the assessment framework principle of accountability and transparency it makes AEMO accountable for the outcomes arising from its decision-making on the choice of intervention mechanisms. It also provides information to allow market participants to understand why AEMO selected the intervention mechanisms used, which may contribute to more efficient operational decisions. The Commission considers this requirement will better advance the NEO than AEMO's proposed rule, since the arrangements would be more transparent.

4.2.6

Summary and conclusion

The Commission considers that transparency and accountability requirements would support the implementation of AEMO's discretion to select least cost intervention mechanisms and promote the achievement of the NEO, and will, or is likely to, better contribute to the NEO than the proposed rule for the reasons set out in the sections above. The more preferable draft rule requires the following:¹⁴⁷

- AEMO must develop, and may amend from time to time, procedures for its approach to implementing clause 3.8.14. Such procedures must include details of the method and assumptions that AEMO will use to select the intervention mechanism, or combination of intervention mechanisms, that is effective while minimising the direct and indirect costs of intervening in the market.
- In developing these procedures, AEMO must take into account any applicable guidelines issued by the Reliability Panel and any other relevant procedures or guidelines published by AEMO.
- AEMO is to consult on its procedures in accordance with the Rules consultation procedures. AEMO may make minor or administrative amendments to the procedures without complying with the Rules consultation procedures.
- AEMO must report on its selection of intervention mechanisms including detail of:
 - the basis on which AEMO determined which intervention mechanism, or combination of intervention mechanisms, to use under clause 3.8.14;
 - how AEMO applied the principle in clause 3.8.14(c); and
 - whether AEMO followed its procedures, and if it did not, the reason for not following those procedures.

¹⁴⁶ AEMC, *Investigation into intervention mechanisms in the NEM*, final report, p. vii.

¹⁴⁷ See clause 3.8.14A of the draft Amending Rule.

- AEMO must publish its report in line with the relevant reporting requirements set out for each of the individual intervention mechanisms.

ABBREVIATIONS

| | |
|------------|--|
| AEMC | Australian Energy Market Commission |
| AEMO | Australian Energy Market Operator |
| AER | Australian Energy Regulator |
| Commission | See AEMC |
| MCE | Ministerial Council on Energy |
| NEL | National Electricity Law |
| NEO | National electricity objective |
| NERL | National Energy Retail Law |
| NERO | National energy retail objective |
| NGL | National Gas Law |
| NGO | National gas objective |
| RERT | Reliability and Reserve Trader |
| IIFR | Interventions Investigation Final Report |
| VPP | Virtual power plant |
| VCR | Value of customer reliability |
| LOR | Lack of reserve |
| RRN | Regional reference node |
| PIAC | Public Interest Advocacy Centre |
| AEC | Australian Energy Council |
| MW | Megawatt |
| MWh | Megawatt hour |

A LEGAL REQUIREMENTS UNDER THE NEO

This appendix sets out the relevant legal requirements under the NEL for the AEMC to make this draft rule determination.

A.1 Draft rule determination

In accordance with s. 99 of the NEL the Commission has made this draft rule determination in relation to the rule proposed by AEMO.

The Commission's reasons for making this draft rule determination are set out in section 3.4 and Chapter 4 of this draft determination.

A copy of the more preferable draft rule is published with this draft rule determination. Its key features are described in section 3.1 of this draft determination.

A.2 Power to make the rule

The Commission is satisfied that the more preferable draft rule falls within the subject matter about which the Commission may make rules. The more preferable draft rule falls within s. 34 of the NEL as it relates to the operation of the national electricity market and the operation of the national electricity system for the purposes of safety, security and reliability of that system.

A.3 Commission's considerations

In assessing the rule change request the Commission considered:

- its powers under the NEL to make the rule
- the rule change request
- submissions received during the Commission's IIFR, and
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO.

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for this rule change request.¹⁴⁸

The Commission may only make a rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed rule is compatible with the proper performance of Australian Energy Market Operator's declared network functions.¹⁴⁹ The more preferable draft rule is compatible with AEMO's declared network functions because it does not amend or affect those.

¹⁴⁸ Under s. 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy. On 1 July 2011, the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated council is now called the COAG Energy Council.

¹⁴⁹ Section 91(8) of the NEL/ 295(4) of the NGL.

A.4 Civil penalties

The Commission cannot create new civil penalty provisions. However, it may recommend to the COAG Energy Council that new or existing provisions of the NER be classified as civil penalty provisions.

The more preferable draft rule does not amend any clauses that are currently classified as civil penalty provisions under the NEL or National Electricity (South Australia) Regulations. The Commission does not propose to recommend to the COAG Energy Council that any of the proposed amendments made by the more preferable draft rule be classified as civil penalty provisions.

A.5 Conduct provisions

The Commission cannot create new conduct provisions. However, it may recommend to the COAG Energy Council that new or existing provisions of the NER be classified as conduct provisions.

The draft rule does not amend any rules that are currently classified as conduct provisions under the NEL or National Electricity (South Australia) Regulations. The Commission does not propose to recommend to the COAG Energy Council that any of the proposed amendments made by the draft rule be classified as conduct provisions.