

Australian Energy Market Commission

RULE DETERMINATION

REMOVAL OF INTERVENTION HIERARCHY

PROPONENT

AEMO

10 SEPTEMBER 2020

RULE

INQUIRIES

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ABOUT THE AEMC

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

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SUMMARY

1 The AEMC has made a final determination to replace the existing hierarchy of interventions with principles providing flexibility for AEMO to select the supply scarcity mechanism or combination of mechanisms that minimise direct and indirect costs and are effective at addressing the conditions of supply scarcity.

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 (these three options are defined as 'supply scarcity mechanisms' in the final rule). This final determination replaces this requirement with a principle that AEMO must use reasonable endeavours to select effective supply scarcity mechanisms that minimise direct and indirect costs, with this promoting more efficient outcomes for consumers.

Background

3 This final determination actions a recommendation made by the Commission in its *Investigation into intervention mechanisms in the NEM*.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 approach to addressing the conditions of supply scarcity.

4 Following this report, AEMO submitted a rule change request on 28 November 2019 to action this recommendation. AEMO considered 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's view was 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 considered the existing hierarchy limits its ability to intervene in a way that maximises anticipated effectiveness by reducing the number of options available to AEMO.

5 On 18 June 2020, the Commission determined to make a more preferable draft rule (draft rule) that largely reflected AEMO's rule change request. Six submissions were received on the draft determination, which have been considered in preparing the final more preferable rule.

The final rule

6 The Commission's final more preferable rule (final 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 supply scarcity mechanism, or combination of supply scarcity mechanisms, that is effective in addressing the need to intervene in the market while minimising the direct and indirect costs

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*.

of intervention.

- 7 The Commission determined that replacing the existing hierarchy of interventions contributes to the achievement of the national electricity objective (NEO) by promoting more efficient operation of electricity services with respect to price. 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 considered the existing requirement that preferenced the use of RERT to potentially preclude lower cost and more effective options for intervention being used, which could lead to higher costs for consumers.
- 8 The Commission determined to make a final rule that provides more clarity than the proposed rule change on the objective and operation of clause 3.8.14 of the NER. The final rule does this by including: a requirement for AEMO to consider both direct and indirect costs; arrangements for transparency and accountability; and a requirement for AEMO to select the supply scarcity 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. These changes did not materially alter the intent of the Commission's recommendation from the *Investigation into intervention mechanisms in the NEM* or the policy position reflected in the rule change request.
- 9 The final rule also requires AEMO to minimise both direct and indirect costs when selecting the supply scarcity 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.
- 10 The final rule applies transparency and accountability requirements to balance the flexibility provided to AEMO on the choice of supply scarcity mechanisms. The final rule requires AEMO to: develop, consult on, and publish procedures setting out its method and assumptions in selecting effective supply scarcity mechanisms 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 considered that requirements for AEMO procedures and reporting are necessary given the additional discretion provided to AEMO under the final rule. The Commission considered 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 particular supply scarcity mechanisms ex post, in order to aid transparency. Such views were expressed by stakeholders in response to the draft determination. Predictability will provide market participants with a basis on which to account for AEMO's selection of supply scarcity mechanisms when making investment and operational decisions.

Changes from the draft rule

- 12 The final rule determination is largely the same as the draft rule determination, however contains some additional requirements following consideration of feedback from stakeholders on the draft determination. There are also some drafting changes to the final rule compared

with the draft rule to better clarify the policy intent.

13 The policy changes from the draft to the final rule are:

- a more explicit requirement on AEMO to have regard to the examples of direct costs and indirect costs set out in the NER when developing its procedures
- an additional requirement for AEMO to conduct a periodic review of its procedures every four years, with the first review to occur two years after the final procedures are made.

14 The Commission considered that a periodic review requirement will advance the NEO since it will provide a trigger for improvements to be made to the procedures that contribute to the selection of more efficient supply scarcity mechanisms and improve overall stakeholder confidence in AEMO's processes and methods for the use of supply scarcity mechanisms.

Implementation

15 The final 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 in order for the rule to come into effect prior to summer 2020-21. This is because supply scarcity conditions predominantly occur during summer. For this reason, the final rule requires AEMO to publish interim procedures by 22 October 2020. By 3 May 2021, AEMO must publish its final procedures in accordance with the Rules consultation procedures.

Table 1: Final more preferable rule

RULE ELEMENTS	FINAL RULE REQUIREMENTS
<p>Clause 3.8.14(a) and (b): Replace the existing requirement in clause 3.8.14 to use RERT first (before directions or instructions) with a principle based approach to minimise costs.</p>	<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 dispatch bids and dispatch offers, to take additional action to address the conditions of supply scarcity, AEMO must determine which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use in accordance with the principle below and AEMO's procedures. <p>When determining which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use, AEMO must use its</p>

RULE ELEMENTS	FINAL RULE REQUIREMENTS
	<p>reasonable endeavours to choose the mechanism, or combination of mechanisms, that is effective in addressing the conditions of supply scarcity while minimising the direct and indirect costs of using such a mechanism or mechanisms.</p>
<p>Clause 3.8.14A: Require AEMO to develop, consult on, and publish procedures for the selection of supply scarcity 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 supply scarcity mechanism(s). Such procedures must include details of the methodology AEMO will use, and the assumptions AEMO may make. • AEMO's procedures must have regard to the types of examples of direct and indirect costs set out in the Rules. • 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>Clause 3.8.14A(a)(2): Require AEMO to conduct periodic ongoing review of its procedures.</p> <p>Clause 11.129.2(d): Require AEMO to conduct the first review of its procedures after two years.</p>	<ul style="list-style-type: none"> • AEMO must conduct a review of its procedures in accordance with the rules consultation procedures at least every four years. • AEMO must conduct the first review of its procedures two years after the final procedures have been made.
<p>Clause 3.8.14(c) and (d): Include examples of types of direct costs and indirect costs to be considered by AEMO.</p>	<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

RULE ELEMENTS	FINAL RULE REQUIREMENTS
	<p>activates or dispatches RERT</p> <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.
<p>Clause 3.8.14A(c) and (d): Require AEMO to report on its selection of supply scarcity mechanisms.</p>	<p>AEMO is to report on:</p> <ul style="list-style-type: none"> the basis on which AEMO determined which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use whether AEMO complied with the rule requirements and its procedures and if it did not, the reason for not complying with the rule requirements and following those procedures. <p>AEMO is to report in accordance with the existing reporting timelines set out for each of the intervention mechanisms (as applicable).</p>
<p>Chapter 10: New global term 'supply scarcity mechanism'</p>	<p>'Supply scarcity mechanism' is defined to mean each of 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

RULE ELEMENTS	FINAL RULE REQUIREMENTS
	<ul style="list-style-type: none">issuing a clause 4.8.9 instruction in accordance with clause 4.8.9.

CONTENTS

1	Rule change request	1
1.1	AEMO's rule change request	1
1.2	Interventions investigation recommendation	3
1.3	The rule change process and fast tracking	5
2	Final rule determination	6
2.1	The Commission's final determination	6
2.2	Rule making test	11
2.3	Assessment framework	13
2.4	Summary of reasons	14
2.5	Transitional arrangements	15
2.6	Interactions with other Rules made but not commenced	16
3	Replacing the intervention hierarchy	18
3.1	Proponent's view and IIFR recommendation on replacing the intervention hierarchy	19
3.2	Stakeholder submissions to the interventions investigation on replacing the intervention hierarchy	20
3.3	Draft determination on replacing the intervention hierarchy	21
3.4	Stakeholder submissions to the draft determination	26
3.5	Final determination on replacing the intervention hierarchy	27
4	Assessing cost and effectiveness	30
4.1	Proponent's view and IIFR recommendation on the assessment of cost and effectiveness	31
4.2	Stakeholder submissions to the interventions investigation on the assessment of cost and effectiveness	32
4.3	Draft determination on assessment of cost and effectiveness	33
4.4	Stakeholder submissions on the draft determination	36
4.5	Final determination on the assessment of cost and effectiveness	37
5	Arrangements for transparency and accountability	39
5.1	Proponent's view and IIFR recommendation on transparency and accountability requirements	40
5.2	Stakeholder submissions to the interventions investigation consultation paper	40
5.3	Draft determination on transparency and accountability requirements	42
5.4	Stakeholder submissions on the draft determination	46
5.5	Final determination on accountability and transparency requirements	47
	Abbreviations	51

APPENDICES

A	Legal requirements under the NEL	52
A.1	Final rule determination	52
A.2	Power to make the rule	52
A.3	Commission's considerations	52
A.4	Civil penalties	53
A.5	Conduct provisions	53
B	Background	54
B.1	Intervention mechanisms	54
B.2	Hierarchy of interventions	60
B.3	Related Commission work	62

TABLES

Table 1:	Final more preferable rule	iii
Table 2.1:	Commission’s final more preferable rule	7

FIGURES

Figure B.1:	AEMO’s increasing use of RERT	56
Figure B.2:	Historic number and duration of directions in the NEM	57
Figure B.3:	Hierarchy of interventions	61

1 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

Currently clause 3.8.14 of the NER requires that in times of “supply scarcity”, after dispatching all valid bids and offers, AEMO must use reasonable endeavours to first activate or dispatch the RERT and then, if necessary, issue either directions or clause 4.8.9 instructions (instructions). This requirement is referred to as the hierarchy of interventions and is the subject of AEMO’s rule change request. An introduction to the intervention mechanisms in the NEM is provided in Appendix B.⁴

This chapter introduces AEMO’s rule change request and the Commission’s rule change process to date.

1.1 AEMO’s rule change request

This section sets out:

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

1.1.1 AEMO’s proposed change to the rules

AEMO’s rule change request proposed that clauses 3.8.14(b) and (c) of the NER, which 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.⁵

AEMO’s rule change proposes that the requirement to dispatch all valid bids and offers before intervening continue to apply.

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 For the purposes of this chapter, ‘intervention mechanisms’ are taken to include RERT, directions, and clause 4.8.9 instructions. Note that the Commission’s final rule uses the term ‘supply scarcity mechanisms’ to prevent confusion with the mechanisms available for use in an AEMO intervention event which are limited to use of RERT and directions.

⁵ AEMO, rule change request, p. 4. The Commission notes that although AEMO can intervene using clause 4.8.9 instructions, an ‘AEMO intervention event’ as defined in Chapter 10 of the NER is limited to the use of RERT or directions.

1.1.2

Rationale for the rule change request

AEMO considered existing arrangements which preference the RERT to directions or instructions reflect the nature of RERT (contract market) arrangements where participants negotiate with AEMO to supply emergency reserves, whereas directions and instructions are obligatory to respond to (subject to safety concerns).⁶

AEMO's rule change request noted that the AEMC's review of intervention mechanisms and system strength 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. AEMO noted that the IIFR recommended minimising costs and maximising effectiveness during intervention. In its rule change request AEMO agreed with the Commission's conclusion on this matter.⁷

AEMO's rule change request identifies the following issues as justifying their proposed rule change:

- **The current Rules might not minimise costs to consumers** - AEMO identified that RERT can be more expensive than directions or instructions and prescribing the use of RERT before directions or instructions limits the number of available options for AEMO to manage supply scarcity. AEMO considered the smaller the number of available options, the less likely that AEMO can select the option that minimises expected costs.⁸ While AEMO acknowledged that exercising RERT before issuing directions or instructions does not necessarily mean that the intervention will be more expensive, AEMO considered it to increase the likelihood that it will be more expensive.⁹
- **The current Rules might not maximise intervention effectiveness** - AEMO considered that prescribing a hierarchy of intervention limits AEMO's ability to intervene in a way that maximises anticipated effectiveness, again by reducing the number of options available to AEMO.¹⁰ AEMO considered that a requirement to 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 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 considered it to increase the likelihood.¹¹
- **The current Rules might not be sufficiently adaptable** - AEMO considered the changing structure of the NEM, including the development of distributed resources and

6 AEMO, rule change request, p. 2.

7 Ibid.

8 AEMO, rule change request, p. 3.

9 Ibid, p. 4.

10 Ibid.

11 Ibid.

virtual power plants (VPPs) mean that the range of options available for AEMO to intervene, while still valuable, may not be sufficiently adaptable to changing nature of the market.¹² In these circumstances, and with further potential for unforeseen developments, AEMO considered maintaining a hierarchy between different forms of intervention could become increasingly untenable.

1.1.3

How AEMO considered the rule change will address identified issues

AEMO considered 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.¹³

AEMO considered that its rule change request advances the NEO as:¹⁴

- 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.
- 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 did 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.¹⁵

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 2019.¹⁶

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 IIFR, with the Commission recommending stakeholders submit rule change requests to implement a range of changes recommended in the report.¹⁷

¹² In this regard, the Commission noted 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).

¹³ AEMO, rule change request, p. 5.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ AEMC, Investigation into intervention mechanisms and system strength in the NEM, consultation paper, 4 April 2019.

¹⁷ 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.

The hierarchy of interventions was considered in the Commission's interventions investigation consultation paper which consulted on:¹⁸

- 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.¹⁹

In order to promote a cost minimisation approach, the Commission considered that it would be appropriate to replace the existing hierarchy with a principle of minimising direct and indirect costs to consumers and maximising effectiveness. Box 1 sets out the Commission's IIFR recommendation on the hierarchy of intervention mechanisms.²⁰

AEMO's rule change request is substantively consistent with the Commission's recommendation made in the IIFR. Chapter 4 of this final determination addresses 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 instructions. 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

¹⁸ Ibid, p. 36

¹⁹ AEMC, Investigation into intervention mechanisms and system strength in the NEM, final report, p. vii.

²⁰ AEMC, Investigation into intervention mechanisms and system strength in the NEM, final report, p. 103.

- 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.²¹

On 28 May 2020, the AEMC elected to progress this rule change through a fast-tracked process because it arises out of a recommendation made in the Commission's investigation into intervention mechanisms in the NEM during which the issues and solution were subject to public consultation.²² The rule making process can be fast tracked if the rule change 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.²³ Under the fast-track process, there is only one round of consultation on a draft rule and determination.

On 18 June 2020, the Commission published a draft determination and more preferable rule to replace the hierarchy of interventions with a principles based approach to the choice of intervention mechanism. The Commission received six submissions, which are available on the AEMC website. The issues raised by stakeholders are presented along with details of the Commission's final determination in Chapters 3 to 5.

²¹ AEMO, rule change request, p. 2.

²² 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).

²³ Section 96A(1)(b)(ii) and (2)(b)(ii) NEL.

2 FINAL RULE DETERMINATION

Following its analysis of the rule change request, which implemented the Commission's IIFR recommendation, and the issues raised in stakeholder submissions to the draft determination and interventions investigation consultation paper, the Commission has decided to make a final rule which is a more preferable rule. This chapter sets out the Commission's final determination to make a more preferable rule with a summary of reasons. Further considerations of the Commission are presented in chapters 3 to 5 and provide detailed reasoning supporting the Commission's decision. The following is presented in this chapter:

- the Commission's final determination
- the rule making test
- assessment framework
- summary of reasons
- transitional arrangements, and
- interactions with other Rules made but not commenced.

2.1 The Commission's final determination

The Commission's final rule determination is to make a more preferable final rule (final rule). The final rule made by the Commission is published with this final rule determination.

A summary of the final rule is set out in this section and further details of the final rule are set out in sections 3.5, 4.5 and 5.5 of this final determination.

The key features of the final rule are that 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 supply scarcity mechanism, or combination of supply scarcity mechanisms, that is effective in addressing the conditions of supply scarcity while minimising the direct and indirect costs of such an intervention
- requires AEMO to develop procedures that set out AEMO's approach to determining its choice of supply scarcity mechanism, including the details of the methodology AEMO will use, and the assumptions AEMO may make, when choosing a supply scarcity mechanism.
- sets out examples of the types of direct and indirect costs arising from AEMO's use of a supply scarcity mechanism and requires AEMO to have regard to these examples when making its procedures
- requires AEMO to review its procedures at least once every four years in accordance with the rules consultation procedures, with the first review to occur two years after the final procedures have been made, to enable stakeholders to provide input into the methodology and assumptions set out in the procedures and feedback on the new framework
- requires AEMO to report on the basis on which it determined which supply scarcity mechanism, or combination of mechanisms, to use during times of supply scarcity and

whether or not it followed the procedures, and if it did not, the reasons for not following those procedures.

The Commission considered that the final rule provides flexibility for AEMO to select supply scarcity mechanisms in a way that is effective but also minimises direct and indirect costs, and enables a high degree of accountability and transparency by requiring AEMO to set out its approach in procedures and then report on how it has applied the procedures following its use of supply scarcity mechanisms.

Transparency is further enhanced by a requirement for AEMO to review its procedures on an ongoing basis in accordance with the rules consultation procedures. That process provides an opportunity for stakeholders to not only contribute both to the initial development of the procedures but also to provide input on future versions of the procedures based on experience of how the procedures are applied in practice.

The elements of the Commission's final rule are set out in the table below. A summary of reasons is set out in section 2.4 and the Commission's more detailed considerations and reasons for making this final determination are set out in chapters 3 to 5. A summary of the transitional arrangements in the final rule is also set out in section 2.5.

Table 2.1: Commission's final more preferable rule

RULE ELEMENTS	FINAL RULE REQUIREMENTS
<p>Clause 3.8.14(a) and (b): Replace the existing requirement in clause 3.8.14 to use RERT first (before directions or instructions) with a principle based approach to minimise costs.</p>	<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 dispatch bids and dispatch offers, to take additional action to address the conditions of supply scarcity, AEMO must determine which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use in accordance with the principle below and AEMO's procedures. <p>When determining which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use, AEMO must use its reasonable endeavours to choose the mechanism, or combination of mechanisms, that is effective in addressing the conditions</p>

RULE ELEMENTS	FINAL RULE REQUIREMENTS
	of supply scarcity while minimising the direct and indirect costs of using such a mechanism or mechanisms.
<p>Clause 3.8.14A: Require AEMO to develop, consult on, and publish procedures for the selection of supply scarcity 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 supply scarcity mechanism(s). Such procedures must include details of the methodology AEMO will use, and the assumptions AEMO may make. • AEMO's procedures must have regard to the types of examples of direct and indirect costs set out in the Rules. • 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>Clause 3.8.14A(a)(2): Require AEMO to conduct periodic ongoing review of its procedures.</p> <p>Clause 11.129.2(d): Require AEMO to conduct the first review of its procedures after two years.</p>	<ul style="list-style-type: none"> • AEMO must conduct a review of its procedures in accordance with the rules consultation procedures at least every four years. • AEMO must conduct the first review of its procedures two years after the final procedures have been made.
<p>Clause 3.8.14(c) and (d): Include examples of types of direct costs and indirect costs to be considered by AEMO.</p>	<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 • any compensation paid in respect of an AEMO intervention event.

RULE ELEMENTS	FINAL RULE REQUIREMENTS
	<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>Clause 3.8.14A(c) and (d): Require AEMO to report on its selection of supply scarcity mechanisms.</p>	<p>AEMO is to report on:</p> <ul style="list-style-type: none"> • the basis on which AEMO determined which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use • whether AEMO complied with the rule requirements and its procedures and if it did not, the reason for not complying with the rule requirements and following those procedures. <p>AEMO is to report in accordance with the existing reporting timelines set out for each of the intervention mechanisms (as applicable).</p>
<p>Chapter 10: New global term 'supply scarcity mechanism'</p>	<p>'Supply scarcity mechanism' is defined to mean each of 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.

2.1.1

Changes since the draft determination

Policy differences between draft and final determination

The final rule determination is largely the same as the draft rule determination. The policy differences between the draft and final are:

- a more explicit requirement on AEMO to have regard to the examples of direct costs and indirect costs set out in the NER when developing its procedures.
- an additional requirement for AEMO to conduct an ongoing periodic review of its procedures, with the first review to occur two years after the final procedures are made. The Commission's final determination is to require AEMO to conduct periodic review of its procedures in consultation with stakeholders at least every four years, with the first review commencing no later than 3 May 2023.

The Commission's final determination contains these additional requirements following consideration of feedback from stakeholders on the draft determination. These are discussed further in chapters 4 and 5 of this determination.

The Commission considered that a periodic review requirement will advance the NEO as it will provide a trigger for improvements to be made to the procedures that contribute to the selection of more efficient supply scarcity mechanisms and improve overall stakeholder confidence in AEMO's processes and methods for the use of supply scarcity mechanisms. The Commission's final determination requires AEMO to conduct a periodic review of its procedures in accordance with the rules consultation procedures. The requirement will provide stakeholders with an additional opportunity for ongoing input into the development of the methods and assumptions set out in AEMO's procedures.

The initial review in 2023 will occur two years after AEMO implements its final procedures required under the transitional rule. At this time, AEMO and stakeholders will have had two summers in which to assess the need for further development of AEMO's procedures. Ongoing reviews at least every four years will provide for the ongoing development of AEMO's procedures in light of changes occurring in the power system that may affect AEMO's methods and processes for identifying effective supply scarcity mechanisms that minimise the direct and indirect costs of addressing conditions of supply scarcity.

Other changes between the draft and final rule

The final rule refers to supply scarcity mechanisms rather than intervention mechanisms. The draft rule required AEMO to determine which intervention mechanism, or combination of intervention mechanisms, would be 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 introduced a new definition for 'intervention mechanism' covering AEMO's use of RERT, directions, and clause 4.8.9 instructions.

The Commission's final determination is to replace references to 'intervention mechanism' (and related terminology of 'intervening in the market') in the final rule with reference to 'supply scarcity mechanism' (and related terminology of 'addressing conditions of supply scarcity'). This change is to prevent confusion with the defined terms 'AEMO intervention event' and 'relevant AEMO intervention event' which are defined in Chapter 10 of the NER.

and exclude clause 4.8.9 instructions. As clause 4.8.9 instructions do not relate to facilities that participate directly in the *market*, they have not previously been defined as a form of intervention in the *market*.

As the final rule applies to AEMO's selection of mechanisms for addressing supply scarcity conditions, and includes RERT, directions, and clause 4.8.9 instructions, the Commission's final determination is to introduce a new definition of 'supply scarcity mechanism' rather than 'intervention mechanism'. References to intervention mechanism in the final rule have also been replaced with references to 'supply scarcity mechanism'.

There are also some additional drafting changes to the final rule compared to the draft rule to improve clarity as well as the changes discussed in section 2.6.

2.2

Rule making test

2.2.1

Achieving the NEO

Under the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).²⁴ This is the decision making framework that the Commission must apply.

The NEO is:²⁵

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:

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

2.2.2

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 final rule.

²⁴ Section 88 of the NEL.

²⁵ Section 7 of the NEL.

In making its final determination and more preferable final rule (final 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 the policy position reflected in the rule change request. However, the final 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 to AEMO's selection of supply scarcity mechanisms to use.
- 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 conditions of supply scarcity while minimising the direct and indirect costs of intervening
- including arrangements for transparency and accountability by requiring AEMO to develop, consult on, and publish procedures on the methodology AEMO will use for choosing which supply scarcity mechanism(s) to use, and to report on how it has applied this principle-based requirement during times of supply scarcity
- requiring AEMO to conduct a review of its procedures two years after they are made, as well as an ongoing review at least every four years thereafter.

The Commission considered these changes will better contribute to the achievement of the NEO by promoting more efficient operation of electricity services with respect to price, reliability, and the security of supply. More detail is provided in the summary of reasons set out in section 2.4.

Further information on the legal requirements for making this final rule determination is set out in Appendix A and in Chapters 3 to 5 of this final determination.

2.2.3

Fast track process

The Commission carried out its assessment of the rule change request under a fast track process.²⁶ 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.²⁷

The Commission elected to fast track the rule change given the public consultation on the hierarchy of interventions undertaken in the investigation into intervention mechanisms in the NEM. 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.

²⁶ In accordance with section 96A(1)(b)(ii) of the NEL.

²⁷ Section 96A(1)(b)(ii) and (2)(b)(ii) NEL.

2.2.4

Rule making in relation to the Northern Territory

The NER, as amended from time to time, apply in the Northern Territory, subject to derogations set out in regulations made under the Northern Territory legislation adopting the NEL.²⁸ Under those regulations, only certain parts of the NER have been adopted in the Northern Territory.²⁹

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

- varies in its terms as between:
 - the national electricity system
 - one or more, or all, of the local electricity systems, or
- does not have effect with respect to one or more of those systems, but is not a jurisdictional derogation, participant derogation or rule that has effect with respect to an adoptive jurisdiction for the purpose of s 91(8) of the NEL.

As the rule relates to parts of the NER that currently do not apply in the Northern Territory (Chapters 3 and 4) or will have no practical effect in the Northern Territory (Chapter 10), the Commission has not assessed the rule against the additional elements required by the Northern Territory legislation.

2.3

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. Frameworks for the management of supply scarcity should seek to minimise market distortions in order to promote efficient investment and functioning of the market.
- **Transparency and predictability:** Frameworks for the management of supply scarcity 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.

²⁸ The regulations under the NT Act are the National Electricity (Northern Territory) (Uniform Legislation) (Modifications) Regulations

²⁹ The version of the NER that applies in the Northern Territory is available on the AEMC website.

2.4 Summary of reasons

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

This section summarises the Commission's reasons for making the final 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 final rule, including how the final rule promotes the NEO, in each of these areas are presented in chapters 3 to 5.

Efficiency

Existing requirements that preference the use of RERT may preclude lower cost options under some circumstances leading to less efficient approaches to addressing supply scarcity and higher costs for consumers. The Commission has determined that the final rule, which provides flexibility for AEMO to choose the mechanism(s) that is effective in addressing the conditions of supply scarcity while minimising the direct and indirect costs of using such a mechanism, or mechanisms, 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 supply scarcity mechanism(s) is important for achieving an efficient outcome. The final rule requires AEMO to minimise direct and indirect costs when selecting the supply scarcity mechanism, or combination of mechanisms to apply. Failure to consider indirect costs, such as a reduction in market efficiency arising from AEMO's selection of supply scarcity mechanisms, or reduction in end user utility from load shedding, may lead to inefficient outcomes. For this reason, the Commission's final rule requires AEMO to minimise both direct and indirect costs when selecting the supply scarcity mechanism, or combination of mechanisms to use. The Commission considered these arrangements to promote the NEO as the final rule provides AEMO with sufficient flexibility to maximise the efficiency of their approach to addressing supply scarcity thereby minimising costs for consumers.

Transparency and predictability

The final rule applies transparency requirements to balance the flexibility provided to AEMO under the final rule on the choice of supply scarcity mechanisms it can use. These transparency measures provide predictability for stakeholders, to the extent reasonably practicable, by requiring AEMO to develop, publish, and consult on its methodologies and assumptions in choosing the supply scarcity mechanism(s) that minimises the direct and indirect costs of intervening while being effective at addressing the conditions of supply scarcity. Transparency is further enhanced by a requirement for AEMO to review its

procedures on an ongoing basis in accordance with the rules consultation procedures. That process provides an opportunity for stakeholders to contribute both to the initial development of the procedures but also to provide input on future versions of the procedures based on experience and learnings of how the procedures are applied in practice.

Transparency helps to improve market confidence in AEMO's processes for addressing supply scarcity because it provides the market with greater understanding of the basis on which AEMO selects specific supply scarcity mechanisms. The Commission considered this to promote the NEO as it will enhance stakeholder understanding of AEMO's processes and reasons in selecting supply scarcity mechanisms thereby improving the efficiency of market through enhanced participant decision-making.

Risk allocation

The final rule places responsibility for selecting the approach to addressing supply scarcity with AEMO as the party with the skills, information, and experience to choose the mechanism(s) that is effective in addressing the supply scarcity condition while minimising direct and indirect costs. The final 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 considered 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 final rule removes any explicit preference in the rules for addressing supply scarcity via a specific mechanism. A consistent approach is also taken to reporting and procedures required under the draft rule. The Commission considered this to promote the NEO as it provides for each mechanism to be considered on a consistent basis.

2.5 Transitional arrangements

Supply scarcity conditions typically occur during summer. Each occasion on which historically AEMO has dispatched RERT, or directed for reliability has been during summer or early autumn. Therefore, the Commission considered it would promote the NEO for the rule to come into effect prior to summer 2020-21 in order for the new arrangements to be used during this time.

The final rule requires AEMO to publish new procedures 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 final rule sets out transitional arrangements which require AEMO to publish interim procedures by 22 October 2020 without following the Rules consultation procedures. While AEMO is not required to follow the Rules consultation procedures for these interim procedures, AEMO is still required to develop those procedures to reflect the requirements of the final rule. By 3 May 2021, AEMO must publish its final procedures in

accordance with the Rules consultation procedures, which will provide stakeholders with an opportunity to contribute to the development of the final procedures. Therefore, the interim procedures will only apply for a limited period of time, being from the time the final rule commences until the final procedures are made.

A summary of the transitional arrangements are set out in Box 2 and are presented in detail in Schedule 5 of the final rule.

BOX 2: TRANSITIONAL ARRANGEMENTS

- By 22 October 2020, AEMO must develop and publish on its website, interim procedures to apply until the final 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, by which time 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.

2.6

Interactions with other Rules made but not commenced

On 11 June 2020, the Commission made the final determination for the *National Electricity (Wholesale demand response mechanism) Rule 2020 No. 9* ("WDR Rule"). Schedule 3 of the WDR Rule amends clause 3.8.14 of the NER with effect from 24 October 2021. However, the final Rule also amends clause 3.8.14, but with earlier effect from 22 October 2020. This creates a timing issue because the WDR Rule was made first, but commences after the final Rule has been made and commenced. As a result, the final Rule contains two mechanisms to give effect to the required amendments for each Rule, at the right time. These are:

1. **Schedule 1 of the final Rule deletes Item [33] of Schedule 3 of the WDR Rule.** Item [33] of Schedule 3 of the WDR Rule amends clause 3.8.14(b)(3). However, under the final Rule, clause 3.8.14(b)(3) is deleted and its contents effectively placed in a new definition for "supply scarcity mechanism" in Chapter 10 of the NER. Given this amendment, when Schedule 3 of the WDR Rule commences on 24 October 2021, there will no longer be a clause 3.8.14(b)(3) to amend and the instruction in this Item will not be able to take effect. Instead, the new definition of "supply scarcity mechanism" will need to be amended.
2. **Schedule 4 of the final Rule, commencing immediately after the commencement of the main parts of the WDR rule, amends the Chapter 10 definition of "supply scarcity mechanism" to give effect to Item [33] of Schedule 3 of the WDR Rule.** Schedule 3 of the final Rule introduces a new Chapter 10 definition for "supply scarcity mechanism" on 22 October 2020. The change described

above is required for the implementation of the WDR Rule on 24 October 2021. Therefore, on that date, Schedule 4 of the final Rule commences and amends the definition of “supply scarcity mechanism” to include the reference to “*wholesale demand response units*” in paragraph (a)(1) of the definition. This gives effect to the drafting intention of Item 33 of Schedule 3 of the WDR Rule.

3 REPLACING THE INTERVENTION HIERARCHY

The Commission's draft determination was to replace the existing hierarchy of interventions with principles providing flexibility for AEMO to select the intervention mechanism or combination of mechanisms that minimise direct and indirect costs and are effective at addressing the need for intervention. The Commission's final determination on this point is largely the same as its draft determination.

A difference between the Commission's draft and final rules was the use of 'supply scarcity mechanisms' to refer to RERT, directions, and clause 4.8.9 instructions. The IIFR, rule change request, draft determination and draft rule referred to 'intervention mechanisms' for this purpose. This chapter uses terminology in its original context. Therefore, sections addressing IIFR, AEMO's rule change request, the draft determination and rule, refer to 'intervention mechanism' while the Commission's final determination and rule refer to 'supply scarcity mechanism'.³⁰

This chapter presents the Commission's considerations in making its final determination setting out:

- proponent's view and IIFR recommendation on replacing the intervention hierarchy
- stakeholder submissions to the interventions investigation on replacing the intervention hierarchy
- draft determination on replacing the intervention hierarchy
- stakeholder submissions to the draft determination, and
- final determination on replacing the intervention hierarchy.

The Commission's final determination is summarised in Box 3.

BOX 3: FINAL DETERMINATION ON REPLACING THE INTERVENTION HIERARCHY WITH A PRINCIPLES BASED APPROACH

The Commission's final determination is to replace the existing requirement in clause 3.8.14 to use RERT first (before directions or instructions) with a principle based approach to minimise direct and indirect costs of addressing supply scarcity conditions.

During times of supply scarcity:

- 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 dispatch bids and dispatch offers to take additional action to address the conditions of supply scarcity,

³⁰ The Commission adopted supply scarcity mechanism in the final rule to avoid confusion with 'AEMO intervention event' and 'relevant AEMO intervention event' which do not include clause 4.8.9 instructions. Additional information on this change is provided in section 2.1.1.

AEMO must determine which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use in accordance with the principle below and its procedures.

When determining which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use, AEMO must use its reasonable endeavours to choose the mechanism, or combination of mechanisms, that is effective in addressing the conditions of supply scarcity while minimising the direct and indirect costs of using such a mechanism or mechanisms.

3.1 Proponent's view and IIFR recommendation on replacing the intervention hierarchy

AEMO's rule change request to replace the existing hierarchy of interventions with a principles based approach actions a recommendation made in the Commission's IIFR. This section sets out the justification for the proposed rule put forward by AEMO in its rule change request and the Commission in its IIFR.

AEMO's rule change request justified the proposal to replace the existing hierarchy of interventions with a principle based approach in terms of efficiency and effectiveness. AEMO considered 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 considered 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.³¹

AEMO also considered 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 consumers.³² AEMO therefore considered the rule change request to promote the NEO by increasing the efficient operation of electricity services.³³

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.³⁴

³¹ AEMO, rule change request, p. 5.

³² Ibid, p. 4.

³³ AEMO, rule change request, p. 5.

³⁴ AEMC, Investigation into intervention mechanisms in the NEM, final report, p. vii.

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.³⁵

3.2 Stakeholder submissions to the interventions investigation on replacing the intervention hierarchy

This rule change request is being fast tracked,³⁶ on the basis that consultation on the issue and proposed solution was conducted through the interventions investigation review done by the Commission in 2019. As a fast tracked rule change does not include a consultation paper, instead proceeding directly to a draft determination, stakeholder submissions in response to the interventions investigation consultation paper were used to inform the Commission's draft determination. Relevant submissions on replacing the existing hierarchy of interventions with a principles based approach are set out below.

The interventions investigation consultation paper sought stakeholders' views on:³⁷

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?

There was considerable support from stakeholders for applying a least cost principle to AEMO's choice of intervention mechanism.³⁸ 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.³⁹

- 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.⁴⁰

³⁵ AEMC, Investigation into intervention mechanisms in the NEM, final report, p. viii.

³⁶ The fast track process is utilised when sufficient consultation on both the issue and solution has occurred as part of an AEMC rule review.

³⁷ AEMC, Investigation into intervention mechanisms in the NEM, consultation paper, p. 36.

³⁸ Submissions to the intervention investigation consultation paper: AEMO, Energy Queensland, Powershop, Powerlink, TasNetworks, PIAC, ERM Power, Origin, AGL and SnowyHydro.

³⁹ Submissions to the interventions investigation consultation paper: AEMO, Powerlink, PIAC, ERM Power.

⁴⁰ Powerlink, submission to the interventions investigation consultation paper, pp. 3-4.

- 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”.⁴¹
- 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.⁴²

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.⁴³ 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.⁴⁴

By contrast, Energy Queensland and Powershop were in favour of applying directions (and/or instructions) ahead of the RERT.⁴⁵ 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).⁴⁶

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 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.⁴⁷

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.⁴⁸ 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.

3.3 Draft determination on replacing the intervention hierarchy

The Commission made a draft determination on 18 June 2020 to make a more preferable draft rule that replaces the existing prescriptive hierarchy that requires RERT to be used in preference to directions and instructions, with a principles based approach that provides

⁴¹ Origin, submission to the interventions investigation consultation paper, p. 1.

⁴² PIAC, submission to the interventions investigation consultation paper, pp 3-4.

⁴³ Submissions to the interventions investigation consultation paper: Snowy Hydro, Engie, AGL.

⁴⁴ AEC, submission to interventions investigation consultation paper, p. 2.

⁴⁵ Submissions to the interventions investigation consultation paper: Energy Queensland and Powershop.

⁴⁶ Origin, submission to the interventions investigation consultation paper, p. 2.

⁴⁷ AGL, submission to the interventions investigation consultation paper, p. 1; Snowy Hydro, submission to the interventions investigation consultation paper, p. 4.

⁴⁸ South Australian Government, submission to the interventions investigation consultation paper, pp. 4-5.

flexibility for AEMO to select interventions that are effective in addressing the need to intervene in the market while minimising the direct and indirect costs of intervening in the market.

In making its draft determination the Commission considered that the principles based approach would better achieve the NEO than the current arrangements as it would enhance the efficiency of AEMO's interventions and promote the NEO by enhancing the efficient operation and use of, electricity services for the long term interests of consumers of electricity.

The Commission's considerations in making its draft determination to replace the intervention hierarchy is set out in this section which considers the potential for efficiency benefits arising from AEMO selecting the lowest cost most effective approaches to intervention.

RERT

The existing hierarchy requirement to use RERT in preference to directions or instructions 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. AEMO uses this cost information to minimise the cost of dispatching the resources procured as RERT resources.

RERT can be a high cost mechanism. The costs directly borne by consumers through AEMO's procurement and dispatch of RERT reflects the technical characteristics of the resources procured as RERT resources as well as the status of those resources as being out of the market. RERT can also impose costs through distorting market price signals. To help address the price distortions caused by RERT, intervention pricing (subject to the regional reference node test) is used to set the market price to the level which, in AEMO's reasonable opinion, 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.

The RERT is also designed with a set of provisions that seek to minimise any distortions on the wholesale market from the use of the RERT.⁴⁹ 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 enhancement to the RERT strengthened 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,⁵⁰ 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.⁵¹

⁴⁹ AEMC, Enhancement to the RERT rule change, final determination, p. 33.

⁵⁰ AEMC, Enhancement to the RERT rule change, final determination, p. 28.

⁵¹ Ibid, p. 162.

As a higher cost mechanism, use of RERT may be a less efficient option for intervention under certain circumstances when other lower cost options for intervention are available to AEMO. While RERT is a mechanism which provides revealed cost information to AEMO and is procured through market based processes, the Commission did not consider this justifies higher costs being borne by consumers. The Commission was therefore of the view that efficiency benefits which advance the NEO are achievable by providing AEMO with flexibility to use lower cost intervention mechanisms when they are available.

Directions

Directions are an “in-market” intervention as only scheduled plant and market generating units are able to be directed.⁵² In contrast to RERT, under clause 4.8.9 of the NER 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.⁵³

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.⁵⁴

The resources available to be directed may be more flexible than RERT resources. 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 may allow AEMO to quickly bring on directed generating systems to more closely reflect the timing and extent of the supply scarcity condition than possible through the use of RERT resources. 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.⁵⁵ 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.⁵⁶

⁵² 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.

⁵³ Clause 4.8.9(c) of the NER.

⁵⁴ In practice, such claims for additional compensation following direction have been infrequent.

⁵⁵ 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.

Similarly to RERT, directions also have the potential to reduce efficiency of the market as a whole. 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. As for RERT, intervention pricing (subject to the regional reference node test) may be 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 directions (and the RERT) to put them in the position they would have been in but for the intervention.

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 noted 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 may other concerns at play, such as the ability and lead time to obtain fuel. The Commission however considered that should the circumstances allow, it should be open to AEMO to direct rather than use higher cost RERT resources.

The Commission however acknowledges that less information may be available to AEMO on directed participant costs than under the RERT, for which revealed cost information is available from contract negotiations. 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.⁵⁷ This information gathering process however is constrained by time available and may not be practicable in all circumstances.⁵⁸

While directions are not procured voluntarily through market based processes, as is the case for RERT, 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.

Clause 4.8.9 instructions

Clause 4.8.9 instructions apply to plant other than scheduled plant and market generating units.⁵⁹ Generally AEMO issues clause 4.8.9 instructions to a TNSP which co-ordinates with DNSPs to shed end customer load. Unlike RERT, which is a mechanism procured through market based processes in which participants reveal their costs, and directions which are issued to market participants who have agreed to participate in the market knowing that AEMO has powers to direct, clause 4.8.9 instructions typically impact parties who have not voluntarily agreed to market rules which provide for AEMO's powers to intervene.⁶⁰ To the

⁵⁶ AEMO, submission to the intervention investigation consultation paper, pp. 3-4.

⁵⁷ Clause 4.8.5A(e) of the NER.

⁵⁸ Supply scarcity events which arise in response to a system security event such as the trip of a generating unit or network element. System security events can result in supply scarcity events occurring close to real time.

⁵⁹ Clause 4.8.9(a1)(2) of the NER.

⁶⁰ Generally AEMO issues a clause 4.8.9 instruction to shed load to a TNSP which co-ordinates with DNSPs to shed end customer load.

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.

The cost of end user load shedding is associated with their value of customer reliability (VCR). The RERT is considered more efficient than load shedding instructions as only those with a VCR of less than the cost of load shedding would participate in the RERT.⁶¹ 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.⁶² 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 Chapter 4.

Potential distortions to market associated with RERT or directions are limited through mechanism design and the application of intervention pricing. Intervention pricing is however not applied to clause 4.8.9 instructions. Therefore, any distortion to market pricing from 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 from this action.⁶³

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.⁶⁴ The Commission remains of the view that it is unlikely that clause 4.8.9 instructions will be a more efficient or desirable option than directing or dispatching RERT. The Commission however considered 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 if it can demonstrate their efficiency. The Commission also noted that the existing hierarchy of interventions does not make a distinction between directions or instructions and considered that this flexibility should remain.

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

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

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

63 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.

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

AEMO has instructed large industrial loads to reduce consumption to maintain system security.⁶⁵

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. Following appropriate consideration of direct and indirect costs, including the end user's VCR, 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 consider the use of clause 4.8.9 instructions.⁶⁶ The Commission however noted that any action by AEMO to issue targeted instructions would be subject to the governance arrangements set out in Chapter 5 of this determination, which require AEMO to follow its procedures developed in consultation with stakeholders.

3.4 Stakeholder submissions to the draft determination

The Commission received six submissions to its draft determination. Five of the six submissions supported the Commission's draft determination to replace the hierarchy of interventions requirement to use RERT in preference to directions or instructions with a principles based approach for AEMO to select interventions that minimise costs and are effective at addressing the need to intervene. Stakeholders generally supported the draft determination on the basis that it would result in lower cost for consumers relative to existing arrangements. Specific views included the following:

- AGL supported the Commission's objective of reducing unnecessary cost to the market when a market intervention events occurs. AGL therefore supported the removal of the intervention hierarchy and replacing it with the proposed effectiveness and least cost principles approach (principle-based approach).⁶⁷
- CS Energy was supportive of the draft determination as they considered the changes to the intervention process should ultimately lower costs for consumers.⁶⁸
- ERM Power generally supported the draft determination which will remove the intervention hierarchy and instead allow AEMO to use an approach that aims to minimise costs.⁶⁹
- EUAA was fully supportive of the rule providing greater flexibility to AEMO to achieve the least cost outcomes for consumers.⁷⁰

65 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, *Final report - South Australia separation event, 1 December 2016*, February 2017 https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2017/Final-report-SA-separation-event-1-December-2016.pdf

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

67 AGL, submission to the draft determination, p. 1.

68 CS Energy, submission to the draft determination, p. 1.

69 ERM, submission to the draft determination, p. 1.

70 EUAA, submission to the draft determination, p. 2.

- PIAC supported improving the consistency, transparency, predictability and efficiency of intervention mechanisms so that they deliver system security and reliability at lowest cost to consumers.⁷¹

While these stakeholders generally supported the Commission's draft determination to replace the existing intervention hierarchy with a principles based approach, a number made their support conditional on enhanced accountability and transparency arrangements being applied. Chapter 5 addresses stakeholder views in this area.

While supporting the objective of the rule change, AGL suggested the Commission retain a requirement for the activation of RERT ahead of a targeted instruction issued with respect to any RERT provider. AGL identified the potential for a customer load reduction to be both subject to RERT activation or an instruction under the draft rule. AGL requested the Commission consider if this could diminish the bargaining position of potential demand response RERT providers and potentially lead to a reduction in the procurement of demand response for RERT.⁷²

Snowy Hydro did not support the draft rule's removal of the requirement for AEMO to use RERT in preference to other intervention mechanisms. While Snowy Hydro agreed with the Commission that any approach should minimise costs to consumers, Snowy Hydro believed that the RERT is the best first response mechanism followed by either directions or instructions to maintain reliability for this purpose.⁷³

Snowy Hydro further considered that the existing hierarchy of interventions should be retained as the RERT mechanism is much closer to a market based means by which system reliability can be maintained. Snowy Hydro identified directions and instructions as coercive measures that were always intended as, and should remain, an absolute last resort, rather than being seen as one of many competing options for AEMO to manage system security. Snowy Hydro was concerned that their increased usage will undermine the structure and ultimately the performance of the NEM as an energy-only market, which relies on voluntary participation.⁷⁴

3.5 Final determination on replacing the intervention hierarchy

The Commission's final determination is to replace the existing requirement for AEMO to use RERT in preference to directions and instructions, with flexibility for AEMO to select the supply scarcity mechanism, or combination of supply scarcity mechanisms, that minimise direct and indirect costs and are effective at addressing the supply scarcity condition. This final determination is the same as the Commission's draft determination in respect of this aspect of the final determination, except for use of 'supply scarcity mechanism' rather than 'intervention mechanism'. The Commission's reasons for making this final determination are therefore as set out in section 2.4 and section 3.3 applying to the draft determination.

⁷¹ PIAC, submission to the draft determination, p. 1.

⁷² AGL, submission to the draft determination, p. 1.

⁷³ Snowy Hydro, submission to the draft determination, p. 2.

⁷⁴ Snowy Hydro, submission to the draft determination, p. 1.

In making its final determination, the Commission identified some key issues raised in stakeholder submissions to the draft determination. These are:

- AGL's request for the activation of RERT to be required ahead of a targeted instruction with respect to a RERT provider
- Snowy Hydro's view that RERT should be preferred to directions or instructions on the basis that it is a voluntary mechanism procured using a market-based process.

The Commission's consideration of these matters in making its final determination is set out below.

Activation of RERT to be required ahead of a targeted instruction to a RERT provider

AGL's submission agrees with the Commission that directions could offer a more efficient lower cost option for market interventions than dispatching RERT. AGL however considered the benefits of using instructions in preference to RERT to be less clear. AGL's submission identifies scope for a customer load reduction to be potentially subject to both RERT activation or a targeted instruction by AEMO. In the interests of certainty for demand response RERT providers, AGL consider the rules should still require the activation of RERT ahead of a targeted instruction issued with respect to a RERT provider.

While the Commission did not consider it likely that clause 4.8.9 instructions will be a more efficient or desirable option than directing or dispatching RERT it also did not consider it appropriate to impose a rules requirement that limits AEMO's scope to consider instructions.

The Commission considered there likely to be a range of factors relevant to the relative efficiency of an option to dispatch RERT or issue a targeted instruction. These factors are likely to be specific to the particular circumstances involved, and include consideration of effectiveness and direct and indirect costs of each option. In making its final determination, the Commission identifies AEMO as the most appropriate party to assess effectiveness and the direct and indirect costs of each option at the time of an intervention given the specific circumstances that apply.

The Commission's final rule requires AEMO to identify the effective approach to addressing the supply scarcity condition that minimises costs in accordance with its published procedures. As discussed in Chapter 5, these procedures will set out the methods and assumptions AEMO will use to compare different options for addressing conditions of supply scarcity. The final rule requires AEMO to consult with stakeholders in establishing these procedures.

Preference for RERT as a market based mechanism

Snowy Hydro's submission considered that the existing hierarchy of interventions should be retained given RERT is a more market based means by which system reliability can be maintained than AEMO's use of directions or instructions. Snowy Hydro was also concerned that the increased use of directions and instructions will undermine the structure and ultimately the performance of the NEM as an energy-only market.

Snowy states that “this proposal would continue the concerning trend of normalising the use of directions as a tool by AEMO to manage the power system”.⁷⁵ The Commission did not share this view and noted that the increased use of interventions in recent years has been driven primarily by the need to maintain system security rather than reliability.

In contrast to the security issues that have prompted the growing use of directions, clause 3.8.14 applies only in conditions of supply scarcity. While more than 500 directions were issued between April 2017 and April 2020, the majority to maintain system strength in South Australia, the RERT has been activated on only nine occasions since November 2017 and only five reliability directions have been issued in the last ten years. (See Appendix B for further information.)

The NEO requires consideration of the long-term interests of consumers with respect to price, reliability, and the security of supply. While the RERT is more market based in terms of how it procures emergency reserves (through a competitive tender process), as discussed above, the use of the RERT may not always be the most efficient outcome for customers in all instances. For example, it may be cheaper to direct a unit to be made available during conditions of supply scarcity.

Therefore, the Commission considered it appropriate that AEMO not be compelled by the current hierarchy to activate the RERT first in circumstances where a unit is available to be directed.

The Commission’s final determination provides AEMO with the flexibility to identify circumstances where the use of directions or instructions will lead to more efficient outcomes that minimise cost for consumers. The Commission considered this flexibility to promote the NEO and the long term interests of consumers, likely including lower costs.

⁷⁵ Snowy Hydro, submission to the draft determination, p. 1

4 ASSESSING COST AND EFFECTIVENESS

The Commission's draft determination for this aspect was to specify non-exhaustive lists of direct and indirect costs that should be considered by AEMO when assessing the cost of different options for intervention under the principles based approach to selecting intervention mechanisms. The Commission has made a final determination that is largely the same as its draft determination on arrangements for the consideration of cost and effectiveness. The differences are discussed in section 4.5.

A difference between the Commission's draft and final rules was the use of 'supply scarcity mechanisms' to refer to RERT, directions, and clause 4.8.9 instructions. The IIFR, rule change request, draft determination and draft rule referred to 'intervention mechanisms' for this purpose. This chapter uses terminology in its original context. Therefore, sections addressing IIFR, AEMO's rule change request, the draft determination and rule, refer to 'intervention mechanism' while the Commission's final determination and rule refer to 'supply scarcity mechanism'.⁷⁶

This chapter sets out the Commission's reasoning in making its final determination and is divided into the following sections:

- proponent's view and IIFR recommendation on the assessment of cost and effectiveness
- stakeholder submissions to the interventions investigation on the assessment of cost and effectiveness
- draft determination on assessment of cost and effectiveness
- stakeholder submissions on the draft determination
- final determination on the assessment of cost and effectiveness.

The Commission's final determination is set out in Box 4.

BOX 4: FINAL DETERMINATION ON ASSESSMENT OF COST AND EFFECTIVENESS

The Commission's final determination is to specify non-exhaustive lists of direct and indirect costs. AEMO would be able to consider other direct and indirect costs as appropriate:

- Direct costs
 - pre-activation and activation costs payable under reserve contracts if AEMO dispatches or activates reserves
 - paying compensation to a Directed Participant, Affected Participant and Market Customer that is entitled to compensation under clause 3.12.2.
- Indirect costs

⁷⁶ The Commission adopted supply scarcity mechanism in the final rule to avoid confusion with 'AEMO intervention event' and 'relevant AEMO intervention event' which do not include clause 4.8.9 instructions. Additional information on this change is provided in section 2.1.1.

- 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.

AEMO must have regard to these when developing its procedures for how it chooses which supply scarcity mechanism(s) to use during times of supply scarcity. The Commission has determined not to define or impose requirements applying to AEMO's assessment of the effectiveness of different options for addressing supply scarcity in the final rule.

4.1 Proponent's view and IIFR recommendation on the assessment of cost and effectiveness

AEMO's rule change request was to implement a recommendation made in the Commission's IIFR to replace the existing hierarchy of interventions with a principles based approach. The principles recommended in the IIFR and rule change request are for AEMO to select the intervention mechanisms which minimise cost and maximise effectiveness.

AEMO's rule change request included the principle of minimising cost but did not specify specific types of costs to be considered when identifying the lowest cost approach to intervention. AEMO's rule change did however address the principle of maximising effectiveness. In its rule change request, AEMO considered existing arrangements 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 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 emergency reserves under RERT. AEMO did 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 noted that it increases the likelihood.⁷⁷

Commission's view in the IIFR

The Commission's IIFR considered principles related to AEMO's selection of intervention mechanisms on the basis of cost and effectiveness. The 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 while maximising effectiveness.⁷⁸ While AEMO's rule change request was materially in line with the Commission's IIFR recommendation AEMO proposed that 'costs' be minimised without reference to direct or indirect costs.

⁷⁷ AEMO, rule change request, p. 4.

⁷⁸ AEMC, Investigation into intervention mechanisms in the NEM, final report, p. viii.

The IIFR identified two main types of costs associated with interventions:⁷⁹

- the direct costs of interventions, which are separate from, and in addition to, spot prices (for example, the contractual costs of RERT and the compensation costs associated with AEMO intervention events)
- the indirect costs of interventions, which are more difficult to quantify, such as the disincentive interventions create for investment by market participants.

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.⁸⁰

4.2 Stakeholder submissions to the interventions investigation on the assessment of cost and effectiveness

This rule change request was fast tracked,⁸¹ on the basis that consultation on the issue and proposed solution was conducted through the interventions investigation review done by the Commission in 2019. Fast tracked rule changes do not include a consultation paper, instead proceeding directly to a draft determination. Stakeholder submissions in response to the interventions investigation consultation paper were used to inform the Commission's draft determination.

The interventions investigation consultation paper did not explicitly seek stakeholder views on the scope of costs that should be considered by AEMO in assessing the lowest cost options for intervention or whether considerations relating to effectiveness should be defined in the rules.

Several stakeholders however made reference to the need to consider costs in addition to the 'direct costs' arising from intervention. These included the following:

- ERM Power's submission referred to a need to consider 'overall costs' when determining whether to exercise RERT or issue a direction.⁸²
- Snowy Hydro identified the potential costs associated with AEMO's choice of intervention mechanisms distorting the primary NEM and contract spot markets. Snowy Hydro considered intervention by AEMO can compromise the current market design and its pricing signals affecting wholesale electricity prices and market signals to investors. Snowy Hydro considered longer term customer outcomes are best protected by undistorted pricing signals that provide the investment signal for ongoing investment in new assets.⁸³

79 AEMC, Investigation into intervention mechanisms in the NEM, final report, p. 90.

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

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

82 ERM Power, submission to the interventions investigation consultation paper, p. 3.

83 Snowy Hydro, submission to the interventions investigation consultation paper, p. 4.

In its submission to the interventions investigation consultation paper, AEMO discussed issues related to effectiveness, risk and uncertainty in the use of different options available for implementation including the role of unit start up and minimum run time constraints on the cost and effectiveness of different options for intervention.⁸⁴

4.3 Draft determination on assessment of cost and effectiveness

The Commission's draft determination was to make a draft more preferable rule that requires AEMO to select the intervention mechanism, or combination of mechanisms, that minimise direct and indirect cost and are effective at addressing the need for intervention.

The Commission's IIFR recommendation and AEMO's rule change request both proposed a principle of maximising effectiveness while also minimising cost. The Commission's draft determination was not to 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 highlights the rules should encourage predictability and reduce uncertainty. Consistent with this principle, the Commission's draft determination required 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. The Commission considered this will reduce uncertainty as it is an unambiguous requirement with a clear basis.

The Commission's draft determination also differs from AEMO's rule change request in its explicit requirement to consider indirect costs when identifying the lowest cost approach to intervention. AEMO's rule change request was for cost to be minimised and did not refer to considering direct and indirect costs. The Commission's draft determination was to provide guidance to AEMO in the rules on the types of direct and indirect costs that should be considered when assessing the costs of the different options for intervention.⁸⁵ In making its draft determination the Commission considered that a requirement to consider specific types of direct and indirect costs would promote the NEO by enhancing the efficient operation and use of, electricity services for the long term interests of consumers of electricity.

The Commission's draft determination did not elect to define effectiveness or specify considerations AEMO should include in its decision-making when considering the effectiveness of different options for intervention. The Commission considered AEMO best positioned to assess effective options for intervention given the range of considerations and circumstances which influence the intervention effectiveness.

This section sets out the Commission's considerations in making its draft determination on the assessment of cost and effectiveness. Commission considerations are presented on the following:

- assessment of direct and indirect costs
- intervention mechanism effectiveness.

⁸⁴ AEMO, submission to the interventions investigation consultation paper, p. 4.

⁸⁵ Clause 3.8.14A(b) and (c) of the draft Amending Rule.

Assessment of 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 highlights that 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 in the long term interests of consumers.

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 direct and indirect costs from AEMO's perspective as the decision maker.

Together, direct and indirect costs capture the costs incurred by all parties affected by an AEMO intervention. While the reference to 'cost' in the AEMO rule change request may be viewed as encompassing both direct and indirect costs, the Commission considered that clarity on this point is necessary to facilitate efficient decisions, and provide predictability and market confidence on AEMO's choice of intervention mechanisms. In line with its recommendation in the IIFR, the Commission therefore considered 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's draft determination was to set out a non-exhaustive list of examples of direct and indirect costs that should be considered by AEMO in the Rule. The Commission selected this approach to provide guidance to AEMO while also not constraining them in the costs that they may consider when identifying the lowest cost option for intervention. This approach is consistent with that used in other rules frameworks.⁸⁶ These costs are aligned with those identified in the Commission's IIFR and are set out below:⁸⁷

- Direct costs

⁸⁶ 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.

⁸⁷ AEMC, Investigation into intervention mechanisms in the NEM, final report, pp. 97-98.

- pre-activation and activation costs payable under reserve contracts if AEMO dispatches or activates reserves⁸⁸
- 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.

Intervention mechanism effectiveness

The Commission's IIFR recommendation and AEMO's rule change request both proposed a principle of maximising effectiveness while also minimising cost.

The principle requiring AEMO to maximise efficiency and minimise cost was proposed 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 considered that policy objective can be achieved without reference to a dual objective. The Commission's draft determination was therefore not to require minimisation of cost and maximisation of effectiveness as such an approach requires AEMO to comply with two competing objectives.

The Commission's draft rule did not require AEMO to select the lowest cost intervention option irrespective of effectiveness. The draft rule requirement was 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 would 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.⁸⁹

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. Different options for intervention have different levels of 'effectiveness'. The interventions investigation identified a range of practical considerations of relevance to the question of effective options for

⁸⁸ 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.

⁸⁹ 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.

intervention. It noted that intervention mechanisms typically have limitations that limit their effectiveness or that should be factored into AEMO's decision-making including:

- 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.

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 did not consider a requirement to exercise RERT before issuing directions or instructions necessarily means that the intervention will be less effective, but noted that it increases the likelihood.⁹⁰

In making its draft determination, the Commission agreed with AEMO that assessing effectiveness requires 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 considered effectiveness, in the context of clause 3.8.14 of the NER, to be a multifaceted concept that are technical and specific to the circumstances that apply to the intervention. As AEMO is the party with the technical information and skills to assess the factors related to the effectiveness of different options for intervention the Commission's draft determination therefore did not define effectiveness or set out considerations AEMO must have when assessing effectiveness.

4.4 Stakeholder submissions on the draft determination

No stakeholder opposed arrangements in the draft determination for the treatment of cost or effectiveness. No stakeholder comment was received on the draft determination approach to effectiveness. Snowy Hydro and AGL however commented on the assessment of direct and indirect costs under the principles based approach.

AGL supported the Commission's draft determination to make a more preferable rule with regard to the assessment of costs considering it important that the rule clearly identifies both direct and indirect costs when AEMO undertakes a cost assessment. AGL supported the example-based approach to defining the direct and indirect costs under 3.8.14 of the NER.⁹¹

⁹⁰ AEMO, rule change request, p. 4.

⁹¹ AGL, submission to the draft determination, p. 1.

AGL however considered that the final rule should also require AEMO to consider costs associated with any lost opportunity to provide demand response. AGL's submission identified scope under the draft rule for a customer load reduction to be both subject to RERT activation or an instruction. AGL's submission considered this may lead to a reduction in the procurement of demand response for RERT given AEMO's capacity to issue an instruction regardless of the RERT agreement. AGL was concerned that this may diminish the bargaining position of potential demand response RERT providers. AGL's submission requested that the Commission include the lost opportunity to provide demand response in the list of indirect costs to be considered by AEMO when identifying the lowest cost approach to intervention.⁹²

Snowy Hydro's submission considered the Commission's draft determination may have cost consequences for plant associated with increased frequency of AEMO directions for reliability. Snowy Hydro also considered that the cost of directions was underestimated by current arrangements. Snowy Hydro's submission considered that directions may seem relatively cheap to AEMO, but compensation for directions in many cases will disguise the true cost borne by directed participants.⁹³

4.5 Final determination on the assessment of cost and effectiveness

The Commission's final determination for this aspect is to provide guidance to AEMO on the types of indirect and direct costs that should be considered when AEMO is identifying the options for intervention. The Commission's final determination is largely the same as its draft determination in that it specifies a non-exhaustive list of examples of direct and indirect costs that should be considered by AEMO. The Commission's reasoning in support of its final rule is therefore as set out for the draft determination in section 4.3.

However, those examples have moved location in the final rule to aid in the clarity of the rule drafting.⁹⁴ The final rule also used 'supply scarcity mechanism' to refer to RERT, directions, and clause 4.8.9 instructions rather than 'intervention mechanism' as used in the draft determination. In addition, the final rule includes a more explicit requirement for AEMO to have regard to the examples of the types of direct and indirect costs set out in the NER when developing and amending its procedures.⁹⁵

The final rule's non-exhaustive lists of direct and indirect costs are:⁹⁶

- Direct costs
 - pre-activation and activation costs payable under reserve contracts if AEMO dispatches or activates reserves
 - paying compensation to a Directed Participant, Affected Participant and a Market Customer that is entitled to compensation under clause 3.12.2.

⁹² Ibid.

⁹³ Snowy Hydro, submission to the draft determination, p. 1.

⁹⁴ See clause 3.8.14(c) and (d) of the final rule. These paragraphs were moved from clause 3.8.14A of the draft rule to clause 3.8.14 of the final rule.

⁹⁵ See clause 3.8.14A(b)(1) of the final rule.

⁹⁶ See clause 3.8.14(c) and (d) of the final rule.

- 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.

AEMO must also have regard to these examples of costs when developing and amending its procedures.⁹⁷ The Commission has determined not to define or impose further requirements applying to AEMO's assessment of the effectiveness of different options for addressing supply scarcity in the final rule. This decision is also in line with the Commission's draft determination.

In making its final determination, the Commission had regard to issues raised in stakeholder submissions. In particular, the Commission considered AGL's request to include the cost of third-party arrangements, such as the lost opportunity to provide demand response, in the list of indirect costs that must be considered by AEMO.

Including the cost of third-party arrangements, such as the lost opportunity to provide demand response as a type of indirect cost

AGL considered the examples of indirect costs under the rules should include the cost of third-party arrangements such as the lost opportunity to provide demand response.

The Commission's final determination does not include the cost of third-party arrangements, such as the lost opportunity to provide demand response, as a type of indirect cost in the rule. The Commission did not consider it reasonable for AEMO to consider impacts on participant contract positions, including those between a demand response provider and their retailer, when assessing the direct and indirect costs of different options for intervention. The Commission noted that the NER framework for compensation does not provide for contractual positions to be considered when assessing indirect costs for compensation purposes.

The final rule includes a requirement for AEMO to consider market distortion arising from the use of the different supply scarcity mechanisms. The list of indirect costs set out in the rule is also non-exhaustive and AEMO can consider other types of indirect cost when assessing the cost of different options for intervention.

The final rule requires AEMO to set out in its procedures the methodology it will use and any assumptions it may make in choosing which supply scarcity mechanism to use. AEMO is required to consult on the development of its procedures through the rules consultation procedures, which provides parties with an opportunity to contribute to AEMO's consideration of such matters.

⁹⁷ See clause 3.8.14A(b)(1) of the final rule.

5 ARRANGEMENTS FOR TRANSPARENCY AND ACCOUNTABILITY

The Commission's draft determination was to make a more preferable rule that incorporates transparency and accountability requirements applying to AEMO's selection of intervention mechanisms. The Commission's final determination is largely the same as its draft determination, but refers to supply scarcity mechanism instead of intervention mechanism and includes an additional requirement for an ongoing periodic review of AEMO's procedures, responding to stakeholder feedback. The changes are discussed in section 5.5.

A difference between the Commission's draft and final rules was the use of 'supply scarcity mechanisms' to refer to RERT, directions, and clause 4.8.9 instructions. The IIFR, rule change request, draft determination and draft rule referred to 'intervention mechanisms' for this purpose. This chapter uses terminology in its original context. Therefore, sections addressing IIFR, AEMO's rule change request, the draft determination and rule, refer to 'intervention mechanism' while the Commission's final determination and rule refer to 'supply scarcity mechanism'.⁹⁸

This chapter presents the Commission's final determination on the transparency and accountability requirements applying to the development of AEMO's procedures for the selection of supply scarcity mechanisms, in the following sections:

- proponent's view and IIFR recommendation on transparency and accountability requirements
- stakeholder submissions to the interventions investigation consultation paper
- draft determination on transparency and accountability requirements
- stakeholder submissions on the draft determination, and
- final determination on accountability and transparency requirements.

The Commission's final determination is set out in Box 5.

BOX 5: FINAL DETERMINATION ON ARRANGEMENTS FOR TRANSPARENCY AND ACCOUNTABILITY

The Commission's final determination is to include a requirement for AEMO to develop, consult on, and publish procedures for the selection of supply scarcity mechanisms:

- 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 supply scarcity mechanism(s). Such procedures must include details of the methodology AEMO will use, and the assumptions AEMO may make.

⁹⁸ The Commission adopted supply scarcity mechanism in the final rule to avoid confusion with 'AEMO intervention event' and 'relevant AEMO intervention event' which do not include clause 4.8.9 instructions. Additional information on this change is provided in section 2.1.1.

- AEMO's procedures must have regard to the types of examples of direct and indirect costs set out in the Rules.
- 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 the NER.
- AEMO must conduct a review of its procedures in accordance with the rules consultation procedures at least every four years.
- AEMO must conduct the first review of its procedures two years after the final procedures have been made.

The Commission's final determination is to also include requirements for AEMO to report on its selection of supply scarcity mechanisms. AEMO is to report on:

- the basis on which AEMO determined which supply scarcity mechanism, or combination of supply scarcity mechanisms, to use
- whether AEMO complied with the rule requirements and its procedures and if it did not, the reason for not complying with the rule requirements and following those procedures.
- AEMO is to report in accordance with the existing reporting timelines set out for each of the supply scarcity mechanisms (as applicable).

5.1 Proponent's view and IIFR recommendation on transparency and accountability requirements

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.⁹⁹

The IIFR recommendation and AEMO's rule change request instead focused 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.

5.2 Stakeholder submissions to the interventions investigation consultation paper

The interventions investigation consultation paper did not seek feedback on arrangements for transparency and accountability specific to removal of the hierarchy of interventions.

⁹⁹ AEMO, rule change request, p. 5.

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.¹⁰⁰
- Uniting Communities considered much greater transparency regarding AEMO's actions to be urgently needed. Uniting Communities was also a strong supporter of greater 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.¹⁰¹
- 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 for compensation.¹⁰²
- 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) Engie did not consider it was clear which generators had been the subject of directions, the quantum of the impact of the direction, and the amounts paid to different parties under each clause of the rules.¹⁰³
- 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.¹⁰⁴
- 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.¹⁰⁵

¹⁰⁰ EnergyAustralia, submission to interventions investigation consultation paper, p. 3.

¹⁰¹ Uniting Communities, submission to the intervention investigation consultation paper, p. 14.

¹⁰² Energy Queensland, submission to the intervention investigation consultation paper, p. 2.

¹⁰³ Engie, submission to the interventions investigation consultation paper, p. 6.

¹⁰⁴ PIAC, submission to the interventions investigation consultation paper, p. 3.

¹⁰⁵ Snowy Hydro, submission to the intervention investigation consultation paper, p. 5.

5.3 Draft determination on transparency and accountability requirements

The Commission's draft determination was to make a draft more preferable rule that imposes transparency and accountability requirements on AEMO's selection of effective intervention mechanisms that minimise direct and indirect costs. The Commission's draft determination was to promote transparency and accountability by:

- requiring AEMO to develop, consult on, and publish procedures that it will follow in selecting the lowest cost effective approach to intervention, and
- to report on the basis of its selection of intervention mechanisms.

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, most effective intervention mechanism(s). While the Commission considered AEMO's rule change as likely to enhance efficiency leading to lower cost for consumers, it also considered that removing prescription in the rules may reduce the transparency and predictability of AEMO's actions for market participants and other stakeholders. In making its draft determination the Commission considered that arrangements for transparency and accountability were likely to better promote the NEO than AEMO's proposed rule as:

- 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
- 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.

The requirements for AEMO to develop, consult on, and publish procedures and report on its selection of intervention mechanisms are set out in the sections below.

5.3.1 Requirement for AEMO procedures

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. The Commission considered that the intervention frameworks should promote transparency as well as being predictable. To provide such transparency, the Commission's draft determination was to require AEMO to publish and follow procedures setting out its methods and processes in selecting the lowest cost, effective intervention mechanisms.

In making its draft determination the Commission considered that procedures required under the rule should address a clearly identified gap in existing arrangements as it would not minimise administrative and compliance costs for reporting required under existing arrangements applying to the individual intervention mechanisms to be duplicated by

reporting required under the rule. The Commission identified a gap as existing arrangements do not address AEMO's methods and processes for selecting between the different mechanisms on the basis of cost and effectiveness. Requirements for AEMO's procedures therefore address this gap.

Requirement for AEMO to make procedures

The Commission had 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).¹⁰⁶

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 required 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 required 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 procedures to take into account Panel guidelines. Panel guidelines for RERT set out considerations AEMO must include in assessing RERT costs which is relevant to AEMO's selection of intervention mechanisms. In making its draft determination, the Commission considered AEMO's procedures for selecting the lowest cost intervention mechanisms should be consistent with relevant elements of Panel guidelines applying to the individual intervention mechanisms.

Unlike provisions relating to the RERT, the Commission's draft rule did not require the Reliability Panel to make guidelines applying to AEMO's selection of intervention mechanisms under clause 3.8.14 of the NER. A requirement for the Panel to make guidelines specific to AEMO's selection of intervention mechanisms would require an additional Panel function to be included in Chapter 8 of the NER. The Commission considered an additional Panel function to be beyond the scope of this rule change. The Commission instead included a requirement for AEMO's procedures to be consistent with applicable Panel guidelines as a means of providing for consistency with guidelines issued for the individual intervention mechanisms.

Consultation requirements applying to AEMO's procedures

¹⁰⁶ See clause 3.8.14A(a) of the draft Amending Rule.

The Commission's draft determination was to require AEMO to consult with stakeholders on its methods and assumptions used to determine the effective and lowest cost intervention mechanism(s).¹⁰⁷

- 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.¹⁰⁸ 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). Consultation with stakeholder will also enhance stakeholder and market confidence in AEMO's methods and allow participant experience and views to be effectively captured in AEMO's procedures.

On occasion, however, AEMO will need to make minor and administrative amendments to its procedures. The Commission did 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 did not require consultation by AEMO on minor and administrative changes to its procedure.¹⁰⁹

Requirement for publication of AEMO's procedures

The Commission's draft determination was to require AEMO to publish its procedures but provides flexibility to publish them alongside those published for relevant intervention mechanisms. This approach may assist to minimise costs associated with implementation and administration by AEMO and is consistent with the current arrangements applying to directions.¹¹⁰ Therefore, the draft more preferable rule did not specify a specific location for these procedures. Instead, AEMO is provided with discretion to determine where its procedures applying to the selection of intervention mechanisms should be published.

5.3.2

Reporting requirements

The Commission's draft determination was to balance the greater discretion conferred on AEMO by the draft rule with reporting requirements to provide transparency and accountability as to the implementation of the rule in line with the NEO. This section sets out the Commission's draft determination on minimum requirements for AEMO's post event reporting and timing of reporting.

¹⁰⁷ See clause 3.8.14A(a) and Schedule 3 of the draft Amending Rule.

¹⁰⁸ Rule 8.9 of the NER.

¹⁰⁹ See clause 3.8.14A(d)(2) of the draft Amending Rule.

¹¹⁰ Clause 4.8.9(b) of the NER.

To minimise the administrative costs incurred by AEMO, the Commission's draft determination aligned transparency and accountability requirements with, and to be delivered through, existing arrangements 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 rule.

Minimum requirements for AEMO's reporting

In making its draft determination the Commission considered that any requirements for ex-post reporting should address a clearly defined gap in existing arrangements applying to each of the individual intervention mechanism. The Commission's draft determination therefore set out a process for AEMO to report on issues which are not addressed by existing frameworks. In making its draft determination, the Commission identified the basis on which AEMO selects effective intervention mechanisms that minimise direct and indirect costs as a clear gap in the existing reporting requirements applying to each intervention mechanism. 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.¹¹¹ 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 included reporting requirements for AEMO to provide reasons why it was not able to follow its procedures.¹¹² This provision provides transparency and accountability with flexibility for AEMO to address situations where circumstances make it unreasonable to follow their procedures.

The Commission's draft determination required 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:¹¹³

- 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.

Timing of reporting

¹¹¹ See clause 3.8.14(b) of the draft Amending Rule.

¹¹² See clause 3.8.14A(e)(3) of the draft Amending Rule.

¹¹³ See clause 3.8.14A(e) of the draft Amending Rule.

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

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.¹¹⁴ Following receipt of the AER's rule change request to action this recommendation, the Commission will consult on and consider the appropriate approach to reporting timelines.

5.4 Stakeholder submissions on the draft determination

Stakeholder submissions supported the transparency and accountability arrangements included in the Commission's draft rule. In particular,

- AGL supported the requirement to set out AEMO's methodology in undertaking the principles-based approach. AGL considered it important that the framework preserve accountability and industry certainty in how the intervention mechanisms operate given the additional flexibility provided to AEMO under the draft rule. AGL also supported the draft rule's reporting requirements as providing the necessary transparency on how this principle-based approach is undertaken.¹¹⁵
- CS Energy supported the draft rule's transparency and accountability requirements identifying that market participants will seek to ensure that the AEMO procedures will enable operational deliverability of selecting effective interventions that minimise the direct and indirect costs borne by consumers.¹¹⁶
- PIAC supported the transparency and accountability measures proposed by the AEMC in the draft rule. PIAC strongly supported the proposed requirements for AEMO to report on the basis for its intervention decisions and to consult with stakeholders on its methods and assumptions for determining effective and lowest cost intervention mechanisms.¹¹⁷

CS Energy, identified a number of specific challenges that would need to be addressed in AEMO's procedures. CS Energy considered a key challenge for AEMO to be its ability to select the lowest cost approach to intervention when circumstances require a decision to be made with short lead time frames or in real time. CS Energy further identified an additional challenge to be the provision of accurate information on participants' costs to AEMO as an input into their decision-making process.¹¹⁸

While supporting the Commission's approach to transparency and accountability a number of stakeholders considered additional oversight to be required. Several stakeholders identified a need for an ongoing review conducted by an independent body such as the AER:

¹¹⁴ AEMC, investigation into intervention mechanisms in the NEM - final report, p. 41.

¹¹⁵ AGL, submission to the draft determination, p. 2.

¹¹⁶ CS Energy, submission to the draft determination, p. 2.

¹¹⁷ PIAC, submission to the draft determination, p. 2.

¹¹⁸ CS Energy, submission to the draft determination, p. 2.

- CS Energy’s submission recommended an independent peer review on a periodic basis by a body such as the Australian Energy Regulator.¹¹⁹
- ERM and EUAA proposed an additional clause in the form of an annual market intervention review report by the AER. Both considered an additional review is warranted to provide increased confidence to stakeholders regarding the application by AEMO of its market intervention powers noting that there is currently no mechanism for the AER to review AEMO’s actions regarding market intervention.¹²⁰
- PIAC was concerned that removing the hierarchy of interventions may reduce accountability and oversight of AEMO’s decisions and recommended a review of the impact of the change after two years. PIAC also identified a need for a mechanism to allow parties to dispute AEMO’s choice of intervention.¹²¹

Different scopes for a review were proposed by stakeholders. CS Energy recommended a review which assessed outcomes arising from AEMO’s selection of intervention mechanisms under the rule which would deliver recommendations to be incorporated into the AEMO interventions procedure.¹²² EUAA and ERM on the other hand proposed a wide-ranging review of AEMO’s compliance with all obligations under the NER in respect of interventions. ERM and EUAA considered that the review should cover all market interventions undertaken, and all market intervention reports issued by AEMO over the financial year period to determine that AEMO has fully complied with the rules.¹²³

5.5 Final determination on accountability and transparency requirements

The Commission’s final determination on transparency and accountability is to make a final rule that is largely the same as its draft rule, but with the addition of a requirement for a periodic review of AEMO’s procedures and use of ‘supply scarcity mechanism’ rather than ‘intervention mechanism’. The Commission’s reasoning in support of its final rule is therefore as set out for the draft determination except for its reasoning on the additional review requirement, which is set out in this section.

The Commission’s final determination is to include a requirement for AEMO to develop, consult on, and publish procedures for the selection of supply scarcity mechanisms:

- 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 supply scarcity mechanism(s). Such procedures must include details of the methodology AEMO will use, and the assumptions AEMO may make.
- AEMO’s procedures must have regard to the types of examples of direct and indirect costs set out in the Rules.

¹¹⁹ CS Energy, submission to the draft determination, p. 2.

¹²⁰ Submissions to the draft determination: ERM, p. 2; EUAA, p. 3.

¹²¹ PIAC, submission to the draft determination, p. 2.

¹²² CS Energy, submission to the draft determination, p. 2.

¹²³ Submissions to the draft determination: ERM, p. 2; EUAA, p. 3.

- 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.
- AEMO must conduct a review of its procedures in accordance with the rules consultation procedures at least every four years.
- AEMO must conduct the first review of its procedures two years after the final procedures have been made.

AEMO to report on its selection of supply scarcity mechanisms including:

- the basis on which AEMO determined which supply scarcity mechanism, or combination of supply scarcity mechanisms to use
- whether AEMO complied with NER requirements and its procedures and if it did not, the reason for not complying with the NER requirements or following those procedures.
- AEMO is to report in accordance with the existing reporting timelines set out in the NER for each of the supply scarcity mechanisms (as applicable).

The Commission had regard to stakeholder submissions in making its final determination. In particular, the Commission considered stakeholder requests for an ongoing review conducted by an independent body such as the AER. Following consideration of stakeholder views, the Commission has determined to add a requirement for AEMO to conduct an ongoing periodic review of its procedures at least every four years, with the first review commencing in 2023. The Commission's considerations regarding this additional requirement included the following:

- the need for a review
- the party to carry out a review, and
- the review's frequency.

The Commission considered PIAC's request for a mechanism to allow parties to dispute AEMO's choice of supply scarcity mechanism. The Commission's final determination is not to include such a mechanism due to the limited time available for AEMO to select supply scarcity mechanisms. The Commission considered the combination of ex post reporting, requirement to publish procedures, and periodic review of those procedures provide an appropriate framework for governance of AEMO's selection of supply scarcity mechanisms.

The need for a review

The Commission noted CS Energy's submission which identified a range of challenges AEMO will face assessing the costs of different options for addressing supply scarcity conditions. The Commission agreed with CS Energy that it will be challenging for AEMO to:

- assess and identify the lowest cost approach to intervention when circumstances require a decision to be made with short time frames or in real time, and

- accurately compare the costs of different options for addressing a supply scarcity condition given the limited availability of information on participant costs for directions and instructions.

In addition, the Commission also considered AEMO may face a range of practical challenges assessing indirect costs arising from sources such as market distortion, particularly as it learns and adapts to the new framework.

For this reason, the Commission saw value in a mechanism that provides for the periodic review of AEMO's procedures in consultation with stakeholders. The Commission's final determination is therefore to include a periodic review requirement which focuses on the ongoing development of the methods and assumptions set out in AEMO's procedures. This will allow the procedures, which set out transparently how AEMO will make these assessments, to be updated and refined over time as experience is gained and lessons are learned. This will allow for continual improvements to be made to the procedures that seek to contribute to the selection of more efficient supply scarcity mechanisms. This should promote stakeholder confidence in AEMO's decision-making regarding its use of supply scarcity mechanisms.

The party to carry out a review

The Commission has considered stakeholder requests for an annual compliance review by the AER. The Commission did not however consider it appropriate for the rules to mandate specifics or timing of compliance reviews by the AER. The AER has a standing function to monitor and review compliance with the NER and can conduct a compliance review at any time. Further, the AER is guided by its internal procedures and priorities in relation to the timing and frequency of such reviews and how it uses its resources across its range of functions and priorities.¹²⁴

The Commission also did not consider a compliance review by the AER as likely to efficiently achieve the identified need for ongoing development of the methodology and assumptions set out in AEMO's procedures. The Commission considered the review should focus on the ongoing development and refinement of AEMO's methodology and assumptions used to identify approaches to addressing a supply scarcity condition given the challenges identified above. An AER compliance review would not achieve this purpose.

The Commission's final determination is therefore for AEMO to conduct a periodic review of its procedures in accordance with the Rules consultation procedures. The requirement for AEMO to consult with stakeholders in accordance with the Rules consultation procedures provides for a transparent public consultation process which will provide stakeholders with the opportunity for ongoing input into the development of the methodology and assumptions set out in AEMO's procedures. This promotes the NEO because it will enhance AEMO's procedures through input by the widest possible set of stakeholders.

Review frequency

¹²⁴ See AER, *Compliance and Enforcement Policy*, 2019, Commonwealth of Australia, Accessed 24 August at: https://www.aer.gov.au/system/files/AER%20Compliance%20%26%20Enforcement%20Policy%20-%20July%202019_1.pdf

The Commission's final determination is for a periodic review at least every four years, with the first review commencing in 2023. The initial review in 2023 must commence within two years of AEMO making its final procedures required under the transitional rule.¹²⁵ At this time, AEMO and stakeholders will have had two summers in which to assess the need for further development of AEMO's procedures.

Periodic reviews will be required at least every four years following this initial review. This review frequency is consistent with that required in the rules for AEMO's reserve level declaration guidelines,¹²⁶ and will provide for the ongoing development of AEMO's procedures in light of changes occurring in the power system that may affect AEMO's methodology and assumptions for identifying effective options for addressing a supply scarcity condition that also minimise costs. This promotes the NEO because it provides a trigger for AEMO's procedures to be regularly amended to reflect the changing characteristics of the power system, allows learnings to be incorporated and contributes to the selection of more efficient supply scarcity mechanisms.

¹²⁵ See clause 11.129.2(d) of the final rule.

¹²⁶ See clause 4.8.4A(b)(4) of the NER.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Commission	See AEMC
NEL	National Electricity Law
NEO	National electricity objective
NGL	National Gas Law
NGO	National gas objective
IIFR	Interventions Investigation Final Report.

A LEGAL REQUIREMENTS UNDER THE NEL

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

A.1 Final rule determination

In accordance with s. 102 of the NEL the Commission has made this final rule determination in relation to the rule proposed by AEMO. A summary of the more preferable final rule is set out in section 2.1 of this final determination and further details are set out in sections 3.5, 4.5 and 5.5 of this final determination.

The Commission's reasons for making this final rule determination are set out in section 3.4 and Chapters 3, 4 and 5 of this final determination.

A copy of the more preferable final rule is published with this final rule determination.

A.2 Power to make the rule

The Commission is satisfied that the more preferable final rule falls within the subject matter about which the Commission may make rules. The more preferable final 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:

- it's powers under the NEL to make the rule
- the rule change request
- submissions received during the Commission's IIFR
- submissions received in response to the draft determination, 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.¹²⁷

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.¹²⁸ The more preferable final rule is

¹²⁷ 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 was formerly called the COAG Energy Council and is now the ministerial forum of Energy Ministers.

¹²⁸ Section 91(8) of the NEL/ 295(4) of the NGL.

compatible with AEMO's declared network functions because it does not amend or affect those.

A.4 Civil penalties

The Commission cannot create new civil penalty provisions. However, it may recommend to the ministerial forum of Energy Ministers (formerly COAG Energy Council)¹²⁹ that new or existing provisions of the NER be classified as civil penalty provisions.

The more preferable final 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 ministerial forum of Energy Ministers (formerly COAG Energy Council)¹³⁰ that any of the proposed amendments made by the more preferable final rule be classified as civil penalty provisions.

A.5 Conduct provisions

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

The final 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 ministerial forum of Energy Ministers (formerly COAG Energy Council) that any of the proposed amendments made by the final rule be classified as conduct provisions.

¹²⁹ On 29 May 2020, the Prime Minister announced the establishment of the National Federation Reform Council and the disbanding of COAG. New arrangements for the former COAG Energy Council will be finalised following the National Cabinet Review of COAG Councils and Ministerial Forums which is due to provide recommendations to National Cabinet by September 2020. The Prime Minister has advised that, while this change is being implemented, former Councils may continue meeting as a Ministerial Forum to progress critical and/or well developed work.

¹³⁰ Ibid.

B BACKGROUND

This chapter introduces the intervention mechanisms and frameworks that are relevant to the Commission's final determination on the rule change request. Background and context is provided in the following areas:¹³¹

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

A difference between the Commission's draft and final rules was the use of 'supply scarcity mechanisms' to refer to RERT, directions, and clause 4.8.9 instructions. The IIFR, rule change request, draft determination and draft rule referred to 'intervention mechanisms' for this purpose. This appendix uses the term 'intervention mechanism' for consistency with those documents.¹³²

B.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.¹³³ These intervention mechanisms include the reliability and emergency reserve trader (RERT)¹³⁴, directions and instructions.¹³⁵

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 final 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.

¹³¹ Please note that the term 'intervention mechanism' in this appendix refers to the 'supply scarcity mechanisms' of RERT, directions, and clause 4.8.9 instructions.

¹³² The Commission adopted supply scarcity mechanism in the final rule to avoid confusion with 'AEMO intervention event' and 'relevant AEMO intervention event' which do not include clause 4.8.9 instructions. Additional information on this change is provided in section 2.1.1.

¹³³ Clause 3.8.14 of the NER

¹³⁴ Rule 3.20 of the NER.

¹³⁵ Clause 4.8.9 of the NER.

B.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.¹³⁶ AEMO can dispatch these reserves to ensure reliability of supply and maintain power system security, where practicable.¹³⁷ 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:¹³⁸

- The interim reliability reserve which replaces long-notice RERT which provided for between ten weeks' and twelve months' notice of a projected reserve shortfall. On 19 August 2020 the Energy Security Board (ESB) published a set of changes to the National Electricity Rules (Rules) to establish an out of market capacity reserve (the Interim Reliability Reserve). The interim reliability reserve delivers further reliability by establishing an interim out-of-market capacity reserve and amending triggering arrangements for the Retailer Reliability Obligation (RRO). These measures, would allow AEMO to procure reserves for contract terms of up to three years, replacing the long notice RERT until 2025. They aim to keep unserved energy to no more than 0.0006% in any region in any year.¹³⁹
- 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 lead to increased instances of forecast unserved 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.

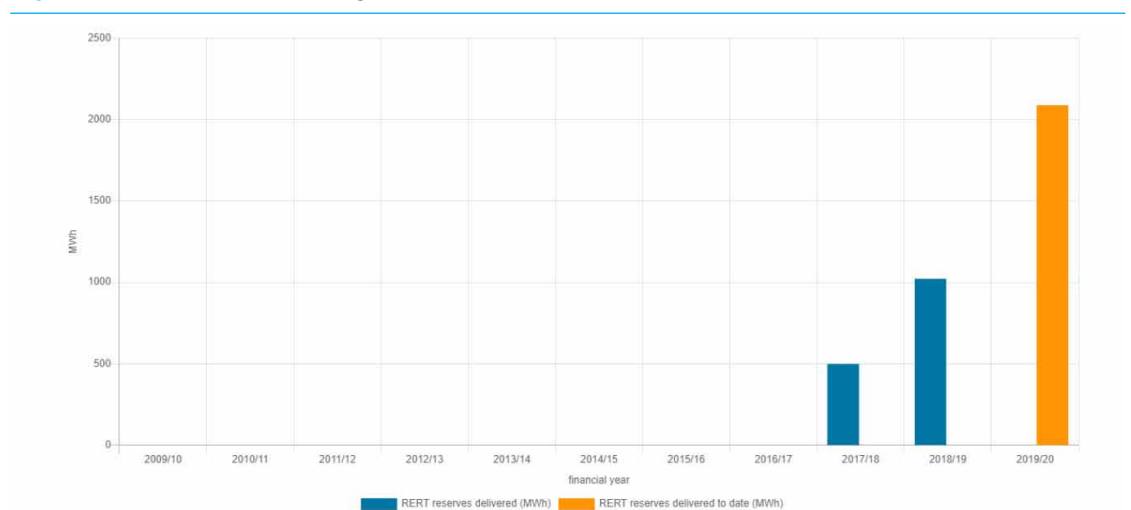
¹³⁶ Where the RERT has been procured for reliability purposes, it can also then be used, where practicable, for the maintenance of power system security. Clause 3.20.2 of the NER. See also section 7 of the RERT guidelines developed and published by the Reliability Panel under clause 3.20.8 of the NER.

¹³⁷ Clause 3.20.7(a) of the NER

¹³⁸ Reliability Panel, RERT Guidelines, p. 11.

¹³⁹ COAG Energy Council, Energy Security Board, Interim Reliability Reserve - decision paper, July 2020. See <https://prod-energycouncil.energy.slicedtech.com.au/sites/prod.energycouncil/files/ESB%20Decision%20Paper%20%E2%80%93%20Interim%20Reliability%20Measure.pdf>

Figure B.1: AEMO's increasing use of RERT



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

B.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, for example, 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.¹⁴⁰ 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.¹⁴¹

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

- energy
- market ancillary services
- voltage control
- system strength, and

¹⁴⁰ Clause 4.8.9(a1)(1) of the NER.

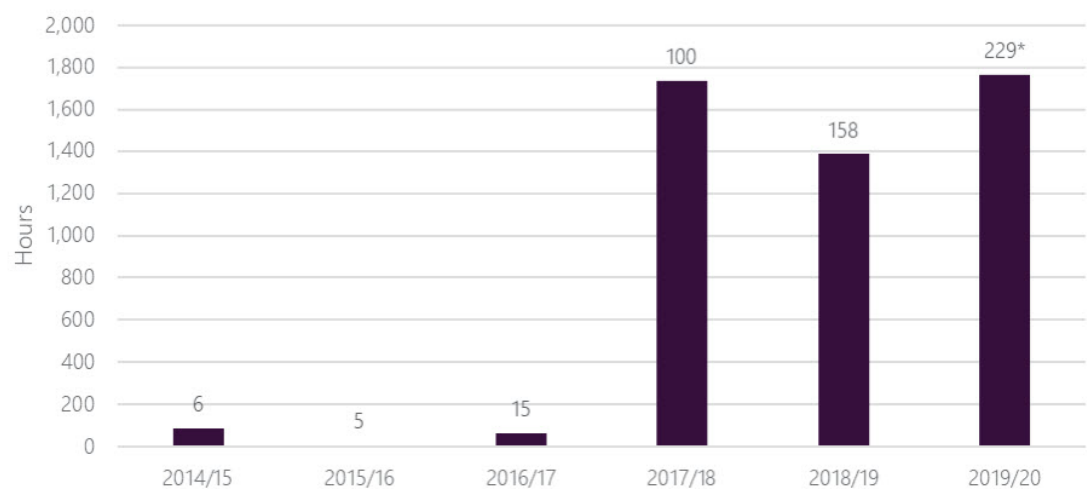
¹⁴¹ Clause 4.8.9(c) of the NER.

- other services.

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 February 17, 2020 (details on the specific generators directed are not available at this point).¹⁴²

Figure B.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.¹⁴³ 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

¹⁴² 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

¹⁴³ Clause 3.8.14(b) of the NER.

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 incentivised to participate in the market voluntarily as spot prices at such times are generally high.¹⁴⁴ Generators may however still be available to direct under such conditions. Such conditions may arise in circumstances such as when unit start up costs, fuel availability/cost and anticipated run times and prices make committing some generating systems uneconomic.

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.¹⁴⁵

BOX 6: 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.

B.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

¹⁴⁴ 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.

¹⁴⁵ 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.

instructions (which require a registered participant to take some other action, i.e. not in relation to scheduled plant or a market generating unit).¹⁴⁶

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 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.¹⁴⁷

While historic practice has been for AEMO to instruct for involuntary load shedding, clause 4.8.9 provides for AEMO to instruct registered participants with respect to any non-scheduled plant or non-market generating unit.¹⁴⁸ 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.

B.1.4

Intervention pricing and compensation frameworks

If the “regional reference node test” set out in clause 3.9.3 is met,¹⁴⁹ 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

¹⁴⁶ 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’.

¹⁴⁷ 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>

¹⁴⁸ Clause 4.8.9(a1)(2) of the NER.

¹⁴⁹ 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>.

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 which is directed to provide services.¹⁵⁰ Broadly speaking, affected participants are those who are dispatched differently due to activation of the RERT or issuance of a direction.¹⁵¹

B.2 Hierarchy of interventions

The rule change that is the subject of this final 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 currently 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 dispatch¹⁵² RERT and then, if necessary, carry out ‘any further corrective actions’ by issuing directions or instructions, as illustrated in figure B.3.¹⁵³ 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.¹⁵⁴

¹⁵⁰ 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.

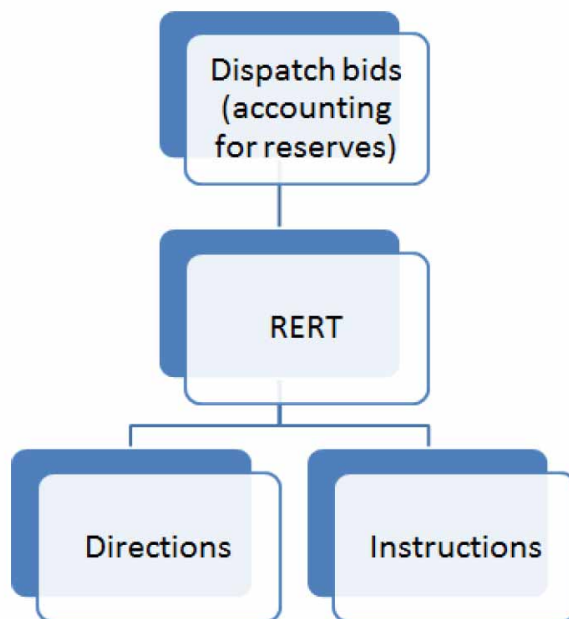
¹⁵¹ Chapter 10 of the NER defines “affected participant” as a scheduled generator or scheduled network service provider which is dispatched differently as a result of an intervention event which triggers intervention pricing. The definition also includes “eligible persons”, being settlement residue distribution (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. Compensation may also be paid under clause 3.12.2 to market customers with scheduled loads which are dispatched differently as a result of an intervention event which triggers intervention pricing.

¹⁵² Unscheduled emergency reserves are said to be activated while scheduled emergency reserves are said to be dispatched. The terms are used interchangeably in this determination.

¹⁵³ 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).

¹⁵⁴ The term “supply” is defined under Chapter 10 of the NER as “the delivery of electricity”.

Figure B.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”.¹⁵⁵ 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).¹⁵⁶

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

¹⁵⁵ Clause 4.8.9(a)(1) of the NER.

¹⁵⁶ 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.

B.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 NEM¹⁵⁷ 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.

B.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 2019.¹⁵⁸ 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.¹⁵⁹
- **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.¹⁶⁰

¹⁵⁷ AEMC, *Investigation into intervention mechanisms and system strength in the NEM, Consultation paper*, 4 April 2019.

¹⁵⁸ AEMC, *Application of the regional reference node test to the reliability and emergency reserve trader, Rule determination*, 19 December 2019.

¹⁵⁹ AEMC, *Application of compensation in relation to AEMO interventions, Rule determination*, 19 December 2019.

¹⁶⁰ AEMC, *Threshold for participant compensation following market intervention, Rule determination*, 19 December 2019.

B.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 final 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. Information about, and the status of these rule changes is provided below:

- **Changes to intervention mechanisms** - 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. On 18 June 2020 the Commission published a draft determination for this rule change. A final determination will be published on 10 September 2020.¹⁶¹
- **Compensation for market participants affected by intervention events** - 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. A consultation paper for this rule change was published on 11 June 2020. A draft determination is planned for publication on 24 September 2020 and a final determination is planned for publication on 17 December 2020.¹⁶²
- **Compensation following directions for services other than energy and market ancillary services** - 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. A consultation paper for this rule change was published on 11 June 2020. A draft determination is planned for publication on 24 September 2020 and a final determination is planned for publication on 17 December 2020.¹⁶³

¹⁶¹ For more information, see <https://www.aemc.gov.au/rule-changes/changes-intervention-mechanisms>

¹⁶² For more information see: <https://www.aemc.gov.au/rule-changes/compensation-market-participants-affected-intervention-events>

¹⁶³ For more information see: <https://www.aemc.gov.au/rule-changes/compensation-following-directions-services-other-energy-and-market-ancillary-services>