



Australian Energy Market Commission

RULE DETERMINATION

NATIONAL ELECTRICITY AMENDMENT (VICTORIAN JURISDICTIONAL DEROGATION – RERT CONTRACTING) RULE 2020

PROPONENT

The Honourable Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change, Minister for Solar Homes (Victoria)

12 MARCH 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 This final rule sets out a jurisdictional derogation to the National Electricity Rules (NER) to provide the Australian Energy Market Operator (AEMO) with the flexibility to enter into multi-year contracts with providers of emergency reserves in Victoria up until 30 June 2023. This will help address the short to medium term reliability challenges facing that state.
- 2 The derogation is limited to the state of Victoria and will not be permanent. The final rule also contains robust checks and balances to make sure AEMO only uses multi-year contracts where it considers that emergency reserves will be required for the later years of the contract. These include a trigger linked to forecast breaches of the reliability standard for the first year of a multi-year contract, and detailed and frequent reporting requirements to provide transparency and accountability.
- 3 The Australian Energy Market Commission (the AEMC or the Commission) has decided to make a final rule which is a more preferable rule. The more preferable rule better reflects the enhanced framework for RERT that will come into effect on 26 March 2020. In addition, it reduces the length of the derogation as proposed by the Victorian Government.
- 4 The Commission also notes that the Energy Security Board (ESB) has been tasked by the COAG Energy Council to provide advice for decision in March 2020 on immediate measures to ensure reliability and security of the electricity system. The AEMC is working closely with the ESB and other market bodies on this work. In making its statutory decision, the Commission has regard to the current regulatory frameworks. The information about reviews has been provided for context and background given these are currently underway and not yet concluded.

The derogation proposal

- 5 The final rule is made in response to a rule change request from the Hon Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change, Minister for Solar Homes (Victoria), to amend the NER to provide for a longer contract duration under the reliability and emergency reserve trader (RERT) mechanism. Specifically, the Minister requested that AEMO be able to enter into long notice RERT contracts of up to three years instead of a maximum contract duration of one year.¹
- 6 The Minister asked for the proposed derogation to be treated as urgent so that it could be considered under the expedited rule change process and determined in advance of the 2019-20 summer peak, to assist AEMO in procuring adequate volumes of RERT to cover the forecast shortfall.
- 7 The rule was initiated under the expedited process. However, following valid objections to the rule being treated as urgent, the derogation proposal was assessed under the standard rule making process. In recognition of the Victorian Government's concerns about current levels of reliability in Victoria, the Commission worked to deliver all milestones in the fastest

¹ Long notice RERT contract duration will extend to 12 months on 26 March 2020, up from 9 months, with the incoming changes under the *Enhancement to the RERT* rule change.

timeframe possible.

The reliability challenges facing Victoria

- 8 AEMO has concluded in various recent reports that a key risk in the National Electricity Market (NEM) in the short to medium term regarding reliability is the increased likelihood of the occurrence of coincident events over peak summer periods arising from extreme summer temperatures. The key coincident events include unplanned generator outages, high demand and low renewable generation. For instance, AEMO stated "the risk of supply interruption is primarily driven by increased vulnerability to climatic events such as extended periods of high temperature, corresponding with low wind and solar availability and unplanned generation outages"².
- 9 Based on feedback from submissions, recent reports by AEMO and the Australian Energy Regulator (AER), and the Commission's analysis including of the factors impacting the 2019-20 summer period, the Commission considers there are challenging reliability issues facing Victoria in the short to medium term.
- 10 The Commission has considered the argument made by the Victorian Government in its derogation proposal, that significant reliability risks arise in Victoria as the region's dispatchable generation fleet comprises a relatively small number of ageing brown coal generators, which are becoming increasingly unreliable. The Commission notes that AEMO has recently concluded that:³
- The biggest discrepancy between the [NEM generators'] long-term outage rates and performance in recent years is for brown coal, where recent forced outage rates sit well above the long-term average.
- 11 While the Commission recognises that new investment in more generation will help support reliability in Victoria, as at the end of 2019, the state's 2,200 MW investment pipeline comprised mainly large-scale wind and solar projects and a 20 MW of large scale battery (for full commercial use by July 2021).⁴ No new dispatchable generation is identified by AEMO into the longer term.⁵
- 12 Regarding the two to five-year time horizon, AEMO's assessment is that:⁶
- The new renewable generation coming online makes only a small improvement to the reliability outlook. Victoria, in particular, remains vulnerable to uncontrollable, high impact events such as prolonged or coincident generator outages, as experienced last summer and again in winter 2019.
- 13 As noted by AEMO, the January 2019 Victorian load shedding event demonstrated that this particular combination of events can have significant consequences for Victorian residents,

2 AEMO, *Summer 2019-20 Readiness Plan*, December 2019, page 16

3 AEMO, 2019 ESOO p. 67.

4 AEMO, 2019 EEAP, Appendix, committed and Com* projects.

5 AEMO, 2019 ESOO, p. 70.

6 AEMO, 2019 ESOO, p.103.

especially when they can result in load shedding events that are widespread and occur on consecutive days.⁷

14 The Commission has observed that the extreme conditions during the 2019-20 summer is evidence of the fact that the power system in Victoria is under pressure. Specifically, since the draft determination was published, the RERT has been activated twice in Victoria, totalling 980 MWh, and lack of reserve conditions (LOR 2 and LOR 3) were declared four times. In addition, AEMO entered into short notice RERT contracts four times in Victoria during the 2019-20 summer period.

15 Over the short to medium term, the current suite of risks to reliability in Victoria may change, and AEMO is continually assessing and updating these risks.

16 As well as market forces driving change, as noted by a number of stakeholders, the Retailer Reliability Obligation (RRO) is a key mechanism focussed on the short to medium term that, if triggered, can facilitate an in-market response. If the RRO is triggered in Victoria, then it will require retailers to enter into sufficient contracts to meet their share of expected system peak demand. Retailers can choose to contract with any form of generation, for example, solar, hydro, gas, coal and batteries. However, the 'firmer' the contracted generation source is, the greater its contribution will be to meeting their obligation. This will provide an incentive for market participants to increase contracting levels with existing participants as well as to invest in the right technologies in regions where it is needed, to support reliability in the NEM.

AEMO requires flexibility to procure adequate RERT to manage reliability issues in Victoria

17 The Commission notes that while out-of-market responses to reliability challenges are not ideal, they are necessary as a last resort should the market fail to respond. For these coming few years, if there continues to be a lack of investment in dispatchable generation and/or substantial storage in Victoria, then this could lead to a lack of in market reserves.

18 The Commission has concluded that, given the current circumstances in Victoria, multi-year contracting could provide more flexibility for AEMO to procure emergency reserves in order to minimise the likelihood of involuntary load shedding.

19 Additionally, the Commission notes that a substantial portion of RERT procured for Victoria for the 2019-20 summer was 64 MW from the AEMO/ARENA demand side participation trial. If AEMO were to need similar volumes in future summer peaks, this may not necessarily be available beyond November 2020, since this is when the trial concludes. The Commission also recognises that adequate volume also pertains to having the right mix of RERT types, covering the required lead times, times of availability and duration of supply.

20 The Commission considers the challenging reliability issues in Victoria will extend beyond the 2019-2020 summer peak, and notes the RRO is now only able to be triggered to address reliability issues at T-3 (i.e. in 2023-2024). The Commission considers that the Victorian Government's concern about the reliability risks in Victoria is understandable, especially

⁷ AEMO submission to the consultation paper, pages 3-4.

considering that the consequences of generator outages during peak demand periods can include widespread involuntary load shedding over multiple days.

Multi-year contracts may enable AEMO to procure RERT at a lower cost in certain circumstances

- 21 The Commission considers that allowing for multi-year contracting in Victoria to address reliability shortfalls for a limited time in certain circumstances could lead to lower costs of emergency reserves.
- 22 Spreading upfront costs over three years under a multi-year contract (where that contract length is needed) could result in lower direct costs per MWh than under one-year contracts. To elaborate on reports by RERT providers and the Victorian Government in its proposal, AEMO has provided the Commission with confidential information on the unsuccessful offers to the long-notice RERT this year. This data demonstrates that if multi-year contracts were allowed, then the direct costs of these suppliers could be lower, providing AEMO with more options and choice for what long-notice RERT contracts to enter into it.
- 23 However, care needs to be taken when comparing multi with single-year contracts. Contracts have different cost structures; differences in availability costs are likely to be more relevant than differences in activation costs. Also, if emergency reserves are not needed in years two and three of a multi-year contract then it would not be more cost effective.
- 24 Given acquiring emergency reserves under a multi-year contract can lead to lower direct costs for consumers, and as there is a likelihood that the RERT may be needed for the coming few years in Victoria, the Commission is of the view that multi-year contracting could be a useful tool for AEMO to have at its disposal for a limited time to procure the volumes of RERT it needs to minimise load-shedding at a minimal cost to Victorian consumers.

The final rule contains checks and balances to make sure multi-year contracting is only used where it minimises costs to consumers

- 25 The Commission shares stakeholder concerns that allowing multi-year contracts may have the potential to lead to increased direct costs to consumers.
- 26 The Commission considers that the principles governing the RERT mechanism should also apply to multi-year contracts in Victoria. Therefore, AEMO must give consideration to the RERT principle of minimising impacts on customer bills and the principle of RERT costs being lower than the value of customer reliability (VCR) when entering into multi-year contracts.
- 27 Additionally, the Commission considers that the trigger for procuring emergency reserves under the current framework should apply prior to entering into a multi-year contract; this is an expected breach of the reliability standard within the first 12 months of the contract term. However, the trigger would not be required to be met in years two and three. Instead, under the final rule, prior to entering into a multi-year contract, AEMO would need to consider what the appropriate term and structure of a Victorian reserve contract would be, including the appropriate volume of emergency reserves procured. The Commission considers this approach balances the need to avoid the cost risk of unnecessarily procured RERT and the need to afford AEMO flexibility to undertake multi-year contracting where it would be cost-

effective.

- 28 The final rule includes some additional guidance to AEMO that it must consider in terms of entering into emergency reserve contracts in Victoria.
- 29 Under the final rule, the term of a multi-year contract is the duration for which AEMO reasonably expects the emergency reserves to be required to ensure reliability of supply in the Victorian region. However, this cannot be longer than three years.
- 30 This still affords AEMO discretion as to the length of the RERT contract required, but it does make clear that, where emergency reserves are expected to be required for a period less than three years, then the contract term should be for that lesser period. This will reduce the likelihood of AEMO entering into multi-year contracts where there is no need for emergency reserves to be in place for years two or three of a contract, minimising costs passed onto consumers.
- 31 The final rule also applies the requirement, that will commence under the *Enhancement to the RERT*, for AEMO to use reasonable endeavours to ensure that the amount of RERT procured is relative to the shortfall forecast. This will apply to year one of a multi-year contract. For subsequent years, the final rule requires that AEMO procure a volume of emergency reserves that is reasonably necessary to ensure reliability of supply in Victoria. This will also address the risk of unnecessary volumes of emergency reserves being procured under multi-year contracts, minimising the costs passed onto consumers.
- 32 The requirement in the final rule for AEMO to publicly report on its reasons for entering into multi-year contracts, including in relation to cost effectiveness, will also encourage compliance and increase the likelihood that multi-year contracts will only be entered into when they are cost effective and in the interests of consumers in Victoria.

Minimal risk of Victorian multi-year contracting costs being passing onto customers in other NEM regions

- 33 The Commission notes the concern raised by Minister Lynham, Minister for Natural Resources, Mines and Energy (Queensland) in his submission to the consultation paper, that RERT costs incurred in Victoria under multi-year contracting could spread to customers in other regions. While it theoretically may be possible for a retailer operating across multiple regions to spread the costs of the RERT that were procured and used in one region to customers in another region, the Commission considers this to be unlikely to occur in practice since for residential customers the Victorian Default Offer (VDO) has a specific allowance for RERT costs; and for large customers RERT costs are typically directly passed through to them.
- 34 Further, the Commission has considered the suggestion that the AER be required to monitor and ensure compliance in relation to preventing RERT costs from being recovered from customers outside of Victoria. Regulatory provisions to prevent retailers from recovering RERT costs from consumers in other jurisdictions are likely to be difficult to enforce. As the risk of RERT costs being recovered from customers outside of Victoria is low, the costs of such a compliance regime would outweigh the benefits.

AEMO's use of multi-year contracting will be transparent

35 The Commission considers that expanded reporting requirements will help to hold AEMO accountable for exercising the multi-year RERT contracts efficiently. This should address stakeholder concerns that AEMO would be free to enter into multi-year contracting in circumstances where it is as not cost effective to do so.

36 The final rule applies the following requirements for the quarterly RERT report to all multi-year contracts entered into in Victoria, in addition to those that apply to all RERT reserves:

- identify any contracts that have a term greater than 12 months
- include an explanation of why such contracts were entered into for a term greater than 12 months, including the basis on which AEMO considered the term and volume to be reasonably necessary to ensure the reliability of supply in the Victorian region; and
- outline the basis on which AEMO had regard to the RERT principles when entering into the multi year contracts
- report on the payments made in respect of each emergency reserve contract (a current requirement on all emergency reserve contracts).
- outline how AEMO had regard to the impact of, and interactions with the RRO, in deciding on an appropriate contract duration and volume of emergency reserves
- outline how any multi-year contract that AEMO enters into would have total costs less than the total costs of other RERT contracts in aggregate covering the same period.

The risk of market distortions is low

37 Indirect costs was an issue that was considered at length in the *Enhancement to the RERT* rule change process. The final rule introduced a number of provisions targeted at minimising indirect costs, which focused on making sure the wholesale market is the primary means by which reliability is delivered so that reliability is delivered at lowest cost to consumers.

38 From 26 March 2020, under the changes introduced under the *Enhancement to the RERT* rule, a number of out of market provisions amendments will apply that minimise indirect costs. This is in addition to the existing RERT principle for AEMO to minimise market distortions in its exercise of the RERT.

39 The Commission considers that there are trade-offs between locking in multiple year RERT contracts compared to shorter dated contracting of reserves. Given the challenging reliability circumstances in Victoria, AEMO is well positioned to make this trade-off in a considered and transparent manner, in accordance with RERT principles and guidelines. The Commission considers that the potential for indirect costs from multi-year contracting are minimised because:

- There would likely be no material distortion to the real-time operation of the wholesale market.
- The changes made under the *Enhancement to the RERT* rule, along with the existing RERT principles, minimise direct costs associated with the RERT.

- The time limited nature of the derogation would further reduce the risk of investors choosing to invest in assets to provide RERT instead of investing in the market.
- Having regard to confidential information provided to the Commission by AEMO, the Commission considers that the type of resource providers that could participate in the long notice RERT are unlikely to participate in the wholesale market.

Multi-year contracts under the derogation should not extend beyond June 2026

- 40 Given the circumstances in Victoria, the final rule specifies that the derogation be in place for a period of approximately three years, rather than five, and end on 30 June 2023.
- 41 The Commission acknowledges that Victoria is facing reliability challenges in the short-medium term. Should circumstances in Victoria change or deteriorate such that the reliability standard in that state is forecast to be breached in the 2020-2021 or 2022-2023 summers, the RRO will not be able to address these shortfalls.
- 42 Given the particular reliability pressures in the state, the final rule provides AEMO with the flexibility to enter into multi-year RERT contracts up until such time the RRO could next address reliability issues. The next opportunity that the RRO would be able to address reliability issues in Victoria is the 2023-2024 summer peak. Therefore, AEMO will be able to enter into contracts up until 30 June 2023.
- 43 In other words, AEMO would have the flexibility to consider and enter into multi-year contracts, subject to the limitations on procurement and activation outlined above, until June 2023 - enabling them to be in place until June 2026 (for three-year contracts). The ability of AEMO to enter into multi-year contracts would end prior to the time at which, were the RRO to be triggered in 2023-2024, retailers would be required to enter into contracts to meet their share of expected system peak demand. Otherwise, the period in which AEMO could procure reserves for a multi-year contract could overlap with the procurement obligations and incentives market participants face under the RRO. If this were to occur it would diminish the incentives for liable entities to contract under the RRO in Victoria since AEMO would also be in the market procuring three year RERT contracts at the same time.
- 44 The final rule addresses the risk that there could be an overlap between emergency resources being contracted under this derogation and obligations on retailers under the RRO, which could lead to market customers and AEMO competing for resources to cover the same period. Under the final rule, AEMO is required to have regard to the impact of, and interactions with, the RRO as part of considering what would be a reasonable contract duration and volume of emergency reserves. How AEMO had regard to the RRO in relation to multi-year contracts will also need to be published in AEMO's quarterly reports.
- 45 The final rule (other than the transitional provisions) will commence operation on 16 April 2020.

CONTENTS

1	Rule Change request	1
1.1	The rule change request	1
1.2	Rationale for the rule change request	1
1.3	Solution proposed in the rule change request	2
1.4	The rule making process	3
1.5	Structure of the final rule determination	4
2	Background	5
2.1	Key elements of the RERT	5
2.2	Other recent changes to the reliability framework	15
2.3	Work underway on the reliability framework	19
2.4	Investment environment in Victoria	20
3	Final rule determination	24
3.1	The Commission's final rule determination	24
3.2	Rule making test	26
3.3	Assessment framework	27
3.4	Summary of reasons	28
3.5	Other requirements under the NEL	30
4	Reliability issues in Victoria	31
4.1	The Victorian Government's view	31
4.2	Stakeholder submissions in response to the consultation paper	34
4.3	Draft rule determination assessment	39
4.4	Stakeholder views on draft rule determination	52
4.5	Final determination analysis	56
4.6	Conclusions	62
5	Implications of multi-year contracting for direct costs	64
5.1	The Victorian Government's views	64
5.2	Stakeholder views on the consultation paper	65
5.3	Draft rule determination assessment	68
5.4	Stakeholder views of draft rule assessment	74
5.5	Commission's assessment for final determination	79
5.6	Conclusion	87
6	Indirect costs	89
6.1	Victorian Government's views	89
6.2	Stakeholder views to the consultation paper	89
6.3	Draft rule determination assessment	91
6.4	Stakeholder views on draft rule determination	97
6.5	Final determination assessment	98
6.6	Conclusion	101
7	Duration of derogation	102
7.1	The Victorian Government's view	102
7.2	Stakeholder views on consultation paper	103
7.3	Draft rule determination assessment	104
7.4	Stakeholder views on draft rule determination	105
7.5	Final determination assessment	108
7.6	Conclusions	110

Abbreviations 112

APPENDICES

A	Summary of other issues raised in submissions	113
A.1	Summary of other issues raised in submissions to the consultation paper	113
A.2	Summary of other issues raised in submissions to the draft determination	117
B	Legal requirements under the NEL	120
B.1	Final rule determination	120
B.2	Power to make the rule	120
B.3	Commission's considerations	120
B.4	Civil penalties	121
B.5	Conduct provisions	121
C	Use of the RERT mechanism	122

TABLES

Table 2.1:	Changes between existing and updated framework for long notice RERT	8
Table A.1:	Summary of other issues raised in response to the consultation paper	113
Table A.2:	Summary of other issues raised in response to the draft determination	117

FIGURES

Figure 2.1:	Current reliability framework with escalating series of interventions	6
Figure 2.2:	Annual notional value of dispatched energy in Victoria	21
Figure 2.3:	Under cap revenue of unit size OCGT generator in Victoria	22
Figure 2.4:	Cap contract prices in Victoria	23
Figure 4.1:	Excess generation capacity in each NEM region	44
Figure 4.2:	Availability of the current Victorian brown coal fleet	46
Figure 4.3:	Historical full forced outage rates comparison	46
Figure 4.4:	Range of USE outcomes, central scenario, Victoria 2019-20	49
Figure 4.5:	Victorian thermal plant availability during times of tight supply/demand balance in 2017/18 and 2018/19	58
Figure 7.1:	Duration of the Victorian jurisdiction derogation - RERT contracting	105

1 RULE CHANGE REQUEST

1.1 The rule change request

On 8 October 2019, the Hon Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change, Minister for Solar Homes (Victoria) submitted a derogation proposal (rule change request) to the Australian Energy Market Commission (AEMC or Commission) relating to the Reliability and Emergency Reserve Trader (RERT).⁸

The Victorian Government sought a jurisdictional derogation from clause 3.20.3 of the National Electricity Rules (NER) for Victoria, to allow the Australian Energy Market Operator (AEMO) to contract for emergency reserves under the RERT mechanism on a multi-year basis in that state. Specifically, this would enable AEMO to procure long-notice RERT contracts of up to three years' duration. The proposal was for five years, ending on 30 June 2025, enabling multi-year RERT contracts of up to three years commencing in June 2025 and ending in June 2028.

As this is a derogation proposal, the Minister seeking the derogation is required to consult with the Ministers of other participating jurisdictions under s. 91(3) of the NEL. Minister D'Ambrosio confirmed in the letter covering the derogation proposal that she had undertaken this consultation as required under s. 91(3) of the NEL prior to submitting the derogation proposal to the AEMC.

1.2 Rationale for the rule change request

In the derogation proposal the Victorian Government sought to assist AEMO procure a greater volume of emergency reserves for the forthcoming 2019-2020 summer and the years that follow.

In its derogation proposal, the Victorian Government provided the following rationale and core issues:

- Since the Commission made its final determination on the Enhancement to the RERT in May 2019, the 2019 Electricity Statement of Opportunities (ESOO) has been published (August 2019) forecasting a heightened risk of load shedding in Victoria for the 2019-20 summer, with Victoria the only state expected to breach the reliability standard.⁹
- Reliability is expected to remain a concern for 2020-2021 and 2021-2022 in Victoria. According to the Victorian Government: "Victoria is in a unique position in the NEM in that it has a disproportionate dependence on a relatively small number of brown coal generation units, which are becoming increasingly unreliable".¹⁰
- The need for a specific mechanism to address reliability in Victoria is expected to be short-term, and unable to be resolved by the Retailer Reliability Obligation (RRO). The Victorian Government stated the market measures included in the RRO, which commenced on 1 July 2019 and can only be triggered based on the reliability forecast for

⁸ Hereafter, we refer to the proponent as the Victorian Government.

⁹ The Honourable Lily D'Ambrosio MP, Victorian jurisdictional derogation – RERT contracting, rule change request, p. 3.

¹⁰ *ibid*, pp. 4-7, quote pp. 6 -7.

three years' in advance, "cannot assist in resolving the shortages forecast for the coming summer peak period in Victoria. The RRO is a long-term solution to forecast capacity shortages."¹¹

- Restricting RERT contracts to nine or 12 months¹² is limiting the availability of emergency reserves in Victoria to a level that threatens the reliability of the national electricity system as it operates in Victoria. For this reason, the Victorian Government considered that introducing multi-year contracts would enable AEMO to procure a greater volume of RERT contracts,¹³ which "will contribute to a more reliable supply of electricity where, in light of increased variability around demand and the changing generation mix, there is a risk that the current RERT response mechanisms may not be adequate to respond to existing and emerging power system events in Victoria".¹⁴
- The proposed solution is expected to deliver a net economic benefit as "RERT providers have advised that longer term contracts have significantly lower costs for each MW of available capacity compared to short term contracts" and "AEMO will only enter into multi-year contracts for RERT where it is more cost effective than entering short term contracts".¹⁵

1.3 Solution proposed in the rule change request

The Victorian Government proposed a jurisdictional derogation to the NER to extend the duration of long-notice RERT contracts to periods of up to three years in the jurisdiction of Victoria.

The Victorian Government proposed that long notice RERT contracts would commence within the existing procurement lead times of a forecast shortfall in capacity.¹⁶ This would mean that a RERT contract could only be entered into nine months (currently) or 12 months (after 26 March 2020) in advance of a forecast reliability gap. However, the contract duration would be a maximum of three years rather than being limited by the maximum procurement lead time as is currently the case.

The Victorian Government stated that having the contracts remain in effect for up to three years would potentially result in availability payments for the duration of the contract, where that was assessed by AEMO as cost-effective and justified.¹⁷

The derogation was proposed to be in place for five years until 30 June 2025.

The Victorian Government stated that the proposed rule would have the effect of:¹⁸

11 Ibid, p. 5.

12 From 26 March 2020, the effective limit on the length of a RERT contract will increase from nine to 12 months under the Enhancement to the RERT rule change, detailed in Chapter 2.

13 *ibid*, p. 3.

14 *ibid*, p. 10.

15 *ibid*, p. 10.

16 The lead times are a period of nine months up until 26 March 2020 and twelve months thereafter.

17 The Honourable Lily D'Ambrosio MP, Victorian jurisdictional derogation – RERT contracting, rule change request, p. 8.

18 *ibid*, pp. 7-8.

- Enabling AEMO to use its discretion to enter into multi-year (up to three years) RERT capacity reserves in Victoria within the parameters articulated in the NER and RERT Guidelines.¹⁹
- Multi-year contracts being entered into, potentially assisting AEMO to procure additional emergency reserves that could help avoid load shedding during the 2019-20 summer and in future years in Victoria.
- Multi-year RERT contracts being entered into up until the proposed expiry of the derogation, which is 30 June 2025. This would mean that multi-year contracts could be entered into up until 30 June 2025, enabling a multi-year contract to be in place until June 2028.
- Separating the concepts of contract duration and procurement lead time in the NER for the state of Victoria for the life of the derogation.²⁰

1.4 The rule making process

On 24 October 2019, the Commission published a notice advising of its commencement of the rule making process and consultation in respect of the rule change request.²¹ A consultation paper identifying specific issues for consultation was also published. Submissions closed on 21 November 2019.

In submitting the derogation proposal, the Victorian Government requested that it be subject to the expedited rule making process on the basis that it is an 'urgent rule' as defined in the NEL.²² The Victorian Government stated that assessment of the rule change request on an expedited basis is needed to allow the derogation to come into effect prior to Victoria's peak electricity demand occurring in the 2019-2020 summer.

The Commission set out in the consultation paper that it accepted that the rule change request was a request for an urgent rule as defined in s. 96 of the NEL. Accordingly, the Commission commenced an expedited rule change process, subject to any written requests not to do so.²³ This decision was informed by the Victorian Government's views, as set out in the rule change request, that the risk to reliability in terms of involuntary load-shedding in the state of Victoria is a reasonable possibility over the 2019-2020 summer and that additional volumes of emergency reserves may be required.

On 7 November 2019, the Commission received four objections to the proposed derogation proceeding through the expedited process as an urgent rule. Under s. 96(3) of the NEL, the AEMC must not make a rule in accordance with the expedited process if the AEMC receives a

¹⁹ The RERT Guidelines provide additional guidance to AEMO on what to take into account when it uses the RERT. The guidelines were last updated by the Reliability Panel on 25 July 2019 following the AEMC's Enhancement to the RERT final rule made on 2 May 2019.

²⁰ The NER does not currently prescribe a specific duration for RERT contracts. However, the procurement lead time specified in the NER limits the duration of these contracts.

²¹ This notice was published under s. 95 of the National Electricity Law (NEL).

²² Section 96 of the NEL.

²³ The expedited rule change process involves one round of public consultation on the rule change request and the publication of a final determination within eight weeks of commencing the rule change process.

written request not to do so, and the reasons set out are not, in its opinion, misconceived or lacking in substance.

The Commission considered the reasons outlined in the four objections submitted and concluded that some reasons provided in the objections were not misconceived or lacking in substance. Consequently, the rule change request has been assessed under the standard rule change process and a notice was published to that effect.²⁴

On the 19 December 2019 the Commission published a draft determination.

The Commission received 15 submissions in response to the consultation paper and seven submissions in response to the draft determination. The Commission considered all issues raised by stakeholders in submissions. Issues that are not discussed in the body of this document have been summarised and responded to in Appendix A.

1.5 Structure of the final rule determination

The structure of the final rule determination is as follows:

- Chapter 2 provides background information on the RERT and recent changes to the reliability framework in the NEM and the investment environment in Victoria.
- Chapter 3 summarises the final rule determination.
- Chapter 4 examines the reliability issues in Victoria.
- Chapter 5 examines the potential direct cost impacts of multi-year contracting.
- Chapter 6 examines the potential indirect costs impacts.
- Chapter seven examines the duration of the derogation.
- Appendix A sets out a summary of the other issues raised in submissions.
- Appendix B sets out the legal requirements under the NEL.
- Appendix C sets out the use of the RERT mechanism.

²⁴ Section 96(5) of the NEL.

2 BACKGROUND

This chapter provides an overview of: the key elements of the RERT, recent changes that have been made to the national electricity market's (NEM) reliability framework including to the RERT; other reliability-related work currently underway; and the investment environment in Victoria.

2.1 Key elements of the RERT

This section summarises the current RERT arrangements. It covers the:

- role of the RERT
- RERT framework
- procurement lead time and the contracting period
- recovery of RERT costs
- reporting on the RERT.

2.1.1 The role of the RERT

The RERT is the NEM's strategic reserve and has formed part of the reliability framework since the start of the NEM in December 1998. It is a tool that allows AEMO to procure 'standby' emergency reserves; generation and demand-side capacity that is not otherwise being traded in the market. AEMO can use the RERT in the event that it forecasts the market will not meet the reliability standard (that is, when AEMO projects that unserved energy (USE)²⁵ is expected to be greater than 0.002 per cent) and where practicable, to maintain power system security.

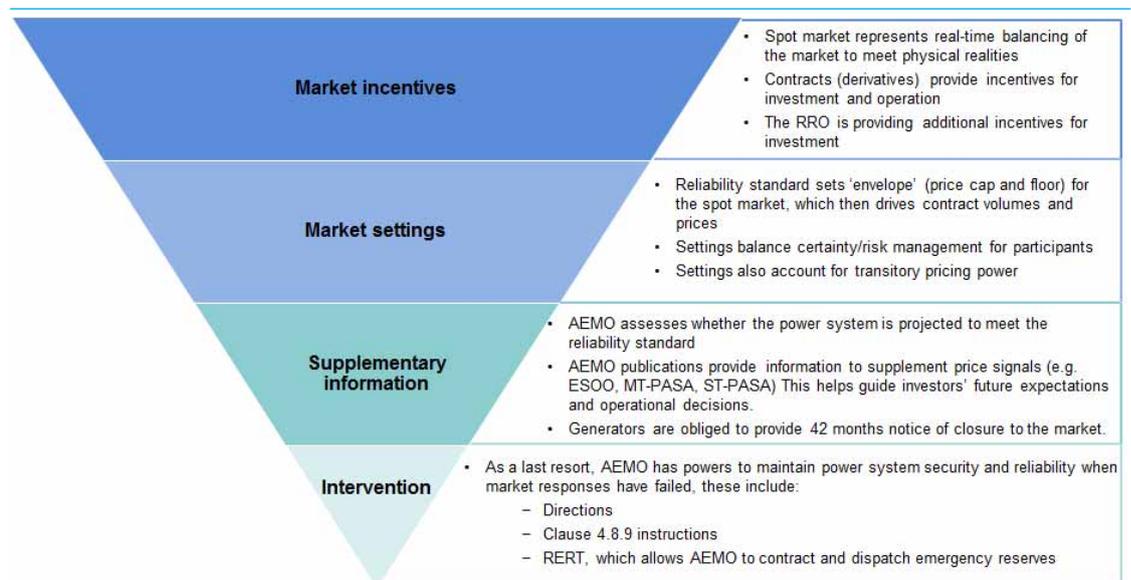
Other components of the reliability framework for the NEM comprise market mechanisms and incentives, the reliability standard and reliability settings, the provision of information to the market and intervention mechanisms. In addition, the reliability framework was recently supplemented by the RRO that was put in place on 1 July 2019. The RRO is expected to support a reliable energy system by requiring companies to hold contracts or invest directly in generation or demand response to support reliability in the NEM (see section 2.2.4 for further details).

As shown in Figure 2.1, the RERT is one of three existing last resort interventions that AEMO can use to maintain reliability if the market fails to respond to published forecast information. The RERT is used to help avoid larger and more widespread blackouts from occurring. To date the RERT has typically been used when extreme heat-waves are predicted.²⁶

²⁵ Unserved energy is defined under Chapter 10 of the NER as "The amount of energy demanded, but not supplied, in a region determined in accordance with clause 3.9.3C(b), expressed as: (a) GWh; or (b) a percentage of the total energy demanded in that region over a specific period of time such as a financial year"

²⁶ A discussion of the use of the RERT in Victoria over the 2019-20 summer is provided in Chapter 4. A more comprehensive discussion of the overall reliability framework can be found in the AEMC's Reliability Frameworks Review, available at https://www.aemc.gov.au/sites/default/files/2018-07/Final%20report_0.pdf.

Figure 2.1: Current reliability framework with escalating series of interventions



Updated from AEMC, *Reliability Frameworks Review*, final report, 26 July 2018.

2.1.2

The RERT framework

The NER provide the high-level framework for the RERT, including:²⁷

- setting out the RERT principles²⁸
- requiring the Reliability Panel to publish RERT guidelines²⁹
- requiring AEMO to publish procedures for the exercise of the RERT.³⁰

The RERT principles provide that:³¹

- actions taken should be those which AEMO reasonably expects, acting reasonably, to have the least distortionary effect on the operation of the market
- actions taken should aim to maximise the effectiveness of reserve contracts at the least cost to end use consumers of electricity.

The RERT guidelines, prepared by the Reliability Panel, provide additional guidance to AEMO on RERT principles and on the cost-effectiveness of emergency reserves.³² AEMO is required to exercise the RERT in accordance with the RERT guidelines.

²⁷ Rule 3.20 of the NER.

²⁸ Clause 3.20.2(b) of the NER.

²⁹ Clause 3.20.8 of the NER.

³⁰ Clause 3.20.7(e) of the NER.

³¹ Clause 3.20.2(b) of the NER.

³² The Reliability Panel recently updated these Guidelines in response to the AEMC's final determination for the Enhancement to the *Reliability and Emergency Reserve Trader* rule change request.

There are three types of emergency reserves based on how much time AEMO has to procure emergency reserves prior to the projected reserve shortfalls occurring:

- Long-notice RERT — currently between nine months' and ten weeks' notice of a projected reserve shortfall. This will increase to 12 months on 26 March 2020.
- 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.

AEMO's discretion as to how it should procure and dispatch the RERT is limited by a number of provisions in the NER, including those relating to the application of the RERT principles. The RERT mechanism allows AEMO to contract for emergency reserves that are not otherwise available in the wholesale market. The RERT framework is designed to minimise distortions to the wholesale market.

The relevant aspects of the RERT framework for this derogation proposal, and key recent changes to the RERT and reliability framework more generally, are summarised in the following sections.

Prior to 2017, AEMO had only entered into RERT contracts three times and had never dispatched the RERT. This changed in 2017, when AEMO entered into a number of emergency reserve contracts. Since that time, AEMO has used the RERT a number of times, including in November 2017, January 2018, January 2019, and most recently in December 2019 and January 2020. This increase in use of the RERT reflects the changing system needs, including:

- the changing generation mix being evidenced by a growing proportion of variable renewable generation and an aging fleet of thermal generation,
- a tightening supply-demand balance,
- peakier demand and higher temperature peaks.
- as well as more flexible and responsive demand-side.³³

The appendix to this final determination details recent load shedding and use of the RERT.

2.1.3

Changes made to the RERT framework under the Enhancement to the RERT final rule

On 2 May 2019, the Commission made a final rule for the *Enhancement to the RERT* rule change request. This final rule made a number of changes to the RERT framework to embed it clearly within the reliability framework. This change was made to provide AEMO with flexibility and discretion to use the RERT while also increasing transparency and minimising market distortions and costs to consumers. Many of these changes to the RERT framework commence on 26 March 2020, with some new reporting requirements commencing on 31 October 2019.

³³ AEMC, *Enhancement to the Reliability and Emergency Trader Reserve*, Rule determination, 2 May 2019, pp. 26–27, and AEMC, *Enhancement to the Reliability and Emergency Trader Reserve*, Consultation Paper, 21 June 2018, pp 15–17.

The table below summarises how the current and updated framework under the *Enhancement to the RERT* final rule apply to long notice RERT, as the derogation proposal relates to extending the contract duration of long-notice RERT to a maximum of three years.

Table 2.1: Changes between existing and updated framework for long notice RERT

ASPECT OF FRAMEWORK	CURRENT ARRANGEMENTS	UPDATED ARRANGEMENTS
Procurement trigger	The NER trigger clause links RERT procurement to ensuring the reliability of supply meets the reliability standard, but AEMO is able to use any information to inform its decision to procure RERT (subject to the RERT Guidelines).	The trigger is linked explicitly to forecast breaches of the reliability standard. AEMO can only procure RERT following a declaration of low reserve conditions (LRCs) or lack of reserves conditions (LORs).
Procurement volume	The current arrangements are silent in relation to the procurement volume. However, the RERT principles requiring AEMO to minimise market distortions and costs to end consumers have relevance to the volume of RERT procured.	The volume procured must be an amount that is no more than AEMO considers is reasonably necessary to meet the reliability gap identified by an expected breach of the reliability standard.
Procurement lead time and implied contract duration	A maximum of nine months.	A maximum of 12 months.
Out of market provisions	Scheduled reserves cannot participate in RERT if in the market (ie, dispatch offers or bids submitted, likely to be submitted or otherwise available for dispatch) for the trading intervals to which contract relates. However, implementation of the provision is unclear.	Scheduled reserves cannot participate in RERT if in the energy market (ie, dispatch offers or bids submitted, likely to be submitted or otherwise available for dispatch) for the past 12 months, and for the duration of the contract. Unscheduled reserves cannot participate in RERT if subject to another arrangement under which the reserves are offered in the market for the trading intervals to which the contract relates.

ASPECT OF FRAMEWORK	CURRENT ARRANGEMENTS	UPDATED ARRANGEMENTS
		<p>"market" means a market for the trading of energy only.</p> <p>Greater transparency by requiring AEMO to provide guidance on implementation in its procedures.</p>
<p>Costs of RERT</p>	<p>The RERT principles requiring AEMO to minimise market distortions and costs to end consumers and market distortions have relevance to the costs of the RERT procured.</p> <p>The NER require that RERT costs incurred by AEMO be met by fees imposed on market customers in the region where emergency reserves have been procured under reserve contracts which relate to that region.</p>	<p>Introduces an additional RERT principle that the costs of RERT should not exceed estimated average value of customer reliability.</p> <p>Introduces a more cost reflective approach to who pays for emergency reserves. This approach aligns the cost of emergency reserves with, where possible, the customers who were consuming when the RERT was used.</p>
<p>Reporting on RERT procurement, activation, use and costs</p>	<p>The RERT guidelines state that within one month of entering into a contract AEMO may publish the name of the counterparty to the contract and the volume and timing of the reserves procured. This is not mandatory but AEMO does routinely publish this information.</p> <p>If AEMO dispatches or activate emergency reserves, it must (no later than 5 business days) publish details covering the total estimated payments made under reserve contracts and total volume of reserves</p>	<p>In addition to the existing reporting requirements, AEMO must include detailed information about RERT contracts in quarterly RERT reports including the estimated amount payable by region; AEMO's modelling forecast and analysis used to determine whether to enter into reserve contracts and the amount of reserve procured; if relevant an explanation for why AEMO procured a greater amount than any shortfall identified; the periods during which the emergency reserves are expected to be required; the term of each</p>

ASPECT OF FRAMEWORK	CURRENT ARRANGEMENTS	UPDATED ARRANGEMENTS
	<p>dispatched.</p> <p>*Please note that some of the reporting requirements introduced under the <i>Enhancement to the RERT</i> and referred to in the adjacent cell have already commenced.</p>	<p>reserve contract including explanation for why that term was necessary; an explanation for the basis on which AEMO had regard for the RERT principles.</p> <p>AEMO must include detailed information in RERT quarterly reports about any RERT that has been dispatched or activated.</p> <p>The RERT quarterly reports must also include AEMO's costs associated with exercising the RERT and a breakdown of the recovery of those costs.</p>

Note: 1. The majority of the changes under the enhanced framework come into effect on 26 March 2020 with some reporting requirements having commenced on 31st October 2019.

Note: 2. More information on the *Enhancement to the RERT* framework can be found in the final determination, available at: <https://www.aemc.gov.au/rule-changes/enhancement-reliability-and-emergency-reserve-trader>

The following sections detail the differences between the existing and the updated RERT arrangements.

2.1.4

Procurement trigger, lead times and contract duration

Arrangements prior to 26 March 2020

The current trigger for the procurement of RERT is when AEMO observes that forecast reliability is outside the reliability standard. If AEMO considers there is no market resolution to a forecast shortfall, then it may choose to procure emergency reserves "to ensure that the reliability of supply in a region meets the reliability standard for the region and, where practicable, to maintain power system security."³⁴

The RERT guidelines identify what information AEMO may take into account when deciding whether to enter into reserve contracts.

Typically, AEMO sets up a RERT panel of providers for both the medium-notice and short-notice RERT, and only trigger the procurement contract when it has identified a potential

³⁴ Clause 3.20.3 (b) NER.

shortfall and after seeking offers from RERT panel members.³⁵ There is no panel for the long-notice RERT; rather, contracts are signed following the close of a public tender process.

Under the arrangements for long and medium notice RERT, AEMO may take into account the forecasts in the Medium Term Projected Assessment of System Adequacy (MT PASA) reports, the outcome of the Energy Adequacy Assessment Projection (EAAP) or any other information (such as the ESOO) that AEMO considers relevant.³⁶ For short-notice RERT, the RERT Guidelines state that AEMO may take into account the Short Term Projected Assessment of System Adequacy (ST PASA) and pre-dispatch processes and any other information that AEMO considers relevant.³⁷

The Victorian Government derogation proposal relates to the maximum duration of a long-notice RERT contract. Prior to 26 March 2020, AEMO could enter into a contract up to nine months in duration.³⁸

Arrangements commencing 26 March 2020

From 26 March 2020, the procurement trigger for emergency reserves will change in accordance with the *Enhancement to the RERT* rule made in May 2019. These changes will more explicitly link the procurement trigger for the RERT to forecast breaches of the reliability standard.

The new requirements restrict the procurement of all types of RERT to a low reserve condition (LRC) or lack of reserve (LOR) declaration. By linking the procurement processes explicitly to the reliability standard (through the LCR and LOR declarations), it limits the misallocation of reliability risks, in terms of how they are managed in the NEM.

The *Enhancement to the RERT* final rule also recognised the practical limitations and challenges of emergency reserves, and incorporates some flexibility into these parameters. In practice currently this means that in the future forecast shortfalls in the ESOO will not be able to trigger the procurement of RERT. The inputs into an LRC or LOR declaration are set out in the Reliability Standard Implementation Guidelines (RSIG). Section 2.3 of these guidelines state that the MT-PASA identifies an LRC. According to the RSIG the EAAP is also relevant to LRC declarations.³⁹

Under the *Enhancement to the RERT* final rule, the maximum procurement lead time for the long notice RERT ahead of a forecast shortfall will be 12 months. Where long notice RERT is procured this will enable AEMO to enter into long notice RERT contracts of up to 12 months duration, rather than the 9 months under the pre-26 March 2020 arrangements. This extended lead time also creates consistency with the lead time under the Retailer Reliability Obligation (RRO, see section 2.2.4).

35 AEMO has the discretion to use a tender process in addition to using panel members in the case of the medium-notice RERT.

36 Reliability Panel, RERT Guidelines, p. 4.

37 Reliability Panel, RERT Guidelines, p. 4

38 The maximum duration of a RERT contract is implied by the procurement lead time as the contract cannot be entered into more than nine months prior to when AEMO expects the shortfall to occur. Clause 3.20.3(d) of the NER.

39 See sections 2.1 and 2.2 of the RSIG. An LOR is the relevant trigger for short notice RERT and it is based on the ST-PASA.

Therefore, from 26 March 2020, AEMO will be able to procure RERT contracts of up to 12 months duration.⁴⁰ While AEMO cannot currently enter into multi-year contracts, the NER do not prevent AEMO from negotiating at any time with potential tenderers in relation to RERT contracts.⁴¹

2.1.5 **Activation of RERT**

Arrangements prior to 26 March 2020

The dispatch and activation of RERT is quite separate from the procurement arrangements described above. If AEMO considers the latest time for exercising the RERT has arrived, AEMO may dispatch scheduled reserves or activate unscheduled reserves to ensure that the reliability of supply in a region meets the reliability standard, and where practicable, to maintain power system security.⁴² Closer to real-time and a potential reliability event, AEMO's reliability assessment switches to a more operational-type assessment where AEMO targets zero USE.

Arrangements commencing 26 March 2020

The framework relating to the activation of the RERT remains unchanged from the current arrangements.

2.1.6 **Recovery of RERT costs**

Arrangements prior to 26 March 2020

The NER require that RERT costs incurred by AEMO be met by fees imposed on market customers in the region where emergency reserves have been procured under reserve contracts which relate to that region.⁴³ The cost per market customer is proportional to the energy consumption of that customer in the relevant region during certain time periods.⁴⁴ Costs are recovered through the usual weekly settlement process.

If emergency reserves are required in multiple regions, cost sharing arrangements must be agreed between the regions and AEMO when entering into the contracts.⁴⁵ Such arrangements currently only exist between South Australia and Victoria.

The NER do not prescribe how market customers (retailers) then recover these costs from end customers. Market customers typically recover RERT costs based on the conditions of the contracts with their customers. For example, tariffs in residential contracts, tend to only change once per year and so this affects how these costs are recovered. Other contracts such as with large customers may have different conditions, including the ability for retailers to pass through RERT costs directly, should they choose to, in a more timely manner.

40 As the maximum procurement lead time will increase from nine to 12 months upon the commencement of the Enhancement to the RERT rule change.

41 Clause 3.20.3(d) of the NER.

42 Clause 3.20.7(a) of the NER.

43 Clauses 3.15.9(a) and (e) of the NER

44 Clause 3.15.9(e) of the NER

45 Clause 3.20.3(f) of the NER.

Arrangements commencing 26 March 2020

The Commission's changes to the RERT in the *Enhancement to the RERT* rule introduce a more cost reflective approach to who pays for emergency reserves. This new approach recovers the costs of emergency reserves where possible, from those customers who were consuming electricity at the time the RERT was used. These changes are expected to provide efficient incentives for parties to reduce or avoid these costs.

The more cost reflective RERT cost recovery arrangements require AEMO to recover costs associated with the *direct and immediate activation of RERT* resources (for example, activation costs or usage charges) in proportion to market customers' consumption over each of the trading intervals in which the RERT resource is activated, in the region in which the RERT was used.

It also requires AEMO to recover all other costs associated with the *procurement of emergency reserves* (for example, availability charges), other than administrative and operational costs, in proportion to market customers' consumption during each of the billing periods in which the costs were incurred, in the region in which RERT was used.

The *Enhancement to the RERT* rules also inserted an additional RERT principle that specified the costs of the RERT should not exceed the estimated average Value of Customer Reliability (VCR) for the relevant region. This was included to provide guidance to AEMO to consider whether the cost of entering into emergency reserve contracts is reasonable.

2.1.7

Reporting on RERT

Arrangements prior to the *Enhancement to the RERT* rule change

The RERT guidelines state that in relation to the procurement of long, medium and short notice RERT, AEMO may "within one month after entering into a contract for [emergency] reserves, publish the name of the counterparty to the contract and the volume and timing of reserves procured under the contract".⁴⁶ This requirement is not mandatory; however, AEMO routinely publishes this information and in relation to long-notice RERT, this typically occurs towards the end of November.⁴⁷

Arrangements introduced under the *Enhancement to the RERT* rule change

The *Enhancement to the RERT* rule change introduced new reporting obligations on AEMO. These obligations require a clear explanation of the reasons for RERT procurement, to improve the ability of retailers, consumer groups, governments, policy-makers and other interested parties' understanding of the costs of the RERT and what is driving its use. It is anticipated that an improved understanding of RERT will help these parties to make more informed operational and investment decisions, and better budget and plan for RERT related charges. It also allows lessons to be learned from past RERT events.

⁴⁶ Reliability Panel, RERT Guidelines, p. 14.

⁴⁷ In line with these guidelines, AEMO published information about the long notice RERT contracts it has entered into for the 2019-2020 summer in Victoria. The information can be found at : https://www.aemo.com.au/-/media/Files/Electricity/NEM/Emergency_Management/RERT/2019/RERT-Contracted-for-Summer-2019-20.pdf

Arrangements that commenced on 31 October 2019

Several of the changes to the reporting requirements introduced under the *Enhancement to the RERT* rule commenced on 31 October 2019. Under these changes, AEMO is now required to release a RERT report each quarter providing key RERT information. The quarterly reports are to be published within 30 business days of the end of each quarter. The inaugural RERT quarterly report was published in February 2020 and covered Q4 2019.

In relation to the procurement of RERT, AEMO is required to report on the estimated average amount payable under reserve contracts for each region broken down by payment type.⁴⁸

The RERT quarterly report must also include information about any RERT that has been dispatched or activated and must include a detailed explanation of:⁴⁹

- the circumstances giving rise to the need for the dispatch or activation of emergency reserves, including the modelling, forecasts and analysis used by AEMO to determine the need for such dispatch or activation of reserves
- the basis on which it was determined the latest time for that dispatch of scheduled reserves or activation of unscheduled reserves and on what basis AEMO determined that a market response would not have avoided the need for the dispatch of scheduled reserves or the activation of unscheduled reserves
- changes in dispatch outcomes
- processes implemented by AEMO to dispatch the scheduled reserves or activate the unscheduled reserves
- if applicable, the reasons why AEMO did not follow the processes in rule 4.8 of the NER (covering power system security operations)
- if applicable, the basis upon which AEMO determined its approach to setting spot prices and ancillary service prices in accordance with clause 3.9.3(b) of the NER
- the total amount of emergency reserves dispatched or activated (and, if applicable, why such amounts were different to those previously forecast or modelled by AEMO)
- the periods in which emergency reserves were dispatched or activated, and if applicable, why such periods were different to those previously forecast
- impact of the dispatch of scheduled reserves or activation of unscheduled reserves on:
 - the reliability of supply into the market, or
 - where applicable, power system security.

The RERT quarterly report must also include a detailed explanation of:⁵⁰

- AEMO's costs associated with exercising the RERT (including an amount expressed in \$/MWh), including the payments under the reserve contract for the relevant billing periods

48 Clause 3.20.6 (d) of the NER.

49 Clause 3.20.6(e) of the NER.

50 Clause 3.20.6 (f) of the NER.

- a breakdown of the recovery of those costs (including an amount expressed in \$/MWh) from each market customer, as determined by AEMO, in each region.

In addition, under the *Enhancement to the RERT*, if AEMO dispatches or activates emergency reserves, then it must, as soon as practicable, and in any event no later than five business days after, publish on its website a report that includes details of⁵¹:

- the total estimated payment made under reserve contracts
- the total estimated volume (in MWh) of reserves dispatched or activated under reserve contracts for the relevant region.

Arrangements commencing 26 March 2020

From 26 March 2020, AEMO will be required to provide additional information about RERT in its quarterly reports. The additional reporting requirements regarding RERT contracts under clause 3.20.6 (d) of the NER include:

- AEMO's modelling forecast and analysis used to determine whether to enter into reserve contracts and the amount of reserve procured, and if applicable, an explanation for why AEMO procured an amount greater than the identified shortfall
- identifying the periods for which emergency reserves are expected to be required to address the relevant low reserve or lack of reserve condition
- the term of the reserve contract — including the justification for that term with respect to the relevant low reserve or lack of reserve condition
- an explanation for the basis on which AEMO had regard to the RERT principles and, in relation to the principle that the average amount payable for each MWh of emergency reserves should not exceed the estimated average VCR, an explanation for why the RERT costs exceeded the VCR (where relevant).

In relation to RERT that has been dispatched or activated, new obligations under clause 3.20.6(e) of the NER require the RERT quarterly report to include the estimated costs of load shedding (including an amount expressed in \$/MWh) in a region avoided as a result of the dispatch or activation of reserves.

2.2 Other recent changes to the reliability framework

There have been a number of recent changes to the reliability framework in the NEM, including rule changes relating to other aspects of the RERT. The following sections summarise the key recent changes as context for the Victorian Government's derogation proposal.

⁵¹ Clause 3.20.6 of the NER. In circumstances where emergency reserves are dispatched or activated over consecutive days, the reference to five business days in this clause is to be read as "five business days from the final consecutive day in which the reserves were dispatched or activated".

2.2.1 Extension of the RERT

In 2016, the Commission made a final rule called the Extension of the RERT — 2016.⁵² While the RERT was originally designed with an expiry clause, the Commission made it a permanent feature of the reliability framework under this rule.

In making this determination, the Commission noted that ongoing uncertainty raised the possibility that future electricity demand may not be met and that the RERT is more efficient than other intervention mechanisms in the NEM's reliability framework (for example, directions) in managing shortfalls of supply. In making the RERT a permanent feature, the Commission also decided to reduce the timeframe for its exercise (from nine months to ten weeks based on advice from AEMO at the time), in effect removing the long-notice RERT. This was done to minimise the distortionary effects of the RERT on market participants, which can contribute to increased costs to consumers. The final determination noted that removing the long-notice RERT would:

- Give market participants greater time and opportunity to respond to a projected shortfall before AEMO seeks to enter into RERT contracts. A response from market participants is more economically efficient than reserve contracting.
- Minimise the likelihood that, in contracting for emergency reserves, AEMO crowds out potential market-based arrangements (such as retailers seeking to engage with their customers to reduce load through demand response).
- Allow AEMO to utilise new and more up-to-date information to inform both its assessments of capacity adequacy, and its decisions on whether to enter into reserve contracts(s). This can reduce the risk that reserve contracts are unnecessarily entered into and not dispatched, with the associated costs being ultimately borne by customers.

2.2.2 Reinstatement of the long-notice RERT

In June 2018, the Commission made the decision to reinstate the long-notice RERT in response to a rule change request from AEMO.⁵³ The procurement lead time was increased to nine months. The Commission noted that having more resources able to participate in the RERT through a longer procurement lead time may improve the efficiency of the procurement process and may put downward pressure on the direct costs of the RERT.

2.2.3 Enhancement to the RERT

In May 2019, as detailed in previous sections, the Commission made a final rule, the *Enhancement to the RERT*, in response to a rule change request from AEMO.⁵⁴ Of particular relevance to this derogation request, the *Enhancement to the RERT* final rule did not allow multi-year contracting. This decision was made following consideration of the potential costs (both direct and indirect) weighed against the potential benefits.⁵⁵

⁵² AEMC, *Extension of the Reliability and Emergency Reserve Trader*, final determination, 23 June 2016.

⁵³ AEMC, *Reinstatement of the long notice Reliability and Emergency Reserve Trader*, final determination, June 2018.

⁵⁴ See <https://www.aemc.gov.au/sites/default/files/2019-05/Final%20Determination.pdf>

⁵⁵ AEMC, *Enhancement to the Reliability and Emergency Reserve Trader*, rule determination, 2 May 2019, pp. 132-139. In its April 2019 submission to the rule change process, the Victorian Government supported amendments to the NEM to permit multi-year contracting.

2.2.4 The Retailer Reliability Obligation (RRO)

Overview

On 19 December 2018, the Council of Australian Government (COAG) Energy Council agreed to the final draft bill of the NEL amendments which would give effect to the RRO, as presented by the Energy Security Board (ESB). The RRO was developed to help with additional investment in dispatchable generation needed to avoid the risk of supply shortfalls.

The RRO, which commenced on 1 July 2019, builds on existing spot and financial market arrangements in the electricity market to facilitate investment in dispatchable capacity and demand response. It is designed to incentivise retailers, on behalf of their customers, to support the reliability of the power system through their contracting and investment decisions. If the RRO is triggered, retailers will be required to enter into contracts that will have the aim of increasing contracting levels of existing generators as well as unlocking new investment. This will improve liquidity and increase demand response, which will increase in-market reserves and support reliability.

The obligation on retailers to secure sufficient qualifying contracts will be triggered if there is a material gap (defined as a breach of the reliability standard) between forecast demand and supply three years out from the period in which the gap is forecast by AEMO⁵⁶ and the AER has subsequently made a 'T-3 reliability instrument'.⁵⁷

If the AER triggers the RRO, retailers (and other liable entities) will be required to enter into sufficient qualifying contracts to cover their share of a one-in-two year peak demand at the time of the reliability gap. When liable entities submit their contract positions to the AER each contract will be assessed and if necessary, adjusted for 'firmness'. To make sure enough contracts are available to smaller market customers, a Market Liquidity Obligation will require the obligated parties to make contracts available to the market.⁵⁸

Under the RRO, if a gap that was identified three years out still persists one year out, then AEMO may commence procurement of emergency reserves at T-1 (that is, 12 months ahead of the gap) through the RERT framework to address the remaining gap, with costs to be recovered through the Procurer of Last Resort cost recovery mechanism.

The need for consistency between the lead times on the RERT and the RRO was one of the reasons why the Commission increased the procurement lead time for long-notice RERT contracts to 12 months in the *Enhancement to the RERT* rule.

Cost recovery

The cost recovery arrangements for emergency reserves procured under a T-1 instrument will differ from other RERT cost recovery arrangements. Under the RRO, all RERT costs will initially be settled on the basis of existing RERT cost recovery arrangements. A portion of

⁵⁶ AEMO will identify any potential reliability gaps in each NEM region in the coming five years using its ESOO

⁵⁷ When AEMO identifies a material gap three years out, it has to apply to the AER to make a "T-3 reliability instrument". This instrument is then the trigger for the RRO mechanism and obligations, such as requiring retailers to have enough contracts in place.

⁵⁸ Commonwealth of Australia, *Retailer Reliability Obligation Factsheet*, 2019.

RERT costs may subsequently be reallocated under the Procurer of Last Resort (POLR) cost recovery regime. The reallocation will be calculated on an ex-post basis once compliance has been determined by the AER. Once total POLR costs have been determined, these costs will be recovered from under-contracted liable entities, capped at \$100 million per liable entity. A liable entity's share of total POLR costs will be proportionate to the extent of its under-contracting.⁵⁹

Operational commencement of RRO

The 2019 ESOO released in August 2019 was the first report that could be used under the RRO to predict reliability gaps. It stated that while the expected level of USE in Victoria in 2019-2020 is forecast to exceed the reliability standard under some scenarios (for instance, if either of the current outages at the Loy Yang and Mortlake Power Stations were extended over the 2019-20 summer), the 2019-2020 summer does not fall within the timeframes for the RRO to be triggered.⁶⁰ As there are no reliability gaps in the other years covered by the 2019 ESOO, AEMO noted it would not be requesting T-3 reliability instruments in response to the 2019 ESOO.⁶¹ The next opportunity for the RRO to be triggered is the 2020 ESOO. If the 2020 ESOO triggers the RRO then earliest it could be operational is for the 2023-2024 peak summer period⁶².

Triggering of the RRO in South Australia

On 8 January 2020, the South Australian Minister for Energy and Mining triggered RRO in South Australia to apply for the first quarters of 2022 and 2023.⁶³ Under South Australia's declaration, the details of the prescribed periods are:

- each weekday from 10 January 2022 – 18 March 2022 for the trading periods between 3pm and 9pm EST; and
- each weekday from 9 January 2023 – 17 March 2023 for the trading periods between 3pm and 9pm EST.

As of 7 February 2020, South Australian generators Origin, AGL and Engie are required to start performing the Market Liquidity Obligation.⁶⁴

Chapter 4 of this final determination considers the potential implications of the triggering of the RRO in South Australia for this derogation proposal.

⁵⁹ Energy Security Board, *Retailer Reliability Obligation*, Final rules package, 2 May 2018, section 8.

⁶⁰ AEMO, *2019 ESOO*, pp. 73, 77. Without a T-3 reliability instrument for the same period, a T-1 reliability instrument cannot be requested. As this is the first year the RRO is in effect, there are no T-3 reliability instruments in existence. There are also no forecast reliability gaps in the T-1 timeframe (2020-2021).

⁶¹ AEMO, *2019 ESOO*, August 2019, p. 77.

⁶² There are direct interactions in the NEM's reliability framework between the RRO and the RERT. In particular, if a T-1 reliability instrument is made by the AER under the RRO, then AEMO would become the Procurer of Last Resort and could purchase emergency reserves through the RERT mechanism. As noted above, one reason the procurement lead time for long-notice RERT contracts was increased to a maximum of 12 months was to give AEMO the ability to procure emergency reserves for the duration of a T-1 reliability instrument.

⁶³ Under the RRO legislation, the South Australian Minister can currently trigger the obligation in that region 15 months ahead of a forecast shortfall period (instead of the three years that applies in the other regions). Under the RRO a T-1 instrument cannot be issued if the same period has not previously been covered by a T-3 instrument.

⁶⁴ AER, <https://www.aer.gov.au/retail-markets/retailer-reliability-obligation>, accessed 26/02/2020.

2.3 Work underway on the reliability framework

The Commission recognises there are a number of work programs that, once concluded, may be relevant to matters considered in relation to this derogation proposal.

Where a review has not been completed and its recommendations approved by the relevant body, the Commission cannot take into account any of that project's progress and/or preliminary outcomes, given that they are, by definition, uncertain. In making its statutory decision the Commission has regard to the current regulatory frameworks. The information about reviews has been provided for context and background given these are currently underway and not yet concluded.

Key work streams currently underway (and recently completed) are discussed below.

ESB review of the reliability standard

In November 2019, the COAG Energy Council (COAG EC) tasked the ESB to provide advice for it to make a decision in March 2020 on immediate measures to ensure reliability and security of the electricity system. As part of this work, the ESB was requested to undertake an immediate review of the NEM electricity reliability standard to assess whether it is fit for purpose and to also assess its benefits and costs to consumers. The ESB will report to COAG Energy Council with its recommendations by 20 March 2020. The COAG Energy Council has signalled to the ESB that any change to the reliability standard that is approved is to apply for the 2020-2021 summer and beyond for the purposes of the 2020 ESOO, RERT triggering and RRO triggering, and enable AEMO to better capture tail risks.⁶⁵

AEMO rule change request regarding the 'merit order' of reliability interventions

AEMO submitted a rule change request to the AEMC proposing that the requirement for AEMO to exercise RERT before issuing directions or instructions be removed from the NER, and replaced by a principle requiring AEMO to endeavour to minimise the costs and maximise the effectiveness of an intervention in the NEM. This rule change request is currently pending and will be initiated shortly.

AER review of values of customer reliability

The AER has recently completed its review to determine the values different customers place on having a reliable electricity supply, and published a final report on 18 December 2019.

The value of customer reliability (VCR) is relevant to procurement of RERT due to the principle introduced under the *Enhancement to the RERT* rule; that RERT costs at time of procurement should be below VCR and, if they are not, AEMO is required to provide an explanation in the RERT quarterly report.

The VCR plays a pivotal role in network planning and investment and informs the design of market and network price caps and incentives, such as for network reliability.

⁶⁵ COAG Energy Council, *Meeting communique*, 22 November 2019. See also scope of work at <http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/Reliability%20and%20Security%20Measures%20-%20Scope%20of%20work.pdf>.

While there are some differences between the 2014 (developed through a study undertaken by AEMO) and the 2019 VCR values for residential and business customers, in general, VCR values are similar between the two reviews. Consistent with previous studies, the AER observed that business customer VCRs tend to be higher than residential customer VCRs. Residential customers continue to value reliability and have a preference to avoid longer outages, and outages which occur at peak times.⁶⁶

The AER will publish its analysis on VCRs for widespread and long duration outages in the first half of 2020.

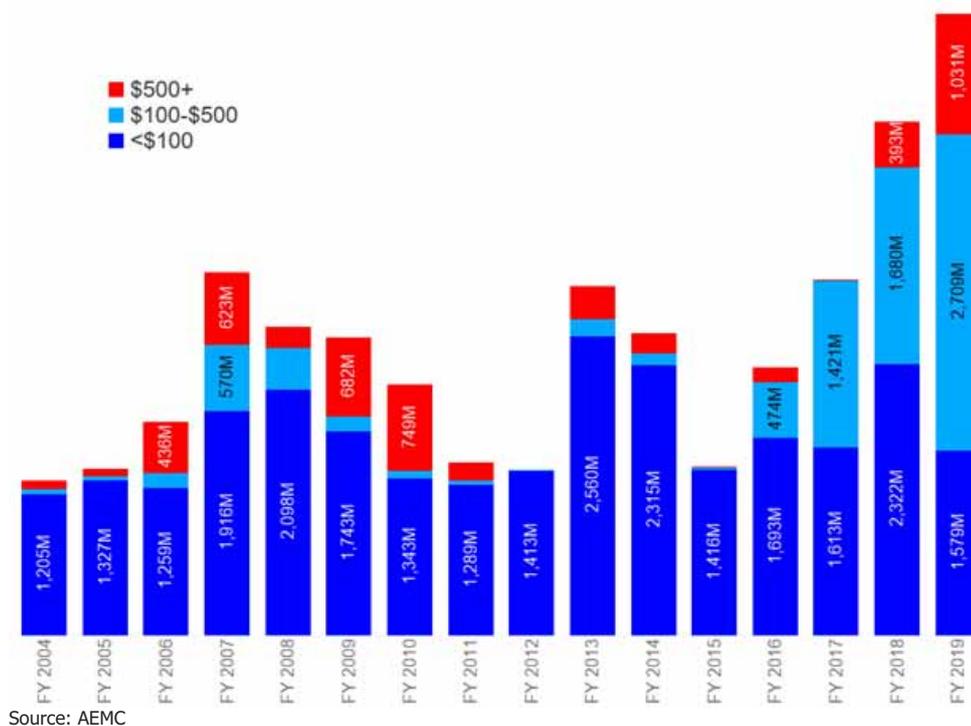
2.4 Investment environment in Victoria

It is also worth considering the current investment environment in Victoria as context for this rule change request.

Based on historical spot market data, it can be seen that there have been strong signals for investment in the Victorian wholesale market for the past several years. For example, the figure below shows that the value of electricity settled in the Victorian wholesale pool during the 2018-2019 financial year was a record high. Over \$1 billion of the total \$5 billion traded related to prices above \$500/MWh, above the prices typically needed to cover the running costs of peaking generators (\$300/MWh). Furthermore, the 2017 and 2018 financial years were also high relative to previous years.

⁶⁶ See factsheet on final report: <https://www.aer.gov.au/system/files/AER%20-%20Values%20of%20Customer%20Reliability%20Review%20-%20Factsheet%20-%20December%202019.pdf>

Figure 2.2: Annual notional value of dispatched energy in Victoria



Source: AEMC

The figure shows that the value of the energy traded in the Victorian wholesale market over the past four years has been high, and is increasing. The last two years recorded the highest values in the past 15 years despite the volume of energy traded being relatively flat or decreasing. This increasing value reflects higher spot prices in the market. In addition, a greater proportion of revenue is coming from periods of medium to high spot prices.

Box 1 presents the Commission's analysis of the financial incentives facing investment in peaking generation in Victoria. Its findings suggest there are strong price signals to invest in the Victorian market. Yet, as noted in Chapter 5, there has been no investment in dispatchable generation in Victoria either over the past few years or slated going forward.⁶⁷

BOX 1: INCENTIVES FOR INVESTMENT IN PEAKING GENERATION IN VICTORIA

The Commission has analysed the potential returns from investing in a hypothetical 200MW open-cycle gas turbine (OCGT) generator in Victoria. This analysis assumed the following about the hypothetical OCGT plant:

⁶⁷ AEMO Generation information page, 14 November update, <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Generation-information>

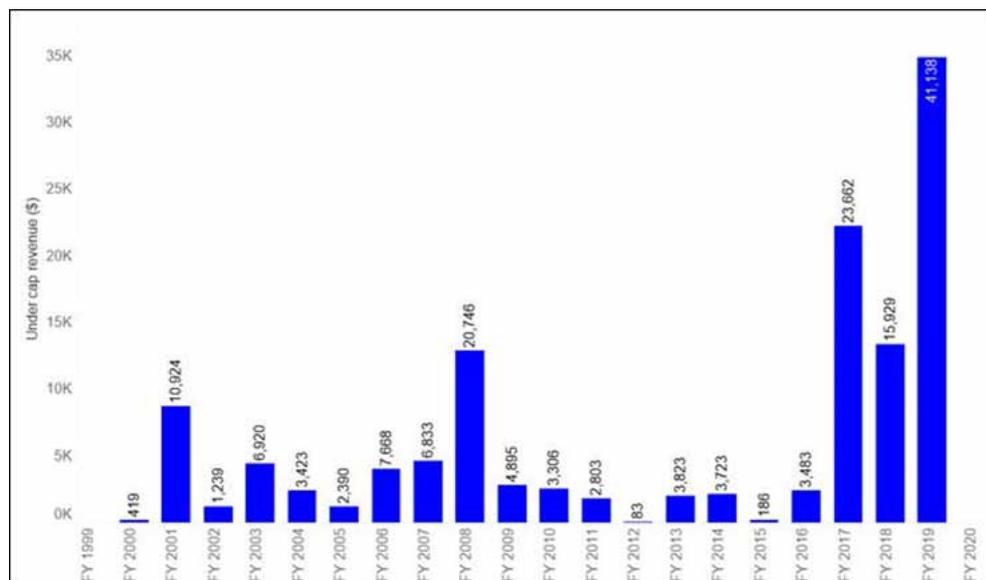
- all its capacity was contracted in the form of selling \$300/MWh cap contracts over the life of the generator
- short-run marginal cost (SRMC) of \$150/MWh (assuming a gas price of \$10/GJ and a heat rate of 15GJ/MWh)
- capital costs of \$1 million per MW
- a (inflation-adjusted) weighted-average cost of capital of 10 per cent p.a.
- an operating life of 20 years
- fixed costs of \$10,000 per MW.

This hypothetical generator is assumed to have two revenue streams (both electricity based; no FCAS or other ancillary service revenues are assumed):

1. The under-cap revenue – this is based on the difference between the cap strike price (\$300/MWh) and the generator’s SRMC (\$150/MWh), and the corresponding dispatch volume.^a This revenue accrues to the generator as, when prices are between SRMC and \$300/MWh, the cap contract is not exercised and the generator therefore gets paid the spot price for each MWh dispatched.
2. The cap revenue – this is a combination of the cap premium (i.e. the price of the cap contract) and \$300/MWh, which is the effective price received by the generator when the spot price exceeds \$300/MWh.^b

The generator’s under-cap revenue is shown in the figure below on a per-MW basis, assuming this generator had been operating in the market since NEM start. The under-cap revenue has increased significantly since 2016, in line with the increase in pool prices and settlement amounts.

Figure 2.3: Under cap revenue of unit size OCGT generator in Victoria



Source: AEMC

Assuming the hypothetical OCGT entered Victoria at the start of the 2019 financial year, the Commission’s analysis combined the under-cap revenue for 2019 with the revenue received from the cap contract being exercised (i.e. when spot prices exceeded \$300/MWh) during 2019. This revenue was then assumed to last for the entire 20-year operating life.

This 20-year revenue was then subtracted from the lifecycle costs of the OCGT plant, leaving the cap premium that the generator would need in order to recover its remaining (fixed and capital) costs. The resulting implied cap premium is \$9.58/MW, well below the Victorian cap prices (observed in June 2019) for the 2020 and 2021 financial years (noting that cap prices for 2020 and 2021 have risen since June 2019).

Figure 2.4: Cap contract prices in Victoria

Region	FY 2019-20	FY 2020-21
Victoria	14.04	11.49

Source: AEMC

This analysis suggests that there is a business case for investment, noting the limitations of some of the assumptions used in the analysis.

Source: AEMC analysis

Note: This analysis was carried out in June 2019, using the information available at the time.

- a) During these periods, the assumption is that the hypothetical OCGT plant generated to its maximum potential output.
- b) When the spot price exceeds \$300/MWh, the cap contract is exercised, and the generator pays the cap counterparty the difference between the spot price and the strike price. This difference payment, when netted against with the payment received by the generator in the spot market, results in the generator effectively receiving the cap strike price (\$300/MWh), for each MWh settled under the cap contract (which as noted above is equal to the volume generated).

This analysis suggests other considerations may be impacting investment decisions in the Victorian market and not resulting in investment. The Commission’s liaison with investors and market participants has highlighted that the following factors may be deterring investment in dispatchable plant:

- Increasing government intervention in the market including in the form of investment, that may increase the risk of asset stranding for prospective new entrants.
- Concern regarding network congestion and constraints.
- Uncertainty on carbon emissions policy is an especially pertinent issue for gas-fired generation which could face stranding risks under deeper decarbonisation targets.
- Technology-induced stranding risks, in particular the risk that batteries may become cheaper than peaking plant (gas-fired or pumped hydro). This is being seen in overseas jurisdictions, in California, four-hour batteries are increasingly replacing gas peaking plant as these plant approach major capital expenditures (associated with extensions of technical life).

This is relevant context for considering the issues discussed in this derogation.

3 FINAL RULE DETERMINATION

This chapter sets out the Commission's final rule determination and the reasons for its decision. It also outlines the rule making test and the Commission's assessment framework.

3.1 The Commission's final rule determination

The Commission's final rule determination is to make a more preferable rule. The more preferable rule provides a time-limited jurisdictional derogation to allow AEMO to enter into multi-year reserve contracts under the RERT mechanism in Victoria.

The final rule has been prepared relative to the *Enhancement to the RERT* final rule because the *Enhancement to the RERT* final rule will be in full effect by the time the final rule commences.

The final rule requires AEMO to ensure that the maximum duration of a multi-year Victorian reserve contract must be no longer than the length of time AEMO considers is reasonably necessary to ensure the reliability of supply in the Victorian region. However, the final rule also makes clear that such contracts must, in any event, not last longer than three years.⁶⁸ This still affords AEMO discretion as to the length of the contract required, but does make it clear that, where reserves are expected to be required for a period of less than three years, then the contract term should be for the lesser period.

The final rule does not specify a different trigger for entering into long notice RERT contracts, meaning the trigger specified under the *Enhancement to the RERT* rule⁶⁹ will also be applicable for multi-year reserve contracts under the derogation. The trigger is therefore, the making of a Low Reserve Condition (LRC) declaration by AEMO for a period within the coming 12 months. This trigger is not required to be met in years two and three of a multi-year contract. The final rule requires AEMO to ensure that the term of the multi-year contract is no longer than AEMO considers is reasonably necessary to ensure reliability of supply in the Victorian region, and in any event, is no longer than three years.

The final rule also seeks to ensure that the amount of RERT procured for the first year of the multi-year contract is no more than reasonably necessary to address the shortfall identified in the LRC declaration. This is consistent with the requirement for long notice RERT contracts under the *Enhancement to the RERT* rule change. For the subsequent years of a multi-year contract, AEMO would need to ensure that the volume is no more than AEMO considers is reasonably necessary to ensure the reliability of supply in the Victorian region.⁷⁰

In relation to both the term and amount of reserve procured, the final rule also requires AEMO have regard to any potential impact of, and interaction with, the RRO prior to entering into a multi-year contract in order to minimise impacts that could arise from an overlap of multi-year contracts with the RRO⁷¹.

68 Final rule clause 9.5.3(c)(1).

69 Clause 3.20.3(f) of the NER post 26 March 2020.

70 Final rule clause 9.5.3(c) (2)

71 Final rule clause 9.5.3(c)

The RERT principles will also guide AEMO's decision-making when entering into multi-year contracting. These principles include to minimise market distortions and impacts on customer bills. In addition, the new principle that will commence with the remaining provisions of the *Enhancement to the RERT* rule on 26 March 2020 will also apply to multi-year contracting. This principle is that, payments made by AEMO under reserve contracts should not exceed the estimated average VCR for the relevant region.

Other aspects of the *Enhancement to the RERT* rule that also apply to multi-year contracting include the additional reporting requirements⁷², the out-of market provisions that make clear that the wholesale market is the primary means by which reliability is delivered, and the improved cost recovery process such that costs associated with emergency reserves are recovered, where possible, from those that were consuming at the time that the emergency reserves were needed.

The final rule includes additional measures for transparency and accountability surrounding the use of multi-year contracting. It requires that as part of the RERT report on reserve contracts, AEMO must:⁷³

- identify reserve contracts that are "multi-year Victorian contracts"
- include an explanation of why AEMO considered the term of each contract to be reasonably necessary to ensure reliability of supply in the Victorian region
- include an explanation of why AEMO considered the amount of reserve procured to be, for the first year, reasonably necessary to address the relevant low reserve condition, and for the remainder of the term, reasonably necessary to ensure the reliability of supply in the Victorian region
- explain how AEMO had regard to any potential impact of, and interaction with, the RRO.
- include the basis on which AEMO took into account the *RERT principles*.
- explain how the total costs of each multi-year contract is likely to be lower than the payments that AEMO would have made under other types of RERT contracts for the same period of time (for example the total costs of a three year contract compared to the total cost of three consecutive single year contracts).

The final rule is the same as the draft rule except for the following additions:

- it includes the requirement for AEMO to have regard to any potential impact of, or interaction with, the RRO
- it requires AEMO to report on how it had regard to the RRO in the RERT quarterly reports
- it requires AEMO to report on how the total costs of a multi-year contract are cheaper than entering into other types RERT contracts covering the same period
- it contains some minor drafting changes to clarify that:
 - any valid multi-year contracts entered into prior to the expiry date of the derogation can continue to apply after the derogation expires. This would include associated

⁷² Other than the requirements at clause 3.20.6(d)(4) and amended requirements at clause 3.20.6(d)(3)

⁷³ Final rule clause 9.5.4.

reporting obligations with respect to those particular contracts extending beyond the expiry date.

- AEMO's overall obligation to ensure reliability of supply when entering into reserve contracts⁷⁴ is subject to the particular requirements relating to multi-year Victorian reserve contracts.

The derogation is set to expire on 30 June 2023 and will have an effective period of approximately three years and three months.⁷⁵

The final rule (other than the transitional provisions) will commence operation on 16 April 2020. This date has been nominated following consultation with AEMO.

The final rule also includes some transitional rules. These are:

- By the effective date (that is, 16 April 2020), AEMO must amend and publish the RERT Procedures to take into account the amending rule with those amendments to take effect from the effective date.
- AEMO is not required to comply with the Rules consultation procedures when amending the Procedures. This is due to the fact that the substance of the proposed changes are being consulted on as part of this rule change process.

Following a review of the Panel's RERT Guidelines, the Commission is of the view that amendments to this document are not necessary to account for multi-year contracting in Victoria. The Guidelines do not cover the term of contracts or contain specific reporting requirements. The elements of the RERT framework that are addressed include the procurement trigger, RERT principles, out-of-market provisions and the contracting process, which would all apply to multi-year contracting in any event.

The Commission's reasons for making this final determination are set out in section 3.4.

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

3.2 Rule making test

3.2.1 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).⁷⁶ This is the decision making framework that the Commission must apply.

The NEO is:⁷⁷

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:

74 cl 3.20.3(a) NER post 26 March 2020

75 Final rule 9.5.2.

76 Section 88 of the NEL.

77 Section 7 of the NEL.

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

To assess the proposed derogation, the Commission has had particular regard to the efficient investment in, and efficient operation and use of electricity services with respect to the price and reliability of supply of electricity, and reliability of the national electricity system as it operates in Victoria because:

- the RERT is one of the intervention mechanisms available to AEMO to manage reliability of the power system in the event that the market is projected to not meet the reliability standard; and
- direct costs of the RERT are passed on to consumers, meaning that the RERT has an impact on prices, while the indirect costs such as market distortions also have implications for reliability and prices.

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

3.2.2 Making a more preferable rule

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

In this instance, the Commission has made a more preferable rule. A summary of the reasons for this decision is provided below. More detailed reasons for making this draft more preferable rule, including detailed analysis of the issues raised and appropriate response to them, are set out in Chapters 4 to 10, as well as the accompanying Appendix A.

3.3 Assessment framework

In assessing the proposed derogation against the NEO the Commission has considered the following principles:

- **Promoting reliability of the power system:** A reliable power system is a crucial part of the energy market and an important aspect of the long-term interest of consumers. The Commission has regard to the potential benefits to reliability brought about by the proposed solution, weighed against the likely costs, including market distortions.
- **Minimising market distortions:** Minimising market distortions is important in order to minimise indirect costs. In assessing the case for regulation in the presence of a market failure, it is necessary to consider the potential distortionary effects of regulation. Efficient outcomes can be best promoted by aligning the commercial incentives on businesses with the interests of consumers. The Commission has regard to the distortionary impact of the proposed solution.
- **Minimising direct costs:** Procurement efficiency is an important aspect of the RERT and helps to minimise direct costs and improves AEMO's ability to manage reliability. The

Commission has assessed the potential costs and benefits in relation to the procurement process.

The assessment framework is consistent with that set out in the consultation paper and draft determination for this rule change process.

3.4 Summary of reasons

The final rule made by the Commission, which is a more preferable rule, is attached to and published with this final rule determination. It is described in section 3.1.

Having regard to the issues raised in the rule change request, and during consultation in response to the consultation paper and the draft determination, the Commission is satisfied that in accordance with s88(1) of the NEL that the final rule will, or is likely to, contribute to the achievement of the NEO. In addition, given that the final rule is a different rule to that proposed by the Victorian Government (i.e. a more preferable rule), the Commission considers, under s91A of the NEL, that the more preferable rule will or is likely to better contribute to the achievement of the NEO than the rule proposed by the Victorian Government for the reasons set out below.

The final Rule is made for the following reasons⁷⁸:

- **Promoting reliability of the power system:**
 - By providing AEMO with the flexibility to enter into multi-year contracts for emergency reserves in Victoria, the final rule broadens the pool of RERT providers, which could increase the reserves available at a cost effective price, in the event emergency reserves are needed in Victoria over multiple years.
 - By providing AEMO with an option for acquiring emergency reserves that could, in certain cases lead to lower overall direct costs for consumers, the final rule could assist AEMO procure the volumes of RERT it needs to minimise load-shedding at a lower cost to consumers.
 - By enabling multi-year contracts to be entered into only where there is an LRC declaration (a breach of the reliability standard) within 12 months, the final rule maintains the ability for the wholesale market to respond to forecast breaches before an intervention is used. (Under the more preferable rule.)
 - By having the derogation in place until such time as the Retailer Reliability Obligation (RRO) can next address reliability issues in Victoria, the final rule could assist AEMO address reliability issues in the interim, should the reliability situation deteriorate and the market fails to respond. This minimises any costs associated with the final rule, and so is preferred compared to the proposal made by the Victorian Government. (Under the more preferable rule.)
- **Minimising direct costs:**
 - By putting constraints around the contract term, by requiring reserve contracts to only have a term and volume as long as necessary to address supply issues, and

⁷⁸ The list below notes where the reason applies to the more preferable rule test under s91 of the NEL

capping the term to three years, the final rule still affords AEMO discretion as to the length of the contract required. However, it does make it clear that, where reserves are expected to be required for a period of less than three years, then the contract term should be for the lesser period. This will reduce the likelihood of unnecessary amounts of RERT from being procured with the costs passed onto consumers. (Under the more preferable rule.)

- As the RERT principles will apply to AEMO's decision-making about whether to enter into multi-year contracts, the final rule will require AEMO to consider when multi-year contracts would be more cost effective than single year contracts.
- By applying the tighter procurement trigger that will come in under the *Enhancement to the RERT* rule change, the final rule will reduce the risk of multi-year contracts being entered into where there are not reliability shortfalls forecast.
- By including additional reporting requirements specific to AEMO's decision-making around entering into multi-year contracts, the final rule ensures there are appropriate levels of transparency and accountability that will promote the minimisation of RERT costs. (Under the more preferable rule.)
- By specifying the requirements are appropriately included in AEMO's procedures, the final rule ensures that the requirements that aim to reduce costs will be appropriately implemented. (Under the more preferable rule.)
- **Minimising market distortions**
 - By applying the RERT principle of minimising market distortions and ensuring AEMO reports on how this principle was factored into AEMO's decision-making about entering into multi-year contracts, the final rule will help to reduce the likelihood AEMO will enter into contracts that have distortionary impacts on the wholesale market. (Under the more preferable rule).
 - By restricting the derogation to a shorter period than requested by the Victorian Government, the final rule reduces the impact that multi-year contracting of RERT would have on the wholesale market. (Under the more preferable rule.)
 - By clarifying that the out-of-market provisions that will be introduced under the *Enhancement to the RERT* rule will apply to multi-year contracts, the more final rule will constrain the potential for perverse impacts arising from multi-year contracting. (Under the more preferable rule.)
 - By requiring AEMO to have regard to any potential impact of, and interaction with, the RRO that a multi-year contract could have prior to entering into such a contract, and requiring AEMO to report on how it had regard to this requirement, the final rule minimises the risk that an overlap between RRO and RERT contracting periods would increase costs of reserves or pull resources (i.e demand response) out of the market. (Under the more preferable rule.)

3.5 Other requirements under the NEL

In applying the rule making test,⁷⁹ the Commission has also had regard to:

- confidential information provided by AEMO
- jurisdictional derogation requirements
- recent reports by AEMO covering reliability issues in Victoria including the 2019 ESOO, the Summer Readiness 2019-20 Plan, the 2019 EAAP and AEMO's Quarter 4 2019 RERT Report from AEMO.

⁷⁹ Set out in s. 88 of the NEL.

4 RELIABILITY ISSUES IN VICTORIA

In assessing whether the proposed derogation will or is likely to contribute to the achievement of the NEO, the Commission has considered the principle of promoting reliability of the power system. This is because a reliable power system is a crucial part of the energy market and an important aspect of the long-term interest of consumers.

In the consultation paper, the Commission set out the Victorian Government's views about the reliability issues facing the jurisdiction and asked for stakeholder feedback.

In the draft determination, the Commission considered feedback from stakeholders, and recent reports from AEMO and the AER, and concluded that there are challenging reliability issues facing Victoria in the short to medium term. The Commission continues to hold this view.

This chapter details the discussion that has occurred during this rule change process regarding the reliability challenges facing Victoria and the need for the proposed derogation. The chapter outlines the:

- Victorian Government's views about the reliability issues in Victoria as outlined in the rule change request
- stakeholder views about the issues in the consultation paper
- recent reports on system reliability published by AEMO
- Commission's draft rule determination assessment
- stakeholder views on the Commission's draft assessment of reliability issues
- Commission's final assessment of these issues.

4.1 The Victorian Government's view

As noted in section 1.2, the Victorian Government raised concerns about the reliability of the power system in Victoria in its derogation proposal. The Victorian Government claimed:

- there is heightened risk of load shedding for the Victorian 2019-20 summer and concerns regarding whether emergency reserves will be available in sufficient volumes to address the risk
- that Victoria is unique in the NEM as it relies on fewer thermal plants than other states
- reliability issues in Victoria will remain over the short to medium term
- that AEMO is restricted in procuring adequate volumes of RERT by the current RERT contracting period.

4.1.1 Heightened risk of load shedding for the Victorian 2019-2020 summer

The Victorian Government stated in its derogation proposal that there has been a "material change in conditions" since the Commission made its final determination on the *Enhancement to the RERT* rule in May 2019.⁸⁰ The derogation proposal cited the new

⁸⁰ The Honourable Lily D'Ambrosio MP, Victorian jurisdictional derogation -- RERT contracting, rule change request, p. 3.

information provided in AEMO's 2019 ESOO, published August 2019, on the reliability outlook for Victoria.⁸¹

Based on the forecasts in the 2019 ESOO, the Victorian Government considered that, if the proposed rule was not made, there would be an "inability to contract sufficient RERT reserve capacity over the peak summer demand period in 2019-20" to avoid widespread load shedding in Victoria.⁸² The Victorian Government stated that "AEMO has indicated that existing intervention measures (such as the utilisation of demand-response RERT) can not address the magnitude of the forecast USE [unserved energy]." ⁸³

The Victorian Government highlighted in its derogation proposal the following 2019 ESOO findings:

- A risk of insufficient supply that could lead to between "125 MW and 560 MW of USE in Victoria during summer 2019-20."⁸⁴
- Victoria breaching the reliability standard in 2019-2020.⁸⁵
- A 30 per cent probability that Loy Yang A would remain out of service and a 60 percent probability that the Mortlake unit would remain out of service until 1 March 2020.⁸⁶
- That, due to the damage resulting from the failures of the thermal generators, and the extensive repairs required, delayed return to service of one or both units is considered likely.⁸⁷

The derogation proposal stated that if no additional supply were to be secured, involuntary load shedding may be experienced in Victoria during extreme weather events, equivalent to between 260,000 and 1.3 million households being without power for four hours.⁸⁸

4.1.2

Victoria's unique reliance on a few thermal plants

The Victorian Government's derogation proposal also stated that: "Victoria is in a unique position in the NEM in that it has a disproportionate dependence on a relatively small number of brown coal generation units, which are becoming increasingly unreliable."⁸⁹ The Government noted that unplanned outages appear to be increasing, and therefore the

81 *ibid*, p. 3.

82 *ibid*, p. 3.

83 *ibid*, p.5. USE is energy that cannot be supplied to customers, resulting in involuntary load shedding (loss of customer supply), as a result of insufficient levels of generation capacity, demand response, or network capability, to meet demand.

84 *ibid*, p. 3. For clarity, the 2019 ESOO identified between 125 MW and 560 MW in Victoria to close the gap to the current reliability standard or reduce the likelihood of exceeding the standard to a 'on-in-10 year event, respectively. AEMO, 2019 ESOO, p. 3.

85 *ibid*, p. 3. For information, AEMO's forecast breach of the reliability standard in Victoria is based on AEMO's assessment of the probability of two major generating units that were then offline having a delayed return to service. AEMO's modelling has assumed that there was a 30% probability that Loy Yang A Unit 2 would remain out of service until 1 March 2020 and a 60% probability that the Mortlake unit would remain out of service until 1 March 2020. Based on these probabilities, the expected USE would be above the reliability standard at 0.0026%. See AEMO, 2019 ESOO, p. 72.

86 The Honourable Lily D'Ambrosio MP, Victorian jurisdictional derogation – RERT contracting, rule change request, p. 4. AEMO also forecast an 18 per cent probability (or roughly one-five-chance) that neither of these generating units would be available over summer 2019-20. In this latter case, expected USE in Victoria would rise to 0.0047 per cent and may be as great as 0.0168 per cent in the worse case scenario. See AEMO, 2019 ESOO, p. 11.

87 *ibid*, p. 4. The derogation proposal stated that "generators on such extended outages are often delayed in their return to service due to new, unforeseen issues with the plant that are revealed during repair and recommissioning, or due to delays as parts need to be ordered, sourced and shipped to Australia"

88 *ibid*, p. 3.

89 *ibid*, pp. 6 -7.

potential impact of unplanned outages of one or more coal-fired generation units on system reliability is greater in Victoria than any other jurisdiction.⁹⁰ The derogation proposal highlighted that:

- Since December 2017, the Loy Lang A and Yallourn power stations have suffered the most outages compared to other gas and coal-fired power stations across the NEM, with 29 and 26 outages respectively.
- Over summer 2018-19, Victoria's coal-fired thermal generators had 16 major outages. The Victorian Government noted that "Victoria's current, but transitioning, reliance on this ageing thermal baseload generation increases the State's exposure to potential capacity shortage during periods of peak summer demand".⁹¹

4.1.3 The duration of reliability problems in Victoria

The derogation proposal stated that Victoria could face reliability problems beyond the 2019-2020 peak summer period into 2020-2021 and 2021-22, even though the 2019 ESOO does not forecast a shortfall for those years comparable to that forecast for 2019-20.⁹² The Victorian Government noted that the ESOO forecasts are 'volatile'. As an example, it highlighted the change between the 2018 ESOO and the 2019 ESOO. The volatility in forecasts, the Victorian Government argued, drastically reduces the time available for the market to respond.⁹³ The upcoming closure of Liddell power station in 2022-2023 is said to represent "the next significant danger period for the Victorian supply reliability beyond the current forecast of shortfall and the coming online of new generation."⁹⁴

The Victorian Government anticipated that supply reliability will be resolved over the longer term by other measures including:

- on market investment in generation and transmission augmentation
- the Retailer Reliability Obligation; and
- the Energy Security Board's post 2025 Market Design for the NEM.⁹⁵

4.1.4 AEMO is restricted in procuring adequate volumes of RERT by the current contracting period

In its proposed derogation, the Victorian Government stated that the RERT is not delivering sufficient reserves to support reliability during the energy transition in Victoria.⁹⁶ According to the Victorian Government, allowing for multi-year contracting of up to three years would help to attract greater volumes of reserve capacity generation.⁹⁷

The Victorian Government stated in its proposed derogation:⁹⁸

⁹⁰ *ibid*, p. 7.

⁹¹ *ibid*, p. 7.

⁹² *ibid*, p. 4.

⁹³ *ibid*, p. 4.

⁹⁴ *ibid*, pp. 4-5.

⁹⁵ *ibid*, p. 8.

⁹⁶ The Honourable Lily D'Ambrosio MP, Victorian jurisdictional derogation – RERT contracting, rule change request, p. 3.

⁹⁷ *ibid*, p. 10.

⁹⁸ *ibid*, p. 6.

- "indications are that maximum market availability for demand-side contracts has been materially reached
- restricting RERT contracts to nine/twelve months is a barrier to participation for those parties who face significant upfront deployment costs (i.e. small-scale generation units); and
- small-scale generation contracts are potentially available, but require greater certainty to be able to cost-effectively recoup their investment within the term of the contract."

In addition, the Victorian Government considered that the current contract duration is preventing additional supply side resources as they need the certainty provided by longer contract duration to recover their investment costs. The derogation proposal further noted that:⁹⁹

[b]ased on preliminary discussions with potential RERT supply side providers, the Department of Environment, Land, Water and Planning (DELWP) is aware that several parties have stated that they are unable to offer in resources below the value of customer reliability within the constraints of a one-year RERT contract. However, these same parties have indicated that they are able to provide substantial new energy generation resources at significantly lower annual cost if multi-year contracts were available.

The Victorian Government also considered that multi-year contracting could diversify the types of RERT reserves held in Victoria. It commented that there is a lack of diversity in RERT contracts in the Victorian region, which are currently dominated by demand-response capacity.¹⁰⁰ The derogation proposal stated that diversity of resource providers is important as not all resources can necessarily be activated for a given shortfall event. This is particularly so for potential demand-side capacity contracted under medium and short-notice RERT.¹⁰¹

Finally, the Victorian Government stated that introducing multi-year RERT contracts would make the RERT a more effective instrument to manage the risk of power disruption to Victorian households and businesses in circumstances like extreme weather events. Specifically, "it allows AEMO greater flexibility to procure a broader base of power supplies for use in emergencies in Victoria".¹⁰²

4.2 Stakeholder submissions in response to the consultation paper

In responding to the consultation paper, stakeholders expressed differing views regarding the reliability of the power system in Victoria. Some stakeholders agreed with the Victorian Government's view that the state faces significant reliability challenges. Others did not consider there to be sufficient evidence to support the Government's conclusions. A number of stakeholders did not express a view on this issue.

⁹⁹ *ibid*, p. 6.

¹⁰⁰ *ibid*, p. 6.

¹⁰¹ *ibid*, p. 6.

¹⁰² *ibid*, p. 10.

The following sections set out key stakeholder feedback to the consultation paper regarding reliability of the power system in Victoria.

4.2.1 **Heightened risk of load shedding during the 2019-2020 summer peak in Victoria**

There were differing responses to the Victorian Government's concern about the heightened risk of load shedding in Victoria for the 2019-2020 summer peak period.

AEMO noted that the 2019 ESOO forecast tightly balanced supply and demand in all NEM regions for the 2019-2020 summer, with Victoria the only region forecast to breach the reliability standard. The risk of load shedding in Victoria in the 2019-20 summer was, according to AEMO, due to the extended outages of two major power stations, Loy Yang A2 and Mortlake 2, which would pose a significant risk of insufficient supply if the outages extended into the summer peak.¹⁰³ Mondo noted in November 2019 "the concerns about supply reliability for the coming [2019-20] summer in Victoria given the improving, but not yet complete, return to service of the Loy Yang A and Mortlake units".¹⁰⁴

The Australian Energy Council (AEC), Alinta Energy, ENGIE, the Energy Users Association of Australia (EUAA), ERM Power and the Queensland Energy Users Network (QEUN) suggested that the 2019 ESOO's forecast of a breach of the reliability standard in Victoria in the 2019-2020 summer was based on a conservative set of assumptions:¹⁰⁵

- Several stakeholders referred to the availability information that AGL and Origin have provided into the MT-PASA and/or announced to the market as strong indications that the current outages at Loy Yang A2 and Mortlake 2 will not extend into the summer period.¹⁰⁶
- AEC noted that the ESOO's forecast of a breach of the reliability standard in Victoria for the 2019-2020 summer was also based on the assumption that AGL Energy would be unable to achieve agreement of the South Australian Government to extend the operation of its Torrens Island A plant through the summer and that the South Australian plant would therefore not be able to support reliability in Victoria.¹⁰⁷
- ERM Power noted that the ESOO USE forecast scenario excluded the availability of nine emergency diesel units in South Australia, which are currently operated by SA Power Networks on behalf of the South Australian Government, and are able to help address reliability issues in Victoria.¹⁰⁸
- Stakeholders, including the AEC, did not consider that there would be a heightened risk of load shedding for the 2019-20 summer due to their understanding that AEMO would procure sufficient amounts of RERT ahead of the peak summer period.¹⁰⁹

¹⁰³ AEMO submission, 21 November 2019, p. 3.

¹⁰⁴ Mondo submission, 26 November 2019, p. 2.

¹⁰⁵ Submissions to the consultation paper: AEC, p.3., Alinta Energy, p. 1., ENGIE, p. 2., the EUAA, p. 5., ERM Power, p. 4., the QEUN, p. 2..

¹⁰⁶ Submissions to the consultation paper: EUAA p. 7., QEUN, p. 2., ERM Power, p.. 3-4..

¹⁰⁷ AEC submission to the consultation paper, 20 November 2019, pp. 3-4.

¹⁰⁸ ERM Power submission to the consultation paper, 21 November 2019, p. 3.

¹⁰⁹ AEC submission to the consultation paper, 20 November 2019, p. 2 and 4.

4.2.2 **Victoria's reliance on fewer thermal plants that are ageing and increasingly unreliable**

In its response to the consultation paper, AEMO agreed with the Victorian Government's assessment that the ageing brown coal generators in Victoria are exacerbating the risks of load shedding in Victoria, particularly the likelihood of coincident events where high temperatures cause unplanned generator outages and higher peak demand, and there is low output of renewable energy generation plant.¹¹⁰ AEMO cited that, in one single heatwave in Victoria that lasted for two days, the amount of electricity supply lost (including involuntary load shedding and those avoided by the RERT dispatch) was approximately equal to 2.5 times the region's annual reliability standard.¹¹¹

The AEC expressed a contrasting view. It disputed the allegation that brown coal generators in Victoria are becoming increasingly unreliable, stating the claim is "unproven" and "due to the natural variation in forced outage rates overtime".¹¹²

4.2.3 **Reliability after the 2019-2020 summer**

AEMO's submission to the consultation paper highlighted the established trend towards much hotter summers. The 2018-2019 summer, for instance, was the hottest on record with January 2019 being the hottest month in Australia to date.¹¹³ With hotter summers and ageing thermal plants causing reliability issues in Victoria, AEMO "only forecasts slight improvements in reliability for peak summer periods" following the 2019-20 summer.¹¹⁴

Mondo considered there to be a reliability issue in Victoria, caused by "the ongoing transition to new generation technologies, unpredictability of operational demand growth, and uncertain policy environment is likely to create medium term risks that may mute efficient market-based investment in new supply. Ultimately, it will be Victorian electricity consumers who are exposed to the risk of non-supply."¹¹⁵

Other stakeholders felt that the Victorian Government's reliability concerns were based on input assumptions that were too conservative. According to the EUAA, this was because "the Victorian Government (and perhaps AEMO) have more incentive to minimise disruptions to the power system than to minimise costs associated with that activity."¹¹⁶ This view was echoed by ERM Power who stated the forecasts: embody an overly-pessimistic view of generator outages; under-forecast demand response; and scale up historical demand levels to the 10 per cent demand forecast despite the fact this demand level has never been exceeded in Victoria. According to ERM Power, this is because while customers experience load shedding on a rotational basis, AEMO will experience it as a single event and "the system operator would be affected to a greater extent than each consumer would".¹¹⁷

110 AEMO submission to the consultation paper, 21 November 2019, p. 3.

111 AEMO submission to the consultation paper, 21 November 2019, p. 3.

112 AEC submission to the consultation paper, 20 November 2019, p. 3.

113 AEMO submission to the consultation paper, p. 4.

114 *ibid*, p. 4.

115 Mondo submission to the consultation paper, 26 November 2019, p. 2.

116 EUAA submission to the consultation paper, 21 November 2019, pp. 5-6.

117 ERM Power submission to the consultation paper, 21 November 2019, p. 3.

ERM Power and EUAA further noted that forecasts can be volatile and inaccurate with forecast shortfalls often not eventuating.¹¹⁸ The AEC expressed the view that the reliability framework assumes that the reliability standard is a "target met as an average over time." Further the AEC stated that there will be occasional years in which the reliability standard will be moderately exceeded and that is not a "fundamental concern"¹¹⁹.

4.2.4 The duration of reliability issues in Victoria

Stakeholders had differing views on the length of time that Victoria will experience reliability issues.

AEMO suggested that reliability in Victoria will continue to be uncertain until new transmission, dispatchable supply and demand resources become available. Furthermore, AEMO stated that "tail risk" in Victoria will continue to be an issue until such time that the RRO is embedded, and the reliability standard is reviewed.¹²⁰

In contrast, the AEC, ERM Power and ENGIE argued that the only time the reliability standard is forecast to be breached in Victoria is the 2019-2020 summer. While these stakeholders questioned the validity of the ESOO's forecast reliability standard breach, they pointed to this as evidence that Victoria will not have reliability issues beyond March 2020.¹²¹

In addition, ERM Power disputed the Victorian Government's view that the closure of the Liddell Power station after the 2022-2023 summer period would negatively impact on reliability in Victoria. ERM Power noted that while this was included in the ESOO, the ESOO did not forecast a breach of the reliability standard in Victoria following Liddell's retirement.¹²²

AEC and ERM Power argued that there is a reduced probability of future supply shortfalls given the amount of new generation expected to be built in Victoria with the AEC stating that "more than 2GW of committed generation preparing to connect, with a further almost 9GW proposed".¹²³ ERM Power stated that "[g]eneration facilities like the Stockyard Hill and Moorabool wind farms are due to come online over the next 12 months with more to follow".¹²⁴

While several stakeholders expressed concern about the permanent introduction of multi year contracting in Victoria, some commented that it would be acceptable as a short term measure in order to help address the reliability issues in the state. EUAA and ERM Power considered that it is not a "short term derogation" as it would be in place several years after closure of Liddell and the commencement of the RRO.

118 Submissions to the consultation paper: EUAA, p. 8; ERM Power, p. 4.

119 AEC submission to the consultation paper, 20 November 2019, p. 3

120 AEMO submission to the consultation paper, 21 November 2019 pp. 4 and 5. In the 2019 ESOO, AEMO characterised the term 'tail risk' in this way: "AEMO observes greater risks of load shedding due to uncontrollable, but increasingly likely, high impact ('tail risk') events such as coincident unplanned outages" p. 3.

121 Submissions to the consultation paper: AEC, pp. 1-2; ERM Power, p. 4; ENGIE, p. 2.

122 ERM Power submission to the consultation paper, p. 4.

123 AEC submission to the consultation paper, p. 2.

124 ERM Power submission to the consultation paper, p. 4.

Several stakeholders noted that the Retailer Reliability Obligation (RRO) is likely to address reliability issues and so the derogation duration should be reduced to take this into account.¹²⁵ The AEC noted that if the 2020 ESOO triggers the RRO then it will be able to address reliability issues from the 2023-2024 summer. Therefore, the derogation should end in June 2023 (running for three years rather than five).¹²⁶

AGL and ERM Power noted that the commencement of the proposed wholesale demand response mechanism in June 2022 would also help to address reliability issues.¹²⁷

4.2.5

Inadequacy of the current long notice RERT contract duration

Several stakeholders responded to the Victorian Government's concern that AEMO would be unable to procure sufficient RERT volumes to address the state's 2019-20 summer supply shortfall. For instance, AEC, QEUN, ENGIE and Alinta Energy did not agree that AEMO would be unable to procure sufficient RERT volumes for the 2019-20 summer, on the basis of past procurement volumes and the absence of supporting evidence.¹²⁸ AEMO confirmed in its submission to the consultation paper that it had procured "the RERT it needs" in preparation for the 2019-20 summer period.¹²⁹

For future summer peak periods, AEMO considered that, "in view of the ongoing tail-risk in Victoria", multi-year contracting offers benefits of reduced risks and costs, and greater competition and reserve diversity.¹³⁰ Specifically, AEMO stated that the current RERT contracting period prevents small-scale generation from offering in as this generation requires greater investor certainty to recover costs over the contract period.¹³¹

Enel X, a demand response provider, considered that the absence of multi-year RERT contracts has led to a significant level of untapped latent demand response"¹³² AEMO stated the flexibility afforded by multi-year contracts may be particularly useful should the current ESB review of the reliability standard lead to a revised reliability standard, and breaches of the standard being forecast more often and for multiple successive years.¹³³

Several stakeholders did not consider that AEMO's ability to effectively manage reliability in Victoria is impeded by the current duration of long notice RERT contracts. The EUAA disputed the Victorian Government's claim that a change is needed to stimulate supply-side reserves as "maximum market availability for demand-side contracts has been materially reached". The AEC and Snowy Hydro noted that AEMO has other options available to it to under the reliability framework to manage reliability issues. These include, short and medium

¹²⁵ Submissions to the consultation paper: AEC, p. 4., ERM Power, p. 4., AGL, p. 2., AER, p. 2. and ENGIE, p.2.

¹²⁶ AEC submission to the consultation paper, p. 4.

¹²⁷ Submissions to the consultation paper: AGL, p. 2; ERM Power, pp. 4-5.

¹²⁸ Submissions to the consultation paper: AEC, p. 2; QEUN, p. 2, ENGIE, p. 2. and Alinta Energy, p. 1.

¹²⁹ AEMO submission to the consultation paper, p. 4.

¹³⁰ AEMO submission to the consultation paper, pp. 4 -5.

¹³¹ *ibid*, pp. 4-5.

¹³² Enel X submission to the consultation paper, p. 2.

¹³³ *ibid*, pp. 5-6. AEMO noted that "the current approach does not provide it with enough flexibility as the procurement decision is linked to the reliability standard" and the "current average metric is not an appropriate measure, as the average USE metrics conveys no information about the extent of tail risks".

notice RERT, directions, information to the market, market incentives and settings.¹³⁴ ENGIE noted that with a tight supply-demand balance there should be a high chance of price cap events and should the market not respond, other potential tools could be utilised such as triggering the RRO or building of capacity supported by the Commonwealth Government's Underwriting New Generation Investment (UNGI) program.¹³⁵

The AEC and ERM Power also pointed to the Commission's (then) draft MT-PASA rule to increase the length of the forecast to three years, which if made would provide information to the market on a more granular basis and enable issues to be identified and resolved by the market more quickly."¹³⁶

4.2.6 Potential for multi-year contracting to provide AEMO with more flexibility to manage reliability issues in Victoria

An argument advanced by several stakeholders is that a larger, more diverse pool of long notice RERT bids would give AEMO more flexibility to cost-effectively manage reliability in Victoria. AEMO suggested that additional reserve resources, such as small-scale generation, could become available under multi-year contracts.¹³⁷ AGL also stated that "[m]ulti-year contracting would likely entice greater levels of participation in the RERT".¹³⁸ Similarly, Origin noted the additional certainty for capacity providers could potentially increase the pool of RERT providers available to AEMO through greater diversification.¹³⁹

In addition to the potential for multi-year contracting to attract more supply side providers, AEMO agreed with the Victorian Government that multi-year contracting is also likely to facilitate the development of further demand response options.¹⁴⁰ Enel X agreed with this view and noted that the funding certainty from the joint AEMO/Australian Renewable Energy Agency (ARENA) demand response trial, which is a three-year program¹⁴¹ allowed it to "offer very competitive bids" into RERT: "as a result, we were able to build a portfolio of 30 MW in Victoria and 20 MW in NSW".¹⁴²

4.3 Draft rule determination assessment

In its draft determination, the Commission noted that, if made, the proposed derogation would not be in place for the 2019-2020 summer peak period, given that the final determination is not scheduled to be published until March 2020. As such for the purposes of

134 Submissions to the consultation paper: AEC, p. 2; Snowy Hydro, p. 4.

135 ENGIE submission to the consultation paper, p. 2.

136 Submissions to the consultation paper: AEC, p. 3; ERM Power, p. 3. The final determination on the MT PASA rule was published on 20 February 2020, it provides for a more preferable final rule that improves the transparency of the MT PASA process, reduces asymmetry of generation availability information in the market, and extends the period generation availability is published from two to three years. These changes will better inform the market at a granular level on projected assessments of reliability and generation availability, and will likely result in participants making more effective and efficient decisions in how they interact with the market.

137 AEMO submission to the consultation paper, pp. 4-5.

138 AGL submission to the consultation paper, p. 2.

139 Origin submission to the consultation paper, p. 1.

140 AEMO submission to the consultation paper, p. 4.

141 The ARENA demand response trial that provides subsidies to support the development of demand response and enables participants to provide RERT services. The three-year trial ends November 2020.

142 Enel X submission to the consultation paper, p. 2.

the draft determination, the Commission was primarily interested in understanding the reliability issues facing Victoria for the short to medium-term period after the 2019-2020 summer.

Where findings and observations regarding the 2019-2020 summer reliability outlook are relevant to future reliability issues, they are raised in the following sections of this chapter.

This section presents the Commission's analysis of:

- recent AEMO reports on power system reliability in Victoria
- Victoria's challenging set of reliability issues for the coming years that the RRO cannot address
- AEMO's needs for flexibility to manage the reliability issues in Victoria

4.3.1 **Recent AEMO reports on power system reliability in Victoria**

After the Commission published its consultation paper for this rule change request, AEMO published its Summer 2019-20 Readiness Plan (the Summer Readiness Plan) and the 2019 Energy Adequacy Assessment Project (EAAP).

Risks for reliability in the 2019-2020 summer

The Summer Readiness Plan noted that the following risks in relation to reliability for the 2019-2020 summer in Victoria¹⁴³:

- The Bureau of Meteorology (BoM) iforecast an increased risk of bushfires, with drier conditions, extreme temperatures, and an earlier start to the bushfire season resulting in an extended fire season. Bushfires can directly impact generators and transmission networks.
- The BoM predicted warmer than average temperatures, with an increased risk of early season extreme heat resulting in short but sharp heatwaves in southern Australia. Extreme temperatures and extended heatwaves elevate the risk of extreme peak demands on the network and can limit generator capacity or lead to equipment failures.
- The electricity peak in each region was forecast to be similar to historical levels.
- Extreme conditions can impact the adequacy and availability of generation and network resources when they are needed for the power system to meet demand.
- The risk of USE in Victoria would be more acute if there is any delay in the planned return to service of Loy Yang A (Unit 2) and Mortlake Power Station (Unit 2).

RERT resources

In terms of the RERT, AEMO advised in the readiness plan that, in consultation with governments, AEMO had identified additional reserves under the RERT for the 2019-20 summer. Short or medium notice RERT reserves had been identified across most NEM regions as a precautionary measure under AEMO's panel agreements. (Reserve contracts for those resources are only formed when it is considered likely they will be needed.) Long notice RERT

¹⁴³ AEMO, Summer 2019-20 Readiness Plan, 4 December 2019, pp. 3-4.

had only been sought in Victoria as a result of the forecast potential for the reliability standard not to be met.

AEMO had available:¹⁴⁴

- Reserves from the third year of the three-year joint AEMO/ARENA demand side participation trial. Under this trial, 149 MW of reserves are currently available, of which 64 MW can support reliability in Victoria.
- 61 MW of off-market reserves using long notice RERT contracts, bringing the total to 125 MW.
- Based on previous experience, the nature of the resources, and RERT offer block sizes, an additional 11 MW had been secured to cover the risk of some contracted resources not being available when required (a total of 72 MW). This brought the contracted RERT for Victoria to 136 MW.

AEMO had also received expressions of interest in more than 1,000 MW of short and medium-notice RERT panel agreements in Victoria and South Australia, which would be available to cover risks associated with extreme system scenarios.¹⁴⁵ This was a significant component of the total 1,500 MW of emergency reserves across the NEM for which it has received expressions of interest. In addition, AEMO noted that negotiations for short and medium-notice RERT were continuing, and the final amounts accessible under panel agreements would be published by AEMO in accordance with the RERT Guidelines.¹⁴⁶

On 4 December 2019, AEMO stated that:¹⁴⁷

It is pleasing to see the level of interest from RERT providers, as this initiative enables AEMO to have sufficient resources to manage possible high-risk scenarios that can occur in summer, such as extreme or extended heatwaves, bushfires and unplanned generation or transmission outages.

In order to provide an indicative cost comparison for RERT in 2019-2020, AEMO had calculated the cost of using the assumed 2019-2020 RERT portfolio for the same conditions that occurred on 24 and 25 January 2019. AEMO estimated this cost to be approximately \$40.4 million, which would cover the quantity of RERT required to meet all demand in the same conditions (that is, avoiding the 538 MW of load shedding that actually occurred). After adding in availability payments of \$3.9 million under long notice RERT contracts for 2019-2020, the total RERT cost was estimated to be around \$44 million for the period 1 November

144 AEMO, *Summer 2019-20 Readiness Plan*, 4 December 2019, pp. 12, 14, 15. Compared to RERT procurement for last summer, AEMO anticipates that they will have more emergency reserves under panel arrangements, with slightly more long notice RERT and similar amounts under the ARENA demand side participation trial arrangements.

145 AEMO, *Summer 2019-20 Readiness Plan*, 4 December 2019, p. 14.

146 Reliability Panel, *Reliability and Emergency Reserve Trader Guidelines, Final guidelines*, July 2019.

147 AEMO, *AEMO releases energy summer readiness report*, Media Release, 4 December 2019, accessed 3/12/2019 at <https://energylive.aemo.com.au/News/Summer-readiness-report>. Relatedly, as at 21 November 2019 AEMO considered that it had procured the RERT it needed in preparation for the 2019-20 summer period." AEMO submission to the consultation paper, p. 4.

2019 to 31 March 2020.¹⁴⁸ AEMO noted that it would continue to assess expected unserved energy against the reliability standard up to and during the summer:

- Assumed available generation capacity would be based on the latest available advice from participants, including information sourced from PASA across all time horizons and the Generator Energy Limitation Framework survey (GELF).
- AEMO would monitor the return to service of the units of Loy Yang A (Unit 2) and Mortlake Power Station (Unit 2) that are currently on long-term outages.
- If at any time the review process indicates additional reserves are required to meet the reliability standard under forecast conditions, beyond the RERT already secured, AEMO would consider seeking more reserves, as appropriate, relative to the timing and quantity of the projected reserve shortfall.

The Energy Adequacy Assessment Projection

AEMO's Energy Adequacy Assessment Projection (EAAP) report provides information on the impact of potential energy constraints, such as water storages during drought conditions or constraints on fuel supply for thermal generation, on supply adequacy in the NEM.¹⁴⁹

In the 2019 EAAP, AEMO stated that there remains a risk of USE in Victoria particularly under peak demand conditions for 2019-2020. However, based on the EAAP's methodology, assumptions, and inputs, the expected USE is below the reliability standard in all rainfall scenarios. Due to use of slightly different input assumptions, the EAAP forecast of USE was below the forecast in the 2019 ESOO, and current MT-PASA forecasts.¹⁵⁰

For the 2020-2021 summer period, the 2019 EAAP found that USE declines slightly in Victoria under all rainfall scenarios as a result of more variable renewable energy generation and some relatively small batteries coming online.¹⁵¹

In addition, the Commission noted that the EAAP factors unplanned generator outages into its forecasts differently to the ESOO. AEMO noted in the EAAP that generating units returning to service can, on occasion, require an extended re-commissioning process to ensure sufficient levels of control, stability and reliability are established. If the units returning to service after an extended outage require repeated commitments and de-commitment to establish such control and reliability, or even further periods offline for any length of time during summer, this situation could materially increase the risk of USE.¹⁵²

148 AEMO, Summer 2019-20 Readiness Plan, 4 December 2019, p. 15. Note that the report does not contain an estimate of costs for the Victoria region.

149 The EAAP forecasts electricity supply reliability in the NEM over a two-year outlook period. The EAAP complements AEMO's other reliability assessments such as the MT-PASA and the ESOO, with a primary focus on energy constraints on reliability in the next two years. These include water availability for hydro generation and cooling water for thermal generation and constraints on fuel supply for thermal generators.

150 AEMO, 2019 EAAP, November 2019, pp. 3 and 9. Unlike the 2019 ESOO, the 2019 EAAP did not consider the risk of delays to return to service of the Loy Yang A and Mortlake units and assumed that all eight of Torrens Island units would be made available for the 2019-20 summer.

151 AEMO, 2019 EAAP, November 2019, p. 9.

152 AEMO, 2019 EAAP, November 2019, pp. 14-15.

4.3.2

Victoria faces a challenging set of reliability pressures for the coming years that the RRO cannot address

The Commission assessed stakeholder feedback and a range of data and information in its draft determination, and concluded there were challenging reliability pressures facing Victoria in the short to medium term. This section outlines the Commission's considerations in the draft determination regarding reliability in Victoria over the short-medium term.

In a range of reports, AEMO concluded that a key risk in relation to (generation) reliability in the NEM is the increased likelihood of the occurrence of coincident events over peak summer periods. The key coincident events include unplanned generator outages, high demand and low renewable generation. For example, AEMO noted in its 2019-2020 summer readiness plan that "the risk of supply interruption is primarily driven by increased vulnerability to climatic events such as extended periods of high temperature, corresponding with low wind and solar availability and unplanned generation outages".¹⁵³

As noted by AEMO, the January 2019 Victorian load shedding event demonstrated that this particular combination of events can have significant consequences for Victorian residents, especially when they can result in load shedding events that are widespread and occur on consecutive days.¹⁵⁴

Tightening of the supply and demand balance in Victoria

The Commission noted the AER's assessment that Victoria has a tight supply-demand balance.¹⁵⁵ It also noted AEMO's view that this makes Victoria particularly vulnerable to uncontrollable, high impact events.¹⁵⁶

The AER recently presented data on the supply-demand balance in each region of the NEM. The data and analysis presented by the AER indicates that the exit of thermal plant has led to a tightening in the peak demand-supply balance since 2012 in all NEM regions, with excess capacity halving in this time (Figure 4.1).¹⁵⁷

Relevantly, excess capacity has declined the most in Victoria in percentage terms (a 71 per cent decline, or 1.3 GW) and NSW (56 per cent decline, or 1.7 GW). These declines have occurred despite the significant amount of new variable renewable generation that entered the NEM between July 2012 and June 2019. The AER noted that this partly reflects the fact that much of this extra capacity is variable generation, which may not necessarily generate output at times of peak demand.¹⁵⁸

¹⁵³ AEMO, Summer readiness 2019-20 plan, page 16. See also AEMO, 2019 ES00, pp. 3, 7.

¹⁵⁴ AEMO submission to the consultation paper, pages 3-4.

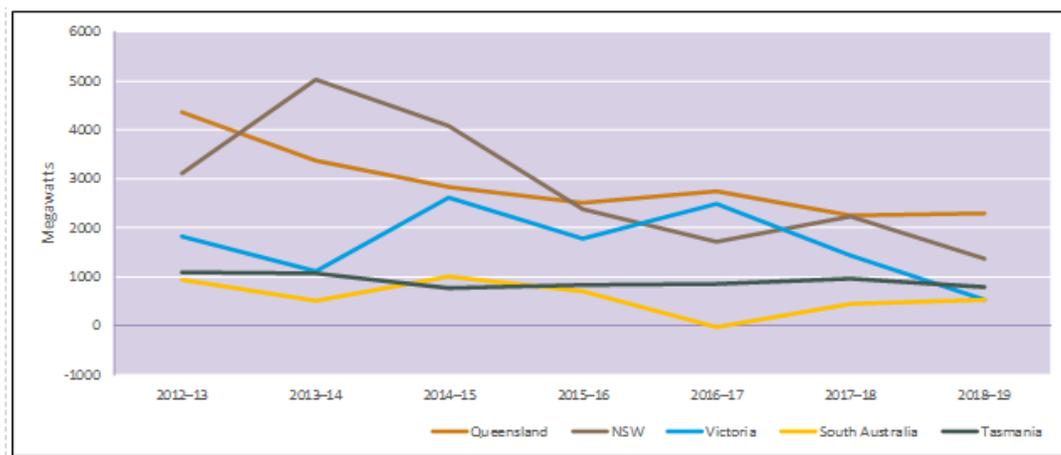
¹⁵⁵ AER, *State of the Energy Market 2018*, p. 103

¹⁵⁶ AEMO, ES00, p.103.

¹⁵⁷ AER, *State of the Energy Market 2018*, p. 103. For each region and for each financial year, excess capacity is defined as maximum demand minus summer capacity (nameplate capacity for non-scheduled plant) as at 31 January of that financial year. In Figure 4.1, Victorian summer capacity for 2016-2017 includes Hazelwood, with closure of that plant reflected in 2017-2018 data. Wind and solar summer capacity is de-rated based on AEMO's 'firm contribution' estimates to account for generation likely to be operational during periods of maximum demand.

¹⁵⁸ Wind and solar is derated, as explained in the previous footnote.

Figure 4.1: Excess generation capacity in each NEM region



Source: AER *State of the energy market, 2018*, Figure 2.22, p. 103.

As indicated by the figure, since 2012-2013, there has been a more significant decline in Victoria's excess capacity since 2016-2017 compared to other regions. This was chiefly due to:

- the exit of Hazelwood power station (a 1,600MW brown coal generator)
- a lack of entry of new dispatchable plant such as gas-fired generation, compared for instance to South Australia.

On the supply side, AEMO noted that across the NEM "[t]here is a substantial pipeline of future projects not yet committed but in various stages of development, from publicly announced to advanced stages of planning."¹⁵⁹ However, in terms of generation type, the EAAP did not identify any new dispatchable generation projects entering Victoria in the coming two years.¹⁶⁰ AEMO's ESOO also indicated that no new dispatchable generators and comparatively little storage is currently expected in Victoria beyond those already committed.¹⁶¹

In addressing the impacts of the supply-demand balance in Victoria, AEMO stated that:¹⁶²

Compared to last year's ESOO forecast, and based on improved model representation of input uncertainties, AEMO observes greater risks of load shedding due to uncontrollable, but increasingly likely, high impact ('tail risk') events such as coincident unplanned outages of aging generation assets, higher peak demand due to more extreme weather events, and uncertain output of renewable energy generation plant.

¹⁵⁹ AEMO, 2019 ESOO, p. 70.

¹⁶⁰ AEMO, 2019 EAAP, Appendix, committed and Com* projects.

¹⁶¹ See Figure 28, AEMO, 2019 ESOO, p. 70.

¹⁶² AEMO submission to the consultation paper, p. 3.

Further, regarding the two to five-year time horizon AEMO considered that:¹⁶³

The new renewable generation coming online makes only a small improvement to the reliability outlook. Victoria, in particular, remains vulnerable to uncontrollable, high impact events such as prolonged or coincident generator outages, as experienced last summer and again in winter 2019.

The risks associated with Victoria's reliance on an aging fleet of brown coal generators

The Commission considered the argument made by the Victorian Government (in its derogation proposal) that significant reliability risks arise in Victoria as the region's dispatchable resources consists largely of an aging fleet of brown coal generators. The Victorian Government considered that these generators are likely to become increasingly unreliable over time.

AEMO has recently analysed the performance of the Victoria's fleet of brown coal generators. The 2019 EAAP stated:¹⁶⁴

In recent years, the average availability factor of the Victorian brown coal fleet has been in decline, with analysis of the last three years of performance showing an 8% reduction in availability when compared to the same period in 2016-17, even after adjusting outage of Loy Yang A2. If the extended outage of Loy Yang A2 was also included in this assessment, availability year to date would be at 78% which is an 18% reduction compared to 2016-17.

163 AEMO, 2019 ESOO, p.103.

164 AEMO, 2019 EAAP, November 2019, p. 15

Figure 4.2: Availability of the current Victorian brown coal fleet

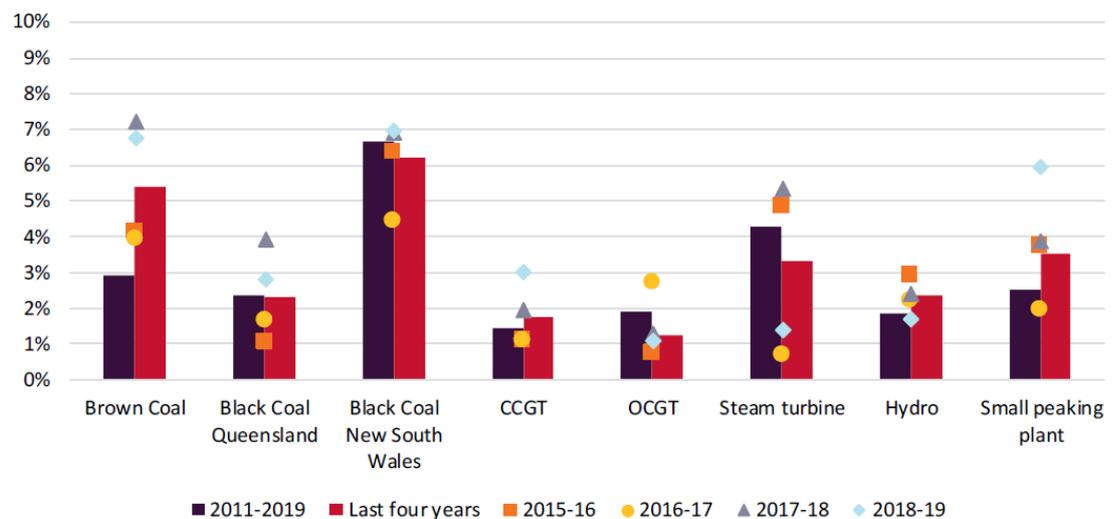


AEMO, Energy Adequacy Assessment Projection, November 2019, page 15.

Note: Applies from 1 July to 18 November, FY16 to date. Current Victorian brown coal fleet refers to Loy Yang A, Loy Yang B and Yallourn power stations. Analysis based on market availability.

In the 2019 ES00, AEMO compared the performance of the Victorian brown coal generators to other generators across the NEM, summarised in figure 4.3.¹⁶⁵

Figure 4.3: Historical full forced outage rates comparison



Source: AEMO, Electricity Statement of Opportunities (ES00), August 2019, page 68.

¹⁶⁵ AEMO, 2019 ES00, Figure 26 Historical full forced outage comparison, p. 68

AEMO concluded that:¹⁶⁶

The reliability of some dispatchable generating plant, particularly in Victoria, has continued to remain at lower levels compared to long-term averages, reflecting the aging of the generation fleet.

More specifically:¹⁶⁷

The biggest discrepancy between the long-term outage rates and performance in recent years is for brown coal, where recent forced outage rates sit well above the long-term average. There is approximately a 2.5% increase in the full forced outage rate of brown coal using the last four years' average compared to the nine-year average. The last two years have had the highest rates recorded, and all of the last four years' rates have been above the long-term average. The outage rates calculated do not include a number of major outages which were not designated as unplanned forced outages, and the rates do not include the impact of current major generation outages such as the outage at Loy Yang A Power Station.

The Commission recognised that a particular concern in relation to power system reliability is where outages are unplanned. These are harder to forecast and, as AEMO has highlighted in the ESOO, tend to be caused by extreme high temperatures (which given the increased demand arising in this time, is when the resources are needed).¹⁶⁸

Growing variable generation and no new investment in dispatchable generation

In the draft determination, the Commission acknowledged that new investment in more variable generation, as noted by AEC and ERM Power, will help support reliability in Victoria. However, by definition, variable generation depends on the weather conditions at a particular point in time and so cannot be relied on to be generating in peak demand periods.¹⁶⁹

AEMO has observed that solar and wind generation tends to be low during the periods of high demand when USE events tend to occur. AEMO has stated that "the risk of load shedding in Victoria is higher during periods of low wind and solar production".¹⁷⁰ AEMO further noted that "[i]n periods of USE, wind is operating (on average) at approximately 16% of its installed capacity, and large-scale solar at 30%".¹⁷¹ Specifically, wind typically drops during heatwaves and solar PV becomes increasingly less efficient as temperatures rise. This

166 AEMO, 2019 ESOO, p. 65.

167 *ibid* p. 67.

168 This was supported by AEMO's submission to the consultation paper, p. 3. AEMO's 2019 ESOO assumed lower full and partial forced outage rates for the Victorian brown coal fleet than for the NSW black coal fleet (see Table 12 of 2019 ESOO). However, Victoria has a tighter aggregate demand-supply balance than NSW (about 850 MW, or 9% of Victorian peak demand; see Figure 4.1). This implied that the consequence for reliability of a forced outage to Victorian brown coal plant is greater than a forced outage of NSW black coal plant, despite the probability of a forced outage of NSW black coal plant being higher.

169 Rai and Nunn (2020), corroborate this finding for South Australia, where a persistent negative correlation exists between wind output and operational (i.e. grid-sourced) demand. For more details, see Rai, A., and Nunn, O, 2020, Is there a value for "dispatchability" in the NEM? Yes, *The Electricity Journal*, <https://doi.org/10.1016/j.tej.2020.106712>

170 AEMO, 2019 ESOO, p. 76.

171 *ibid*.

occurred in January 2019 in Victoria, when the RERT across consecutive days and involuntary load shedding.¹⁷²

Given this, the Commission considered that one reason for the tight demand and supply balance in Victoria is not only the exit of large thermal generators but also the lack of entry of new dispatchable generation that can help to maintain reliability during peak periods. As reported by AEMO at November 2019, while there were over 2,200 MW of large-scale wind and solar projects slated for full commercial use by July 2021 in Victoria, there was only one 20 MW large scale battery project reported for full commercial use over the same period (a battery storage facility co-located with Bulgana wind farm.¹⁷³ No new dispatchable plant is expected to enter Victoria in 2020 or beyond.¹⁷⁴

Breaches of the reliability standard

As at November 2019, AEMO's forecasts were not showing a breach of the reliability standard beyond the 2019-2020 peak summer period. However, the Commission noted in the draft determination AEMO's assessment, in the ES00, that Victoria is more likely than other states to breach the standard up until 2023-2024.¹⁷⁵

As noted by AEMO the vulnerability of a power system to high temperatures is a key driver of probability of reliability standard exceedence.¹⁷⁶ According to AEMO, the effect of potential heatwaves and high temperatures is likely to make USE probability distributions more 'fat tailed' (or, in AEMO's phrasing, increased 'tail risk'), as heatwave-induced extreme load shedding becomes more probable.

AEMO's 2019 ES00 discussed how Victoria's USE probability distribution for 2019-2020 is more positively skewed and 'fat tailed' than USE probability distributions for the other NEM regions. For example, AEMO estimated there is a 22 per cent probability that the reliability standard would be exceeded in Victoria during 2019-2020.¹⁷⁷ AEMO's 2019 ES00 also estimated the probability of the reliability standard being exceeded (the 'tail risk') to be higher in Victoria than the corresponding probabilities for South Australia and NSW, for the 2020-2021 to 2022-2023 period. The Commission noted these "tail risks" may result in multiple days of widespread load shedding in Victoria that are a concern for Victoria, as suggested in the Victorian Government derogation.

172 *ibid.*

173 AEMO, 2019 EAAP, Appendix, covers new generation developments deemed by AEMO to meet committed or Com* criteria in terms of their status of project development.

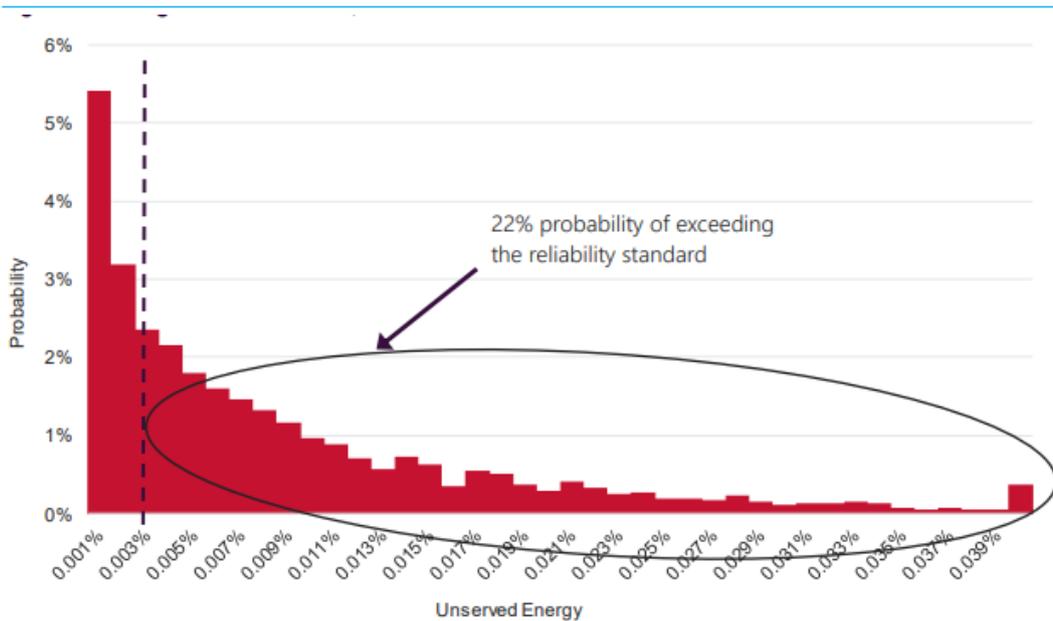
174 AEMO, 2019 ES00, p. 118.

175 AEMO, 2019 ES00, p. 68.

176 AEMO, Summer 2019-20 Readiness Plan, December 2019, p. 16.

177 AEMO, 2019 ES00, p. 73.

Figure 4.4: Range of USE outcomes, central scenario, Victoria 2019-20



AEMO, 2019 ESOO, page 73.

Duration of the reliability challenges

In addition to considering the likelihood of reliability pressures arising in Victoria, in the draft determination the Commission considered the duration of such events. It noted that over the short to medium term, the current suite of risks to reliability in Victoria may change. As well as market forces driving a change, as noted by a number of stakeholders the RRO is a key mechanism, focussed on the short to medium term, that if triggered could facilitate an in-market response.

If the RRO were to be triggered, then it would require retailers to enter into sufficient contracts to meet their share of expected system peak demand. Retailers could choose to contract with any form of generation, for example, solar, hydro, gas, coal and batteries. However, the 'firmer' the contracted generation source is, the greater its contribution would be to meeting their RRO obligation. This would provide an incentive for market participants to increase contacts with existing participants or to invest in the right technologies in regions where it is needed, to support reliability in the NEM.

In the draft determination, the Commission noted that the RRO could only be triggered three years out of a forecast shortfall. On that basis, the next summer that the RRO could be utilised to address a reliability shortfall in Victoria and any other NEM region would be the summer of 2023 -2024 (based on the ESOO triggering a T-3 event in 2020). The Commission noted that, should the circumstances facing Victoria deteriorate such that the reliability standard were forecast to be breached prior to summer 2023-24 (assuming a T-3 event is triggered in 2020), this could not be addressed by the RRO.

4.3.3 **AEMO may require flexibility to procure adequate volumes of long notice RERT in Victoria**

Prior to publication of the draft determination, AEMO advised the Commission that it had a number of RERT resources available to it in Victoria¹⁷⁸. However, as the draft determination applies to the period after the 2019-2020 summer, the Commission's analysis addressed whether AEMO would be unduly restricted in its ability to manage the reliability challenges in Victoria beyond the 2019-20 summer if long notice RERT contracts were to remain restricted to 12 months' duration.

Procuring adequate volumes of long notice RERT

One argument for multi-year contracting has been that it would assist in AEMO holding sufficient volumes of RERT to cover any forecast shortfall. While there are numerous resources available in the short and medium term RERT, multi-year contracting would seek to target increased supply of long-notice RERT.

While AEMO has procured long-notice RERT for Victoria for 2018-2019, in its draft determination the Commission noted that if AEMO were to need similar volumes in future summer peaks, the 64 MW of AEMO/ARENA demand side participation trial — approximately 50 per cent of the long notice RERT for 2019-2020 — may not necessarily be available beyond November 2020, since this is when the trial concludes.¹⁷⁹ Demand response from the ARENA trial provided 64 MW of long notice RERT for Victoria for the 2019-20 summer, and it provided a similar volume during the 2018-19 summer. While trial participants may decide to bid in to supply RERT in future years, without ongoing subsidies this can not be guaranteed.

The Commission also noted that having effective emergency reserves means having the right mix of RERT types, covering the required lead times, times of availability and duration of supply. The Commission considered that from a market operator point of view, shorter lead times may also be an important consideration when arranging a portfolio of RERT suppliers, since it provides more flexibility in terms of managing the system on the day.

The question of the impacts of multi-year contracts on direct costs are addressed in the next chapter. Nonetheless, under the RERT framework AEMO must consider the costs impacts of the RERT it procures. From 26 March 2020, under the changes introduced under the *Enhancement to the RERT* rule AEMO must also have regard to a principle that the cost of the RERT is not to be greater than the estimated average VCR in a particular region, when entering into RERT contracts.

Given this, if long-notice RERT bids for a contract duration of one year are offered in at too high a cost, AEMO may determine not to enter into contracts.

¹⁷⁸ AEMO, Summer 2019-20 Readiness Plan, 4 December 2019, p. 14

¹⁷⁹ ARENA-AEMO joint submission to Reliability Frameworks Review - directions paper, p. 6. Under the \$35.7 million trial, energy users or their service providers (for example, aggregators and energy retailers) received a grant from ARENA as an incentive, or availability payment, to provide standby demand response capacity to be used as emergency reserves through the RERT. Recipients of ARENA funding through the trial are short-notice RERT panel members and so are paid a usage payment by AEMO through the RERT should they be dispatched. They must all also offer contracts each time AEMO issues an expression of interest. Usage payments through the trial are capped at \$1,000/MWh. About \$28.55 million was provided by ARENA and a further \$7.18 million was provided by the NSW Government to develop additional demand response capacity in that state, for a total funding of \$35.7 million.

Other reliability framework mechanisms

The Commission in its draft determination noted that long notice RERT contracts (as well as short and medium notice RERT) are only one of a range of intervention mechanisms in the reliability framework that are all designed to work together.

Providing information to the wholesale market is an important aspect of the framework as it enables the wholesale market to respond to forecast shortfalls. While the Commission noted that stakeholders had suggested providing more detailed information to the market would further promote the market's ability to respond, the Commission considered that this may not be sufficient.

The short and medium notice RERT providers are on a panel. This means that AEMO can enter into contracts with these parties when a shortfall becomes apparent at medium notice (that is, at ten weeks or less). While providers on the short and medium notice RERT panels are not obligated to enter into contracts with AEMO, AEMO is also not restricted in the numbers of providers they can place on a RERT panel. Hence, the Commission considered that short and medium notice RERT is a useful tool for dealing with the tail risks that AEMO is concerned about. However, as short and medium notice RERT panel providers are not obligated to supply when required, AEMO may also seek to have long -notice RERT contracted to make sure that it has adequate levels of emergency reserves.

Some stakeholders pointed to the potential use of directions as a means of addressing reliability pressures. The Commission noted that the use of directions, however, has historically been rarely used to address reliability issues -- they are primarily used to address system security issues. This is because there are already incentives in the wholesale market for in-market generators to respond where demand is high, that is high spot prices. When a generator is directed to provide energy or Frequency Control Ancillary Services (FCAS), they are compensated based on the 90th percentile price. However, in the situation where there is tight supply and demand balance, the spot price will generally be much higher than this. This means that participants already have strong incentives to be on line and so there is unlikely to be any participants available to direct to provide energy during such scenarios.¹⁸⁰

The role of the reliability standard in multi-year contracting

The reliability standard plays a key role in the RERT. It serves as the threshold that must be expected to be breached before AEMO can enter into contracts with providers for long-notice RERT.

In the draft determination, the Commission concluded that the reliability standard should still serve as the trigger for AEMO procuring emergency reserves for the first year of a multi-year contract. An expected breach of the reliability standard should therefore occur before any emergency reserves - under single year or multi-year contracts - are entered into.

¹⁸⁰ Reliability directions have only been used four times in the NEM since 2010. During two events in 2019, intervention pricing was used for a total of 4 hours and 5 minutes. In both cases these, Pelican Point in South Australia was directed in response to a tight supply demand balance. See: AEMC, Investigation into intervention mechanisms in the NEM, Final report, p. 52, 15 August 2019. More recently on 1 February 2020 in NSW, Colongra gas power station was issued with a reliability direction during an LOR 2 in NSW.

However, in the draft determination the Commission's position was that the same trigger would not be required to be met in years two and three. Instead, under the draft rule, AEMO would need to consider what the appropriate term of a Victorian reserve contract would be to ensure reliability of supply in the Victorian region. This is discussed in more detail in chapter 5 on direct costs.

Regarding the volume of emergency reserves that AEMO may procure, the Commission considered that the amount of RERT procured in the first year of a multi-year contract should not exceed the gap to the reliability standard. This mirrored the changes introduced under the *Enhancement to the RERT* rule change. For years two and three of the contract, the Commission's position was that the volume would be based on what AEMO considers is reasonably necessary to ensure the reliability of supply in the Victorian region.

In relation to AEMO's view that it would be restricted if multi-year contracting were linked to breaches of the reliability standard, the Commission considered in the draft determination that its proposed approach balanced the need to:

- reduce the risk that RERT is procured and not used, with costs borne on customer bills; and the
- need to provide AEMO with flexibility to undertake multi-year contracting, where this would be more cost effective.

4.4 Stakeholder views on draft rule determination

In responding to the draft determination, stakeholders expressed differing views on the severity of reliability challenges facing Victoria and the need for the derogation to address potential reliability shortfalls. These are summarised below.

4.4.1 Stakeholders submissions supporting the need for the derogation to address reliability

AEMO and the Victorian Government considered that the draft rule is needed until longer term measures to address reliability challenges are implemented.

AEMO supported the view that RERT may be needed for the coming few years in Victoria, and multi-year contracting could be "a useful tool for AEMO to have at its disposal for a limited time to procure the volumes of RERT it needs to minimise load-shedding at a minimal cost to Victorian consumers".¹⁸¹ Furthermore, AEMO considered that the derogation is needed as an interim measure while the RRO is embedded, and the reliability standard is reviewed by the ESB.¹⁸²

The Victorian Government considered that the draft rule would help address the reliability challenges that Victoria is facing due to tight supply-demand balance, ageing coal generation and extreme weather events. The Government's submission also stated that the draft would also help secure reserves that otherwise would not have been available under short-term contracts.¹⁸³

¹⁸¹ AEMO submission to the consultation paper, p.2.

¹⁸² AEMO submission to the consultation paper, p.3.

¹⁸³ Victorian Government submission to the draft determination, p.1.

4.4.2 Stakeholders submissions opposing the need for the derogation

In the response to the draft rule, several stakeholders questioned the severity of the reliability issues in Victoria by raising the following points:

- The current AEMO forecasts do not show reliability issues in Victoria.
- There is a lack of evidence supporting the assumption that generator forced outages will be the cause of reliability issues in Victoria.
- There is not sufficient evidence to support concern about reliability in Victoria during extreme conditions.
- There is not evidence to support the Victorian Government's concern that the closure of Liddell power station will impact reliability.
- AEMO already has sufficient flexibility to manage reliability issues in Victoria.

These points are explained in more detail below.

Stakeholders noted that current AEMO forecasts do not show reliability issues in Victoria

Some stakeholders reiterated concerns, previously expressed in their submissions to the consultation paper, that the current assessments of reliability in Victoria do not indicate a low reserve condition during the period of 2020 to 2026.¹⁸⁴ The EUAA noted that currently there is no forecast USE in Victoria for the coming years. The EUAA stated that it understood that even though there were no official forecasts of shortfalls in the next two years in Victoria, the intention was to be prepared in case the forecasts change. In making this point, the EUAA also noted that for a variety of reasons (including forecasting errors), forecasts can change both ways — that is, they can change to show conditions are improving, or they can change to show conditions are deteriorating).¹⁸⁵ Snowy Hydro stated that “[i]t is concerning that the Australian Energy Market Operator (AEMO) will now contract for RERT in a period that has recently been assessed under the RRO to not have a forecast shortage of supply.”¹⁸⁶

AGL noted that it understands the Victorian Government's concerns about reliability and is cognisant of the changing dynamics of the NEM, particularly with the increasing penetration of renewable and transitional concerns with reliability. However, in this context AGL also noted that AEMO has not forecast a reliability shortfall in Victoria after 2019-20.¹⁸⁷

Stakeholders questioned assumptions that generator forced outages will cause reliability issues in Victoria

ERM Power questioned the assumptions in the 2019 ESOO regarding the risks of delayed return to service of generating units that drove the forecast expected breach of the reliability standard in Victoria. ERM Power questioned “the view that units returning to service from a lengthy normal maintenance outage or even a lengthy unplanned outage are subject to

¹⁸⁴ Submission to the consultation paper: ERM Power, p.2, EUAA, p. 2.

¹⁸⁵ EUAA submission to the consultation paper, p.2.

¹⁸⁶ Snowy Hydro submission to the draft determination p. 1.

¹⁸⁷ AGL submission to the consultation paper, p 1.

lengthy recommissioning periods.¹⁸⁸ In relation to the generating units that were out of service in Victoria in the lead up to the 2019-20 summer, ERM Power noted that they did not have lengthy recommissioning periods:¹⁸⁹

- Mortlake 2 achieving full load within 60 minutes of initial resynchronising to the power system
- Loy Yang A2 achieving 80 per cent load within 90 minutes and full load within 36 hours of initial resynchronising to the power system.

EUAA power were also concerned about the input assumptions in the 2019 ESOO regarding the return to service of Loy Yang 2 and Mortlake, plus the availability of Torrens Island in South Australia. The EUAA stated that these assumptions were not consulted on, which runs contrary to the provisions of the AER's *Best Practise Forecasting Guidelines* that applies to the ESOO.¹⁹⁰

ERM Power disagreed with AEMO's view, quoted in the draft determination, that higher temperatures lead to increased probability of generating plant failure. It stated that, despite requests to AEMO for data supporting this assertion, no data had yet been provided. ERM Power highlighted that generator de-rating may occur during higher temperatures but this was already factored into generating unit MT PASA submissions.¹⁹¹ Furthermore, ERM Power said that AEMO's approach to availability analysis for some units uses "max availability" as opposed to "PASA availability", and units which remain "PASA available" and not "max available" are considered by AEMO to be unavailable. ERM Power considered that this "may lead to an incorrect view that generating unit availability is lower during summer periods as underlying demand is also lower in the summer months".¹⁹²

ERM Power also highlighted that the Commission's suggestion that EAAP modelling does not factor unplanned generator outages was inconsistent with the AEMO's EAAP guidelines.¹⁹³

Stakeholders questioned whether there was a high risk of reliability issues in Victoria under extreme conditions

ERM Power noted that the Commission's draft determination relied heavily on the view that there is a reasonable probability of Victoria experiencing supply reliability issues under some extreme conditions. ERM Power said that it was not clear to it that such challenges were " 'reasonably probable' under all except a combination of simultaneously occurring multiple low probability extreme events which could exist for a limited time period only."¹⁹⁴

In relation to the AER's data on supply demand balance in Victoria (presented by the Commission, see figure 4.1), ERM Power noted that this information was based on unlikely

188 ERM Power submission to the draft determination, p 2

189 ERM Power submission to the draft determination, p 2

190 EUAA submission to the consultation paper, page 2.

191 ERM Power submission to the draft determination, p.3.

192 ERM Power submission to the draft determination, p.3.

193 ERM Power submission to the draft determination, p.2. The Commission has noted the statement from ERM Power that the EAAP does factor in unplanned outages. The statement should have said that AEMO has more discretion with how it factors unplanned outages into the ESOO than it does with the EAAP.

194 ERM Power submission to the draft determination, p.2.

demand forecast. ERM Power stated that it uses AEMO's 10 per cent probability of exceedance (POE) demand forecasts to calculate the level of available reserves. ERM Power noted that AEMO's demand forecasts tend to be conservative, suggesting that AEMO's 10% POE "[s]ummer maximum demand forecast for the Victorian has never been exceeded in the 20 year history of the NEM."¹⁹⁵

ERM Power also expressed concern about the information quoted in the draft determination from AEMO's 2019 ES00 regarding the probability of tail-risks. This was AEMO's assessment that the effect of potential heatwaves and high temperatures is likely to make load shedding more probable. ERM Power said that it was unclear whether AEMO's forecasts for range of probability outcomes for different USE in Victoria for 2019-20, shown in figure 4.4 contained the full range of potential outcomes, (10, 50 and 90 per cent POE demand scenarios) or only those associated with 10 per cent POE forecast. "From a statistical accuracy perspective these would then need to be weighted from a probability of occurrence basis".¹⁹⁶

The impact of the closure of Liddell power station on reliability in Victoria

Regarding the upcoming closure of Liddell power station, ERM Power suggested that the Commission should "more carefully consider the impact of network congestion in northern Victoria and southern NSW at times of high Victorian demand"¹⁹⁷. ERM Power said that the VNI interconnector transfer capability at times of Victorian demand is close to zero. Based on this ERM Power believes that "the retirement of Liddell will have minimal if any impact on supply reliability in Victoria".¹⁹⁸

Some stakeholders considered that AEMO has sufficient flexibility to manage the reliability issues in Victoria

Snowy Hydro highlighted that Victoria already has a regulatory mechanism that allows it to contract for emergency reserves along with numerous other intervention mechanisms, such as directions and instructions, which could be utilised in cases of genuine market shortfall.¹⁹⁹

The AEC considered that assessment of the necessity of the proposed rule has proven difficult, due to "paucity of information available from AEMO"²⁰⁰. The AEC said it is unclear whether the availability of RERT is inadequate and would be improved by the availability of the proposed rule. According to the AEC, initial indications are that by using AEMO's existing RERT procurement abilities, there is "sufficient volume available to meet foreseen needs".²⁰¹ The AEC also highlighted that AEMO was able to procure 72 MW of RERT capacity in addition to the 64 MW available under the AEMO/ARENA demand side participation trial.

ERM Power also questioned whether AEMO requires more flexibility than it already has for managing reliability issues in Victoria. ERM Power noted that the volume of medium and

195 ERM Power submission to the draft determination, p.3.

196 ERM Power submission to the draft determination, p.3.

197 ERM Power submission to the draft determination, p.4.

198 ERM Power submission to the draft determination, p.4.

199 Snowy Hydro submission to the draft determination, page 2.

200 AEC submission to the draft determination, p.2.

201 AEC submission to the draft determination, p.2.

short notice RERT engaged for the 2019/20 summer was significant, and serves as a more efficient short-term emergency response²⁰²:

"This flexibility provided to AEMO in RERT contracting options supports our view that in some cases, forecasts of a potential LRC is best managed by the efficient use on medium or short notice RERT contracts rather than the signing of higher cost long-notice RERT contracts which ultimately may not be required. The use of short and medium notice RERT contracts ensures that consumers are not burdened by unnecessary RERT costs as costs are only incurred by consumers on an "as required" basis".

4.5 Final determination analysis

The Commission has examined the issues raised by stakeholders in response to the draft determination. The Commission has also considered recent developments including the performance of the wholesale electricity market during the 2019-20 peak demand period, and the implications for reliability in Victoria of the South Australian Minister's decision to trigger the RRO in South Australia during the period for which the derogation would apply. The Commission's views on these matters are set out below.

Do the lack of forecast shortfalls for Victoria indicate that reliability issues do not exist?

As noted in the Commission's analysis on the draft determination, while AEMO's forecasts are not showing a breach of the reliability standard for Victoria, the 2019 ESOO indicated that Victoria is more likely to breach the standard than other states up until 2023-24. This is due to the tight demand-supply balance in Victoria.

Forecasts can and do change, given new information and changing system conditions. While it is acknowledged that forecasts of shortfalls may not eventuate it is also true that shortfalls can materialise even when not forecast ahead of time.

The Commission notes AEMO's concern about the short-term risk in Victoria of coincident events over peak summer periods, which have significant consequences for reliability in that region. The Commission notes that risks pertaining to coincident events are not necessarily reflected in AEMO's forecasting tools.

The Commission therefore maintains the view that, if conditions in Victoria deteriorate to such an extent that breaches of the reliability standard are forecast, AEMO may benefit in the short to medium term, from having the option of procuring RERT over multiple years in order to manage these risks (where it is cost-effective to do so). This is supported by recent events over the summer in Victoria - see Box "Victorian reliability events of summer 2019-20".

Is it reasonable to assume reliability issues in Victoria could be caused by forced outages?

²⁰² ERM submission to the draft determination, pages 6-7

The Commission referred to AEMO's observations about the performance of the Victoria brown coal generators in the analysis for the draft determination. Several stakeholders questioned AEMO's assumptions and findings, including that higher temperatures increase the probability of thermal plant failure.

The Commission considers that AEMO is best placed to make judgements about the extent to which forced outages would cause reliability issues in Victoria given they are the market operator. This is why AEMO has powers to intervene and appropriate discretion to manage the power system. However, the Commission notes the following points:

1. There were return-to-service delays for Mortlake and Loy Yang A over the 2019-20 summer.²⁰³
2. Loy Yang Unit A experienced unexpected interruptions even after it returned to service on 24 December 2019, and was unexpectedly off-line from 27 December 2019 to 20 January 2020.²⁰⁴

The return to service experience of the Loy Yang A and Mortlake units demonstrates that return to service periods and the stages that follow, do not always run smoothly. If there are delays to returning large generators to service, and this occurs during peak demand periods, then this can have consequences for reliability of the system.

The Commission has also considered additional data, presented in the figure below. The figure shows the historical availability of generators in Victoria (2017 -18 and 2018-19). For the following charts:

- Vertical boxes represent the performance of specific thermal generation units.
- Data points within each box represent individual five-minute dispatch intervals when the supply/demand balance was tight. In order to define what constitutes a 'tight supply/demand balance', the AEMC used AEMO's lack of reserve quarterly reports.²⁰⁵ The AEMC has considered any five minute dispatch period to which AEMO applied a lack of reserve condition (Forecast, Updated and Actual LOR 1s, 2s, and 3s) to qualify as an interval in which there was an expectation of tight supply/demand balance in the system.
- The x axis represents the operational demand in Victoria at the time when there was a tight supply/demand balance.
- The y axis represents the percentage of capacity made available and bid into the market by each generator at times when supply/demand balance was tight.
- As such, a tight spread of data points, near the top of the box, implies a generator consistently made capacity available during intervals where there is a tight supply/demand balance, therefore demonstrating a high degree of reliability.

203 Loy Yang A was initially expected to return to service in mid December 2019 however, the actual return to service was 24 December 2019.

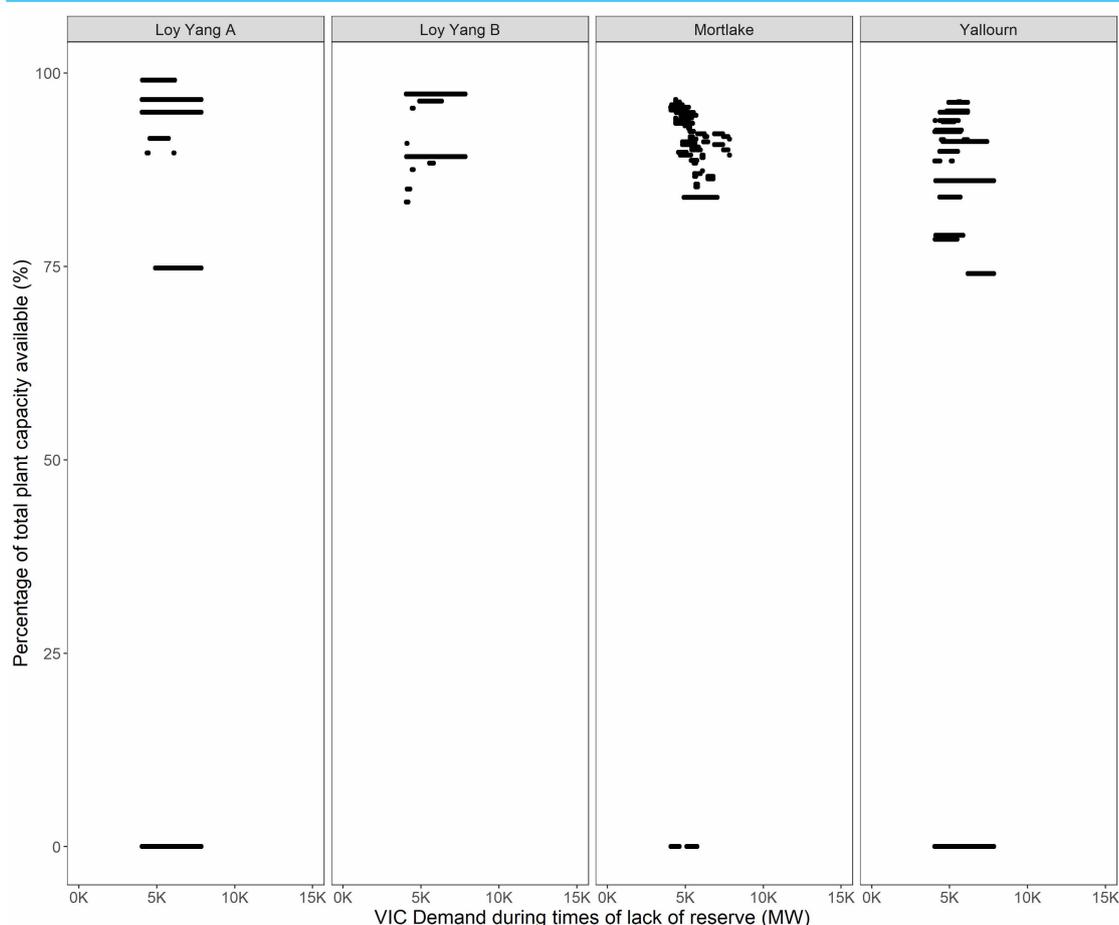
Regarding the Mortlake unit, there was a six day delay return to service:
<http://www.wattclarity.com.au/articles/2019/12/mortlake2-returns-27dec2019/>

204 <http://www.wattclarity.com.au/articles/2020/01/second-time-lucky-lya2-rts/>

205 See <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/system-operations/power-system-operation/nem-lack-of-reserve-framework-quarterly-reports>.

- A wider spread, further down, or a spread with significant outliers implies a generator does not consistently make capacity available during intervals where there is a tight supply/demand balance, therefore demonstrating a lower degree of reliability.

Figure 4.5: Victorian thermal plant availability during times of tight supply/demand balance in 2017/18 and 2018/19



Source: AEMO data

Note: Figure illustrates the availability of Victoria's thermal fleet during periods of tighter supply/demand balances.

Figure 4.5 illustrates the availability of Victoria's thermal fleet during periods of tighter supply/demand balances.

- Loy Yang B appears to make most of its capacity consistently available during periods when there are tight supply/demand balances. Loy Yang B appears to make over 90% of its capacity available for around 50% of times when there is a tight supply/demand balance, and above 80% of its capacity available for the other 50% of times there is a tight supply/demand balance.
- Loy Yang A and Yallourn typically make over 75% of their capacity available during periods when there is a tight supply/demand balance. However, they were both

completely unavailable for about 20% of times when there was a tight supply/demand balance over the course of the 2018/19 financial period.

- Mortlake, as a gas peaking generator with a strong incentive to respond to higher prices, made 90% of its capacity available for over 80% of times there was a tight supply/demand balance in Victoria.

Do extreme conditions pose a risk to reliability in Victoria?

The Commission notes ERM Power's view that AEMO's claim of a reasonable probability of Victoria experiencing supply reliability issues under extreme conditions is unsubstantiated. As outlined above, in the draft determination the Commission noted AEMO's assessment, provided in the 2019-20 Summer Readiness Report, that extreme conditions such as high temperatures could negatively impact power system reliability in Victoria.

The Commission notes the conditions over summer 2019-20 and consider they highlight the challenging reliability issues and extreme conditions being faced in Victoria. Specifically, since the draft determination was published, the RERT has been activated twice in Victoria, totalling 980 MWh, and low reserve conditions (LOR 2 and LOR 3) were declared four times. In addition, AEMO entered into short notice RERT contracts four times during the 2019-20 summer in Victoria.

BOX 2: VICTORIAN RELIABILITY EVENTS OF SUMMER 2019-20

Since December 2019, when the draft determination was published, the Commission has observed that the extreme conditions during the 2019-20 summer has placed the power system in Victoria under pressure. Since the publication of the draft determination, RERT has been activated twice in Victoria with lower reserve conditions (two and three) being declared four times.

The 20 December 2019 saw extreme temperatures in Melbourne and a sharp decline in Victorian wind output leading to declaration of low reserve conditions (LOR).

RERT was activated on 30 December 2019 with the following conditions being faced:

- Extreme weather conditions including high temperatures (above 40 C) and extreme bushfire conditions
- Volatile power system conditions with high forecast maximum demand with the following units out of service:
 - Loy Yang A2 (500 MW)
 - Loy Yang B2 (580 MW)
- De-rating of semi-scheduled and non-scheduled generation throughout the day due to the effects of high temperature on their equipment
- Bushfire in the vicinity of several transmission lines

Rule determination

Victorian derogation - RERT contracting
12 March 2020

- A transmission line trip in New South Wales that led to constrained flows across the Victoria – New South Wales interconnector (VNI) that resulted in reduced level of support to Victoria from New South Wales by over 1000 MW.

AEMO activated 283 MWh of RERT to maintain reliability.

The 30 January saw an actual LOR -2 declaration in Victoria following higher than forecast demand and generator unavailability caused by a trip at Loy - Yang A3.

RERT was again deployed on 31 January with the following conditions:

- high demand levels caused by high temperatures across the south-east Australian states, with AEMO forecasting the highest demand in Victoria since January 2014
- multiple generation outages
- tripping of two 500kV transmission circuits in western Victoria caused by a collapse of double circuit transmission towers in a wind storm leading to an extended separation between Victoria and South Australia.

During this event 697 MWh of RERT was activated by AEMO.

Source: AEMO

Note: Latest information available as at time of writing 9 March 2020. The NSW region also saw RERT activated during the 2019-20 summer period.

In terms of ERM Power's specific concern that there is insufficient data to support AEMO's view of an increased probability of generators failing during high temperatures, the Commission notes ERM's view that "generating unit de-rating may occur during periods of high temperature [and are incorporated in the MT PASA]."²⁰⁶ The Commission notes that these de-ratings exist because higher ambient temperatures can mean a plant reaches its operating temperature limits at lower overall output.²⁰⁷

The Commission notes the concern that ERM Power expressed regarding the inclusion of AER's analysis in the draft determination showing the supply and demand balance in Victoria. ERM Power was concerned that the calculations of the level of available reserves were based on AEMO's 10% probability of exceedence (POE) demand forecast, which has never been exceeded in the 20-year history of the NEM.

The Commission's use of the AER data was to compare the trends in the aggregate demand-supply balance, both across jurisdictions and over time within a jurisdiction. Moreover, to inform considerations around RERT and this derogation, this comparison was done at times the RERT is likely to be used; that is, at times when the aggregate demand-supply balance is at its tightest, which is typically for 10% POE demand levels. Hence, the Commission's view is that, while ERM Power's arguments are valid with respect to AEMO's 10% POE demand levels not being exceeded, the point of the graph is to consider the key trends. Furthermore, the key finding from that analysis remains: Victoria's aggregate demand-supply balance is the

²⁰⁶ ERM Power submission to the draft determination, p. 3

²⁰⁷ ERM Power's related question about the interaction between de-ratings and MT PASA availability is a question for AEMO rather than the AEMC.

tightest of the NEM regions for the nearer term, yet, despite this tightening, there has not been an increase in the amount of dispatchable capacity installed in Victoria.

The Commission has also noted ERM Power's concerns about the data AEMO has used to show the probability of tail risks in Victoria. The Commission has interpreted Figure 30 in the 2019 ES00 (reproduced in this final determination as Figure 4.4) as the probability distribution of USE outcomes across all three POE demand levels, consistent with the definition of 'central scenario' and discussion of POE demand levels in Tables 4-8 of 2019 ES00.

Does the closure of Liddell Power Station pose a risk to reliability in Victoria?

In response to the Victorian Government's claim, ERM Power expressed the view that it is unlikely that the closure of Liddell Power Station will have a negative impact upon reliability in Victoria. The Commission recognises that AEMO's 2019 ES00 forecast for USE in Victoria does not indicate a significant impact following the closure of Liddell in NSW.²⁰⁸ The Commission further notes that:

- Interconnector flows can and do change over time. For example, prior to Hazelwood's closure, Victoria was a net exporter to South Australia. This reversed following Hazelwood's closure with South Australia becoming a net exporter.²⁰⁹ Current or past flow trends on the Victoria-NSW interconnector (VNI) may not indicate future VNI flows.
- Network congestion can impact on system reliability. For example, network congestion in northern Victoria can limit imports to Victoria from NSW. This in turn can limit the ability to address reliability issues in Victoria through inter-regional transfers. Network congestion in northern Victoria can also limit the extent to which generation from that area can supply demand in other parts of Victoria (such as in Melbourne and other Victorian load centres outside of northern Victoria). This could also influence considerations of overall reserve margins in Victoria (in addition to the potential impact of Liddell's exit) and, by extension, the potential need for the RERT in Victoria.

Will reliability in Victoria be significantly improved by the triggering of the RRO in South Australia?

The South Australian Minister has triggered the RRO in South Australia to apply to the summer periods in 2022 and 2023²¹⁰. Retailers and some large energy users are now required to secure contracts for their share of demand for key periods of January through to March in both 2022 and 2023 (six hour daily periods during weekdays between 3pm and 9pm). Should AEMO's forecasts one year prior to these periods show a reliability gap, retailers would be required to have enough electricity supply contracts in place or face penalties. AEMO would also be able to procure additional reserves as a safety net.

²⁰⁸ Figure 32, AEMO, 2019 ES00, p. 79

²⁰⁹ AER, Wholesale performance monitoring - Hazelwood advice, March 2018 (https://www.aer.gov.au/system/files/AER%20electricity%20wholesale%20performance%20monitoring%20-%20Hazelwood%20advice%20-%20March%202018_0.PDF)

²¹⁰ Under the RRO legislation, the South Australian Minister can trigger the obligation in that region only, 15 months ahead of a forecast shortfall period (instead of the three years that applies in the other regions). Under the RRO a T-1 instrument cannot be issued if the same period has not previously been covered by a T-3 instrument.

The Commission has considered whether the triggering of the RRO in South Australia would contribute to addressing reliability in Victoria, given that the regions are interconnected. While triggering of the RRO in South Australia could potentially benefit Victoria, it is likely that AEMO would consider that because the two regions have generally correlated peak demand, excess in-market reserves in South Australia would not be available to assist Victoria when it is most needed. This is consistent with a related point made by AEMO in the 2019 ESOO that because of the correlated peak demand, the two regions often have tight demand-supply balances at the same time and "the ability to transfer power from South Australia to Victoria is relatively infrequently limited by transmission congestion during USE periods in Victoria."²¹¹

Does AEMO have sufficient flexibility already to manage reliability issues in Victoria?

The Commission agrees with ERM Power on the need for AEMO to have the flexibility to procure RERT as and when it is needed.

The Commission notes that the RERT that was delivered in Victoria on two occasions during the 2019-20 summer was a combination of long notice and short notice RERT.

The Commission notes that the flexibility that multi-year RERT contracts can provide as a short term measure does not only relate to being able to procure adequate volumes of emergency reserves but also being able to procure the required volumes at lower cost. This is discussed in the next chapter.

4.6 Conclusions

The Commission assessed whether the proposed derogation promoted reliability of the power system as part of the Commission's determination as to whether:

- the final rule will or is likely to contribute to the achievement of the NEO, and
- whether the final rule better contributes to the achievement of the NEO than that proposed by the Victorian Government.

This is also discussed in Chapter 3.

The Commission considers that there are challenging reliability pressures in Victoria that will extend beyond the 2019-2020 summer peak and until such time that the RRO is operational and can address reliability issues. These were recognised in both the derogation proposal and stakeholder submissions to the consultation paper and the draft determination. The Victorian Government's concern about the reliability risks in Victoria is understandable, especially considering that the consequences of generator outages during peak demand periods can include widespread involuntary load shedding over multiple days.

The Commission considers that while out-of market responses to reliability challenges are not ideal, they are necessary as a last resort should the market fail to respond. For these coming few years, if there continues to be a lack of investment in dispatchable generation in Victoria,

²¹¹ AEMO, 2019 ESOO, page75.

then this could lead to a lack of in market reserves. If there is a need for long notice RERT in the near term in Victoria, having the option of a contract period for long notice RERT of up to three years provides AEMO with the flexibility to address the region's reliability challenges.

The potential for multi-year contracting to provide cost-effective long-notice RERT is the subject of the next chapter.

5 IMPLICATIONS OF MULTI-YEAR CONTRACTING FOR DIRECT COSTS

In assessing whether the proposed derogation will, or is likely to, contribute to the achievement of the NEO, the Commission has considered the principle of minimising direct costs. This is because procurement efficiency is an important aspect of the RERT and helps to minimise direct costs and improves AEMO's ability to manage reliability.

The introduction of multi-year contracting for a fixed term in Victoria could impact the costs of long notice RERT.

The direct costs of the RERT are passed on to market customers (retailers) in the region where the RERT is procured and used, and ultimately recovered from consumers. This means that both the procurement and use of emergency reserves has an impact on prices that consumers pay.

RERT costs could increase if emergency reserves were incurred unnecessarily or inefficiently. Alternatively, multi-year contracting could reduce the direct costs of procuring and using RERT.

In the draft determination, the Commission concluded that multi-year contracting had the potential to deliver a cost effective and reliable supply of electricity to customers. However, the Commission also concluded that it was important that the rule contain measures that minimise the risk that the direct costs of RERT increase under multi-year contracting. The draft rule therefore included checks and balances to minimise this risk including a trigger, a range of considerations prior to multi-year contracts being entered into, and reporting requirements.

The Commission continues to hold this view, and has decided to bolster the transparency requirements further in the final rule.

This chapter outlines:

- the Victorian Government's views about the implications of multi-year contracting for direct costs
- stakeholder submissions in response to the consultation paper
- the Commission's draft analysis
- stakeholder submissions to the draft determination
- the Commission's final assessment.

5.1 The Victorian Government's views

The Victorian Government considered that the availability of multi-year contracting could enable AEMO to procure emergency reserves at a lower cost. It suggested that cheaper long notice RERT contracts could be expected under multi-year contracting as RERT providers had advised the Victorian Government that "longer term contracts have significantly lower costs

for each MW of available capacity compared to short term contracts".²¹² The Government specified that:²¹³

[b]ased on preliminary discussions with potential RERT supply side providers, the Department of Environment, Land, Water and Planning (DELWP) is aware that several parties have stated that they are unable to offer in resources below the value of customer reliability within the constraints of a one-year RERT contract. However, these same parties have indicated that they are able to provide substantial new energy generation resources at significantly lower annual cost if multi-year contracts were available.

The derogation proposal suggested that AEMO would not be obliged to enter into multi-year contracts. Rather, AEMO would be empowered to use its discretion within the parameters set out in the NER and the RERT Guidelines to "achieve the best outcomes for consumers, balancing reliability and costs".²¹⁴ As a result, the Victorian Government expected that AEMO would only enter into multi-year contracts for long notice RERT where it is more cost effective than entering into nine or 12 month contracts.²¹⁵

The Victorian Government argued that multi-year contracting could increase the volume of reserves offered to AEMO, particularly by growing the 'pool' of small-scale generation offering into the RERT. It stated that these reserves become more readily available under a multi-year contract as the longer contract term provides reserve providers greater certainty to be able to recoup their investment within the term of the contract.²¹⁶ The Government also claimed the proposal would facilitate the development of demand response options, which over-time may become available to the wholesale energy market and thereby reduce the cost of electricity to consumers.²¹⁷

The derogation proposal commented that, although procuring RERT contracts has associated costs, the acquisition of insufficient RERT could also be costly to consumers if it results in involuntary load shedding.²¹⁸

5.2 Stakeholder views on the consultation paper

In response to the consultation paper, stakeholders expressed differing views about the impact of the proposed derogation on the direct costs of emergency reserves. Several stakeholders considered it would increase direct RERT costs while others considered that it could deliver cheaper RERT contracts. Some stakeholders suggested other ways to reduce the direct costs to consumers under the proposed derogation.

Reducing direct costs

212 Rule change request, p. 10.

213 Ibid, p. 6.

214 Ibid, p. 10

215 Rule change request, p. 10

216 Rule change request, p. 6.

217 Rule change request, p. 10

218 Rule change request, p. 10

Some stakeholders considered that multi-year contracting would provide for cheaper emergency reserves on a per MW basis. This was said to be the case because longer term contracts would increase the number of potential RERT providers and reduce the costs of providing emergency reserves.²¹⁹

AEMO stated there would be a "greater likelihood of receiving the lowest cost emergency reserves" under the proposed derogation (compared to nine or 12 month contracts). The potential to contract emergency reserve resources for up to three summers would provide greater investment certainty to potential service providers through increased asset utilisation and reduced revenue risk.²²⁰ Similarly, Enel X said that, as an aggregator of demand response under the RERT mechanism, multi-year contracts would allow them to "spread the costs of developing a portfolio over a longer period". This would allow them to offer RERT at a lower per unit cost.²²¹

AEMO also stated that the proposed derogation would encourage a more competitive and diverse supply from RERT providers for Victoria. Similarly, Origin, AGL and Enel-X suggested that the proposed derogation could increase the pool of RERT providers to AEMO.²²²

AEMO commented on the cost impact of procuring RERT for multiple years in the event that the reserves are not required for all of those years. It noted that there were trade-offs with "locking in multiple year long notice RERT with shorter dated contracting of reserves, which are informed by updated forecasts of the reserve shortfall," but said that it was well positioned to make this trade-off in a "considered and transparent manner, in accordance with the RERT principles and guideline."²²³ AEMO considered that the proposed rule would provide it the flexibility to procure multiple years of long notice RERT where "this is considered more efficient than procuring individual year-on-year reserve requirements".²²⁴

Higher direct costs

Several stakeholders expressed concern that the proposed derogation could increase the direct costs of emergency reserves to consumers.²²⁵

Stakeholders highlighted that the costs associated with emergency reserves were high. The Energy Users Association of Australia (EUAA) noted that the maximum price to consumers of three-year RERT contracts was the value of customer reliability, which can be three to four times the market price cap.²²⁶

Many stakeholders were concerned that the proposed derogation could lead to consumers paying for the costs of unnecessary emergency reserves. That is, that consumers would bear RERT availability costs for multiple years for shortfalls that do not arise. For instance, AGL acknowledged the potential for multi-year contracting to increase the pool of providers

219 Submissions to the consultation paper: Origin, p. 1; AEMO, p. 5; Enel-X, p. 1.

220 AEMO submission to the consultation paper, p. 5.

221 Enel-X submission to the consultation paper, p. 1.

222 Submissions to the consultation paper: Enel-X, p. 2; AGL, p. 2.

223 AEMO submission to the consultation paper, p. 5.

224 AEMO submission to the consultation paper, p. 5.

225 Submissions to the consultation paper: Mondo, pp. 2-3; AEC, p. 2; EUAA, pp. 5-6; ENGIE, p. 2; AGL, p. 2.

226 EUAA submission to the consultation paper, p. 9.

(which could reduce direct costs) but is concerned that "a longer contracting period, of up to three years, is likely to increase the risk of high availability payments for resources that are potentially not needed, and ultimately leads to increased costs to consumers."²²⁷ Both AGL and Origin considered that multi-year contracting could lead to lower costs where there was likelihood of successive years of forecast unserved energy.²²⁸

The 'unnecessary' procurement of long notice RERT was considered to be a likely outcome by some stakeholders. For example:

- The Australian Energy Council (AEC) considered that " [a] longer-term [RERT] market will also have the side-effect of AEMO contracting to satisfy inaccurate forecasts, given accuracy deteriorates as predictions of conditions become further into the future".²²⁹ On this, the AER suggested that the AEMC examine the risks associated with over-forecasting the RERT requirements and the impact this may have on the costs to consumers.²³⁰
- The EUAA and ERM Power considered that AEMO takes an overly conservative approach to forecasting the supply-demand balance which may lead to increased costs on consumers.²³¹
- ENGIE considered that given the current supply adequacy forecasts, if "AEMO did contract some RERT capacity on a three year contract, it would be paying three years' availability fees for one year's use".²³²
- Some stakeholders stated that AEMO and the Victorian Government have an incentive to procure more emergency reserves than necessary. ERM Power stated that this was because the "risks associated with not having enough reliability are borne by both consumers and the system operator" whereas the costs of procuring more reserves than needed are borne by consumers alone".²³³

It was also suggested the proposed derogation would be used to reduce the likelihood of outages beyond the reliability standard. ERM Power suggested that proposal seeks to effectively establish a standing strategic reserve to reduce the potential for involuntary load shedding to zero.²³⁴

Minimising the risk of higher direct costs

In responding to the consultation paper the AER suggested that the AEMC should consider the evidence of the potential for cost savings associated with procuring a three-year contract and whether there may be an impact on the cost of electricity provision in other regions of the NEM.²³⁵ Similarly, Minister Lynham, Minister for Natural Resources, Mines and Energy (Queensland) raised concerns about the potential for the proposed derogation to impact

²²⁷ AGL submission to the consultation paper, p. 2.

²²⁸ Submissions to the consultation paper: AGL, p. 2; Origin, p. 1.

²²⁹ AEC submission to the consultation paper, p. 2.

²³⁰ AER submission to the consultation paper, p. 2.

²³¹ Submissions to the consultation paper: EUAA, p. 5. ; ERM Power, p. 4.

²³² ENGIE submission to the consultation paper, p. 2.

²³³ Submissions to the consultation paper, for example, ERM Power, p. 3.

²³⁴ ERM power submission to the consultation paper, p.2.

²³⁵ AER submission to the consultation paper, p. 2.

costs for consumers outside of Victoria. He suggested that any final rule include explicit requirements to ensure the associated costs cannot be passed through to consumers outside the derogating state. In addition, the Queensland Government suggested that any final rule should ensure that the surrounding frameworks provide the ability for the AER to monitor and ensure compliance with this requirement.²³⁶

The AER also said that if the derogation proposal was to be progressed, it would support consideration of measures that would ensure multi-year tender process and its outcomes are transparent to the market in order to achieve optimal pricing outcomes and value for money for consumers.²³⁷

Mondo suggested that in order to increase the efficiency of multi-year RERT contracts, the contracts struck in December could be shortened to fall away after the subsequent two three summer periods. For example, contracts struck in December 2019 could be designed to fall away in April 2022 instead of in December 2022 as would be the case under three year contracts.²³⁸

5.3 Draft rule determination assessment

The Commission concluded that in certain circumstances multi-year contracting could reduce the direct costs of RERT which could help AEMO more cost-effectively contract the volume of emergency reserves required to address reliability shortfalls.

What are the long notice RERT direct costs and how are they passed onto customers?

In relation to long-notice RERT contracts, "direct costs" is a term that embodies the following costs:

- Availability charge: this is expressed in \$/MW. In the case of supply-side RERT, availability charges reflect the capital costs of installing generation; in the case of demand-side RERT, availability charges reflect the costs of equipping consumers to become enabled to provide demand response.
- Activation charges: this is expressed in \$/MWh. In the case of generation plant, activation costs reflect the costs of running the plant. In the case of demand response activation charges compensate the customer for any lost production that may have occurred.²³⁹

The availability costs are incurred irrespective of whether the RERT contract is dispatched, whereas the activation costs are incurred only when the resource is dispatched.

As discussed in section 2.1.6, these costs are passed onto customers in the region where the emergency reserves have been procured. Under the arrangements that will be in place from 26 March 2020:²⁴⁰

236 Minister Lynham, Minister for Natural Resources, Mines and Energy Queensland submission to the consultation paper, p.1.

237 AER submission to the consultation paper, p. 2.

238 Mondo submission to the consultation paper, p. 3.

239 Some RERT resources may also have 'pre-activation' costs, which relate to start-up costs, which are also expressed in \$/MW or a fixed dollar amount.

240 The NER does not prescribe how market customers then recover these costs from end customers.

- Costs associated with the direct and immediate activation of RERT resources, including activation charges, are recovered in proportion to market customers' consumption over each of the trading intervals in which the RERT resource is activated, in the region in which RERT was used.
- All other costs associated with the procurement of reserves (other than administrative and operational costs), including availability payments, are recovered in proportion to market customers' consumption during each of the billing periods in which the costs were incurred in the region in which RERT was used.

These arrangements are consistent with a cost reflective pricing objective of providing efficient incentives for those parties to minimise and avoid the costs. Costs not able to be allocated in a cost reflective manner are recovered by smearing the costs widely.

RERT direct costs could be lower under multi-year contracts

The Commission considered that spreading upfront costs over three years under a multi-year contract could result in lower direct costs than under one-year contracts. Potential RERT providers had commented that multi-year contracting under the proposed derogation would allow them to spread their one-off fixed costs over a longer period which means they will be able to offer RERT at a lower per unit cost.²⁴¹

In addition, AEMO have provided the AEMC with confidential information on the unsuccessful offers to the long-notice RERT for the 2019-20 summer. This data suggested that if multi-year contracts were allowed, then the direct costs of these suppliers per year would be lower. This would have provided AEMO with more options on what long-notice RERT contracts to enter into.

However, care needs to be taken in comparing contracts where they have different cost structures. To compare a contract with high availability charges but low activation charges to a contract with lower availability charges but high activation charges, a comparison on an "expected-value" basis should be undertaken. This allows for the probability of dispatch under each contract.

An expected value approach should also be used to appropriately compare the relative direct costs of single-year and multi-year contracts. This would account for the probability of procuring each contract over its contract life. For example, consider two contracts, A and B, where A is a one-year contract and B is a three-year contract. Procuring B requires paying availability charges over 3 years, whereas procuring A requires paying availability charges over one year. A like-for-like comparison of the cost of A and the cost of B requires considering the probability that A would need to be procured again in year two and then again in year three.

When comparing multi-year contracts with single-year contracts, differences in availability costs are likely to be more relevant than differences in activation costs.²⁴² Spreading the

²⁴¹ Enel- X submission to the consultation paper, p. 1.

²⁴² This said, it is possible that fuel costs may be inversely related to contract duration.

availability charges over a longer period under a multi-year contract could mean that they would be lower on a per year basis than under a one-year contract.

However, if emergency reserves are not needed in years two and three of a multi-year contract then the above comparison approach is not useful and the multi-year contract may not be more cost effective.

In the draft determination, the Commission formed the view that multi-year contracting could provide for cheaper contracts for emergency reserves on a per unit basis (defined as \$/MW/year) through lower availability charges per year, but only if there is a reasonable likelihood of the need for procuring RERT contracts beyond year one.

The Commission noted in the draft determination that, emergency reserves could be needed in Victoria over the coming few years to address potential supply shortfalls. It is also noted that there has been an increasing trend in the use of RERT in the NEM, largely focussed on Victoria. Prior to 2017, RERT had never been dispatched, but since then RERT had been activated a number of times.

The Commission considered acquiring emergency reserves under a multi-year contract can lead to lower direct costs for consumers if the reserves may be needed for other contracted years. Therefore, the Commission was of the view that multi-year contracting could be a useful tool for AEMO to have at its disposal for a limited time to procure the volumes of RERT it needs to minimise load-shedding at a minimal cost to Victorian consumers. The Commission also considered that greater flexibility for AEMO should be accompanied by checks and balances to minimise the risks of multi-year contracting imposing unnecessarily high costs on consumers.

Existing restrictions that minimise the risk of entering into inefficient multi-year contracting

The Commission noted stakeholder concerns that allowing multi-year contracts could lead to increased direct costs to consumers through:

- consumers having to pay for the costs of unnecessary emergency reserves (payment of availability charges over the multi-year period for shortfalls that do not arise)
- inefficient procurement of RERT, due to over-procurement or procurement of more expensive RERT options.

The Commission considered that the principles currently governing the RERT should also apply to multi-year contracts in Victoria. This approach would require AEMO to give consideration to the RERT principle of minimising impacts on customer bills when entering into multi-year contracts.²⁴³ In terms of multi-year contracts, AEMO would have to take into account how likely it is that single-year contracts would need to be entered into again, in years two and three.

Furthermore, the Commission considered that the key new measures introduced under the *Enhancement to the RERT* rule, which will come into effect on 26 March 2020, should also

²⁴³ Clause 3.20.2(b) of the NER.

apply to multi-year contracts. The following measures, introduced under the *Enhancement to the RERT* rule, all aim to reduce direct costs of the RERT and reduce the likelihood of inefficient and unnecessary procurement of RERT:

- **An additional RERT principle:** costs of RERT procured should not exceed the estimated average VCR for the relevant region. This limits the exposure of consumers to emergency reserve costs that exceed the consumer's benefit.
- **Procurement trigger linked to reliability standard:** AEMO can only procure emergency reserves when it identifies and declares an LRC (currently identified through the medium-term PASA or EAAP) or LOR (identified through ST-PASA and pre-dispatch). It provides for greater efficiency as reserves can only be procured when AEMO identifies an expected breach of the reliability standard. This tighter trigger would apply to AEMO's ability to enter into a multi-year contract; an LRC declaration would need to apply in the first year of the contract period.²⁴⁴

The draft rule also required that the volume of emergency reserves to be procured under a multi-year contract:

- For the first year of the contract, should be no more than AEMO considers is reasonably necessary to address the relevant low reserve condition (LRC). This reflects the requirements under the Enhancement to the RERT rule change.
- For the second and third year of the contract, should be no more than AEMO considers is reasonably necessary to ensure reliability of supply in the Victorian region.

This would allow AEMO to procure the amount of reserves that are necessary to ensure the reliability standard is met in Victoria while clarifying that only the amount that is necessary should be procured.

Using the measures put in place under the *Enhancement to the RERT* rule reflects the view put forward by AEMO in its submission to the consultation paper; that there are trade-offs associated with locking in multiple year long-notice RERT contracts compared to shorter duration reserve contracts, as shorter duration contracts are informed by updated forecasts of the reserve shortfall. AEMO considered that it was well positioned to make this economic trade-off in a considered and transparent manner, in accordance with the RERT principles and guideline.²⁴⁵ The Commission considered this approach is appropriate and noted that it would expect AEMO to use these principles to guide its decision in terms of entering into multi-year contracts.

Additional requirements to minimise the risk of entering into inefficient multi-year contracts

The Commission determined that additional obligations should be placed on AEMO, specific to multi-year contracts, to minimise the risk of entering into inefficient multi-year contracts.

The draft rule required AEMO to ensure that the term of a multi-year Victorian contract (including any extension or renewal of such term) is no longer than:

²⁴⁴ AEMC, *Enhancement to the RERT*, final determination, pp. 104-105.

²⁴⁵ AEMO, *submission to consultation paper*, p. 1.

- AEMO considers is reasonably necessary to ensure reliability of supply in the Victorian region, and
- in any event, three years.

This would still afford AEMO discretion as to the length of the contract required. But it does make clear that, where reserves are expected to be required for a period less than three years, then the contract term should be for that lesser period. This would not be built into the contract itself, but would provide guidance to AEMO on how long contracts should be when they enter into contracts.

Greater transparency

The new reporting requirements introduced under the *Enhancement to the RERT* rule bolster transparency to improve market confidence in the RERT process and place an increased level of accountability on AEMO's decision-making.²⁴⁶ These obligations require AEMO to publish details of reserves contracts including:

- estimated average amount payable under reserve contracts for each region broken down by payment type
- AEMO's modelling, forecasts and analysis used to determine whether to enter into reserve contracts
- the term of the reserve contract – including the justification for that term
- if relevant, an explanation for why AEMO procured a greater amount than any shortfall identified
- how AEMO has given regard to the RERT principle that RERT costs should not exceed VCR, and if relevant an explanation for why the RERT costs exceeded VCR
- for each reserve contract, the payments under that contract (including both procurement and activation payments).²⁴⁷

The Commission considered that a commensurate level of disclosure and transparency should apply to multi-year contracts and AEMO's reasoning for entering into multi-year contracts relative to single year contracts. The Commission considered the costs of this would be outweighed by the transparency benefits.

Consistent with the suggestion from the AER, in the draft determination the Commission introduced a similar transparency approach to the procurement of multi-year emergency reserve contracts. The Commission proposed the following additional reporting requirements in the quarterly RERT report, which would relate only to any multi-year RERT contracts entered into in Victoria:

- identify any reserve contracts that have a term greater than 12 months
- include an explanation of why AEMO considered the term to be reasonably necessary to ensure the reliability of supply in the Victorian region

²⁴⁶ AEMC, *Enhancement to the RERT*, p. 216.

²⁴⁷ Once the final statement for reserve settlement has been provided. National Electricity Amendment (Enhancement to the Reliability and Emergency Reserve Trader) Rule 2019 No. 3, Cl 3.20.3(f).

- include an explanation of why AEMO considered the amount of reserve procured to be, for the first year of the term, reasonably necessary to address the relevant low reserve condition, and for the remainder of the term, reasonably necessary to ensure reliability of supply in the Victorian region.
- outline the basis on which AEMO had regard to the *RERT principles* when entering into the multi year contracts.

The requirement on AEMO to publish this information for multi-year contracts would place an increased level of accountability on AEMO's decision-making to enter into multi-year reserves contracts. This would increase the likelihood that multi-year contracts will only be entered into when there is a reasonable likelihood that they will result in lower costs for consumers.

The risk of spreading RERT costs to customers outside of Victoria

Finally, the Commission also noted the concern that RERT costs incurred in Victoria under multi-year contracting could spread to customers in other regions. The Commission noted that theoretically it may be possible for a retailer operating across multiple regions to spread the costs of the RERT that were procured and used in one region to customers in the other region.

However, the Commission considered this situation to be unlikely to occur in practice since:

- Under the NER, RERT costs are recovered by fees imposed on market customers in the region where emergency reserves have been procured and/or dispatched.
- The cost per market customer is proportional to the energy consumption of that customer in the relevant region during certain time periods. Therefore, most RERT costs fall on higher energy using consumers.
- The NER do not prescribe how market customers then recover these costs from end users. The Commission understands that commercial and industrial customers have direct cost pass through provisions for RERT in their contracts. This therefore minimises the share of costs that would have to be recovered from other customers.
- For residential customers, the Victorian Default Offer (VDO) determination explicitly states a cost per customer for RERT- which is \$3.24 per customer for the 2020 calendar year based on RERT costs from the previous year. This is a good example and potentially sets a benchmark for cost reflective tariffs. Given that this is included in the VDO, then this again minimises the share of costs that would need to be recovered from other customers.

Therefore, given there is typically explicit recognition of RERT costs for commercial and industrial customers, as well as residential customers, in Victoria, the potential for RERT not to be recovered from Victorian consumers (and so recovered from consumers in other states) is very low. Also, that the competitive forces in the retail market would reduce the extent to which any minimal RERT costs are passed onto customers in other regions. For example, if Victorian retailers face a cost for RERT, but a Queensland retailer does not, it would be hard for that Victorian retailer to recover RERT costs from Queensland customers since the increased cost would diminish its competitiveness in that state.

The Commission also considered the suggestion that the AER be required to monitor and ensure compliance in relation to preventing RERT costs from being recovered from customers outside of Victoria. Regulatory provisions to prevent retailers from recovering RERT costs from customers in other jurisdiction are likely to be costly to enforce effectively. As the risk of RERT costs being recovered from customers outside of Victoria is low, the Commission concluded that the costs of such a compliance regime would be likely to outweigh the benefits.

5.4 Stakeholder views of draft rule assessment

Stakeholder feedback on the Commission's assessment of direct costs was mixed. Some stakeholders supported the elements of the draft rule that were designed to minimise the risks of direct costs associated with multi-year contracting. For example, the EUAA stated that:²⁴⁸

The EUAA appreciates the substantial analysis undertaken by the AEMC as part of its considerations on this matter. We believe that the Draft Rule addresses many of the concerns we expressed in our initial submission on the need to optimise direct and indirect costs. This will be achieved through greater constraints on contracting than was requested and significantly improved transparency around AEMO's actions as they apply an expanded suite of provisions from the final enhancement to the RERT rule change.

However, many of these stakeholders were of the view that the draft rule has not sufficiently minimised the risks and suggested further changes be made to the draft rule.

The next sections present stakeholders' views on the draft determination under the following headings:

- supportive comments from stakeholders about the potential for multi-year contracts to reduce direct costs
- concern that the direct costs of RERT will rise
- concerns regarding the appropriateness of the trigger
- suggestions for further restrictions on the types of multi-year RERT contracts that AEMO can enter into
- support for greater transparency and accountability.

5.4.1 Supportive comments from stakeholders about the potential for multi-year contracting to reduce direct costs

Some stakeholders agreed with the assessment in the draft determination that multi-year contracts could provide a means for AEMO to procure long-notice RERT at lower direct costs. For example, AEMO agreed that acquiring emergency reserves under a multi-year contract could lead to lower direct costs for consumers. AEMO stated that "as there is a likelihood that the RERT may be needed for the coming few years in Victoria", multi-year contracting would

²⁴⁸ EUAA submission to the draft determination, p. 1

allow AEMO to procure the reserves it needs "to minimise load-shedding at a minimal cost to Victorian consumers".²⁴⁹

The Victorian Government was also of the view that the draft rule would be likely to lower costs of emergency reserves.²⁵⁰ A similar point was made by AGL.²⁵¹

We agree with AEMO and the Victorian Government that there may be notable benefits arising from multi-year contracts such as creating a greater pool of potential suppliers with more diverse system capabilities, along with potentially lower cost solutions when the contract is required for multiple years.

5.4.2 Concern that the direct costs of RERT will rise

While stakeholders noted that the draft determination included measures to minimise the risk of increasing direct costs, several stakeholders remain concerned that the derogation would increase direct costs for consumers.

The AEC, EUAA and ERM Power remained concerned that multi-year contracts could lead to unnecessary procurement of RERT and thereby increase direct costs for consumers. According to the AEC, the cheaper RERT contracts over multiple years is "no salve for the fact that the RERT contracts may not be necessary in later years".²⁵²

The EUAA raised similar concerns.²⁵³

Some stakeholders highlighted that the costs of out-of-market RERT were higher than those of in-market reserves:

- Snowy Hydro stated that multi-year RERT may cost less than a single year contract of RERT, but that the costs would be higher than a market based response.²⁵⁴
- Similarly, the EUAA said that costs of out-of-market RERT were not capped at the market price cap (MPC) like the costs for in-market reserves.
- ERM Power stated that RERT activation payments were high and were a multiple of the MPC.²⁵⁵

In response to the Commission's assessment that RERT providers would be able to offer RERT at a lower per unit cost under the derogation, the AEC stated that vendors offering cheaper multi-year contracts is a logical consequence of the reduced risk vendors face by being able to contract their output for multiple years, and is not unexpected.²⁵⁶

ERM Power stated that shortfalls are in some cases best managed by the efficient use of medium or short notice RERT rather than using long notice RERT. This is because the use of

249 AEMO submission to the draft determination, p.2.

250 Victorian Government submission to the draft determination, p.1.

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

252 AEC submission to the draft determination, p.2.

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

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

255 ERM Power submission to the draft determination, p.3.

256 AEC submission to the draft determination, p 2.

short and medium notice RERT ensures that consumers are not burdened by unnecessary RERT costs as costs are only incurred by consumers on an "as required" basis.²⁵⁷ ERM Power suggested that shortfalls in reserves were efficiently managed during the events that occurred on the 4 January and 23 January (in NSW), through the use of short notice RERT. ERM Power noted that in these cases, only "the efficient costs of RERT 'as dispatched' was paid for by consumers on an 'as required' basis".²⁵⁸

5.4.3

Concerns regarding the appropriateness of the trigger

There was support in the submissions to the draft determination from stakeholders for the trigger for multi-year contracting to be a breach of the reliability standard within 12 months (a LRC declaration). However, several stakeholders, considered the trigger for years two and three of a multi-year contract did not sufficiently limit costs to consumers, and that it needed to be tightened in order to fully minimise the risks of increasing direct costs. While most of the feedback related to the trigger for years two and three of a contract, AEMO's clarification about the inputs into the LRC declaration relate to the appropriateness of the trigger for year one of a multi-year contract.

The inputs into an LRC declaration (trigger for year one of a multi-year contract)

AEMO's submission includes advice as to its intention in relation to the LRC declaration inputs. This is important as an LRC declaration is relevant to the trigger for RERT multi-year contracts²⁵⁹. AEMO has stated that the Reliability Standard Implementation Guidelines (RSIG) are currently 'inaccurate' in relation to the MTPASA determining an LRC declaration. AEMO outlined that it requires flexibility to take into consideration a range of forecasts (additional to the MTPASA) and so intends to amend its RSIG guidelines at the next opportunity.²⁶⁰ The Commission notes that this is subject to mandatory consultation as discussed in the next section.

The trigger for years two and three of a multi-year contract

The AEC said that while the requirement that an LRC declaration in the first year of a multi-year contract is "supported as a reasonable test for whether contracts should be sought it does not remove the possibility that RERT in later years may be a wasted cost, or better addressed via more flexible, short-term RERT contracts"²⁶¹.

The EUAA maintained it was concerned that under the Commission's draft Rule, an LRC declaration was only required for the first year of a multi-year contract. According to the EUAA, this would result in significant residual risk for consumers and consumers having to pay an "insurance premium".²⁶²

257 ERM Power submission to the draft determination, pp. 6-7.

258 ERM Power submission to the draft determination, p7.

259 The LRC declaration is also relevant to the procurement trigger for single year long notice RERT more generally following the commencement of the *Enhancement to the RERT* rule on 26 March 2020)

260 AEMO submission on the draft determination, p.1.

261 AEC submission to the draft determination, p 2.

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

AGL said it would prefer that multi-year contracting only occur where there are successive years of a LRC. It considered the requirements under the draft rule where AEMO can enter multi-year Victorian contracts where the second and third years of the contracts are "reasonably necessary to ensure reliability of supply" is too broad to ensure RERT is contracted at the right level. AGL said that should the Commission consider that the procurement threshold be lower after the first year then, as a minimum, the requirement should be for AEMO to be reasonably satisfied "that there is a material factor (not captured in the reliability forecasts) that poses a heightened risk that the reliability standard is not being met".²⁶³

ERM Power's concerns mirrored those of AGL. ERM Power considered the absence of a required LRC declaration in years two and three would allow AEMO to "sign up to a three-year contract at potentially higher overall costs to consumers".²⁶⁴ ERM Power suggested that "the period covered by a multi-year RERT contract should be supported by a declared LRC condition in each of the twelve-month periods".²⁶⁵ ERM Power added that where "the LRC exists for only a short time frame, particularly where any forecast reliability gap is only relatively small", the shortfall would be more efficiently managed through the use of medium and short notice RERT.²⁶⁶

AEMO suggested a clarification to the draft rule 9.5.3(b)(2) to clarify that an LRC declaration is only needed for year one of a multi-year contract in order for a multi-year contract to be triggered, and that years two and three are subject to another more flexible threshold.²⁶⁷

5.4.4

Suggestions for further restrictions on the types of multi-year RERT contracts AEMO can enter into

Two stakeholders suggested additional conditions should be placed on AEMO before it enters into a multi-year RERT contract to minimise the costs of these contracts:

- ERM Power suggested that the final rule should contain a provision that "the cost of any availability or facility fees for a multi-year contract must be less than or equal to these costs for a twelve-month contract" in order to ensure that consumers only incur the efficient costs.²⁶⁸ ERM Power said that in the absence of such a provision there would be no savings to consumers from multi-year contracting and it is the total costs to consumers overall that must be considered, not just a yearly per MW provision cost.²⁶⁹
- According to AGL some types of RERT providers would not need to spread their fixed costs over a longer period. AGL suggested that, as there is no benefit from procuring these providers on a multi-year basis, that these types of RERT providers should not be

²⁶³ AGL submission to the draft determination, p.2.

²⁶⁴ ERM Power submission to the draft determination, p.6.

²⁶⁵ ERM Power submission to the draft determination, p. 6.

²⁶⁶ ERM Power draft determination, p.6.

²⁶⁷ AEMO submission to the draft determination, pp.2-3

²⁶⁸ ERM Power submission to the draft determination , p.7

²⁶⁹ ERM Power submission to the draft determination, p.7.

contracted for more than 12 months. This is because there is "no material saving in costs".²⁷⁰

5.4.5 Support for greater transparency and accountability

Stakeholders welcomed the increased transparency and accountability measures included in the draft rule.

For example, the Victorian Government said that it "welcomes the measures that support greater transparency and accountability of RERT contracts".²⁷¹ AEMO said that it was supportive of the draft rule, and noted the additional obligations on AEMO relating to quarterly RERT reporting for any multi-year Victorian contracts entered into, and the requirement to update the RERT Procedures to accommodate the rule change.²⁷² Snowy Hydro said that it supports the Commission's proposal to enhance information provision by AEMO. It said that the provisions set by the Commission "will provide confidence to the market and full transparency".²⁷³

However, some considered these measures did not go far enough. For example, the EUAA and ERM Power called for enhanced transparency of AEMO's considerations and decisions.

The EUAA said that although it supported the draft rules' transparency provisions, it needed to "have confidence that AEMO is actually following those provisions".²⁷⁴ The EUAA proposed that consideration should be given to the AER undertaking a review, on an annual basis, of AEMO's RERT procurement process to ensure it meets the stated objectives.²⁷⁵

Ideally the level of disclosure should enable market participants to undertake their own analysis of the results and be able to judge if AEMO has achieved its objective of efficient RERT procurement to meet the NEO and in particular to meeting the Commissions Assessment Framework – promoting reliability in the power system, minimising market distortions and minimising direct costs. However, we recognise that that confidentiality constraints are likely to mean that market participants will not have sufficient information. For this reason, we recommend consideration of the AER undertaking a review, on an annual basis, of AEMO's RERT procurement process to ensure it meets the stated objectives. This is similar to the role the AER plays in many other areas of market governance e.g. reviewing AEMO's conclusions on whether the RRO should be triggered.

EUAA added "although there is always a balance between transparency and confidentiality, it needs to be biased to the former when consumers are being asked to pick up the bill".²⁷⁶

270 AGL submission to the draft determination, p.3

271 DELWP submission to the draft determination, p.1.

272 AEMO submission to the draft determination, p.2.

273 Snowy Hydro submission to the draft determination, p.3.

274 EUAA submission to the draft determination, p. 4.

275 EUAA submission to the draft determination, p. 4.

276 EUAA submission to the draft determination, p. 3.

ERM Power noted that the reporting requirements were intended to provide some level of confidence to consumers that AEMO has acted in their best interests. However, ERM Power was concerned that there is “no independent scrutiny on behalf of consumers that AEMO’s RERT contracting decisions align with an outcome that consumers support”.²⁷⁷ Specifically:²⁷⁸

“If consumers disagree with AEMO’s actions, there is currently no framework for them to alter AEMO’s actions, either in the present, or in the future, other than a lengthy rule change process.”

To address these concerns, ERM Power suggested that, prior to entering into a multi-year contract, AEMO should be required to submit all the relevant information to the AER for review and approval.²⁷⁹

5.5 Commission's assessment for final determination

Given the importance of providing a supply of electricity that is both reliable and affordable, the Commission has considered the impact that the introduction of multi-year contracting could have on direct costs. A key risk that stakeholders highlighted in submissions is that multi-year contracting could lead to AEMO procuring unnecessary volumes of RERT or types of RERT that is overly expensive and this would increase costs, which would be passed onto consumers.

The feedback from stakeholders on the draft determination can be divided into three categories:

- The first category is feedback that is opposed to the introduction of multi-year contracting in principle because the costs of RERT are high.
- The second category comprises feedback calling for tightening of the elements of the rule to further protect against direct costs increasing. Proposals include changes to the trigger for AEMO entering into multi-year contracts; further restrictions of the types of contracts that AEMO can enter into; and further transparency and accountability measures.
- The third category concerns clarifications to the drafting of the rule.

The Commission's assessment of these three categories of issues focus on addressing the following questions:

- Do the costs of the RERT indicate multi-year contracting would be too costly?
- Is the trigger appropriate (includes suggestions for changes that range from clarifications to changes to the trigger for years two and three of a multi-year contract)
- Are further restrictions on the types of multi-year contracts required?
- Are the transparency and accountability elements of the rule appropriate?

²⁷⁷ ERM Power submission to the draft determination, p. 8.

²⁷⁸ ERM power submission to the draft determination, p. 9.

²⁷⁹ ERM commented that the AER currently serves as a safeguard in many areas of the gas and electricity markets ensuring only efficient costs are allocated to consumers. ERM Power further explained that during this stage, the information regarding the proposed RERT contract would be subject to confidentiality provisions and disclosed to consumers. In the ERM Power's view, this process would instil greater confidence in consumers that only efficient costs are being passed onto them. ERM Power submission to the draft determination, p. 9

5.5.1

Do the costs of the RERT indicate multi-year contracting will be too costly?

The Commission notes that several stakeholders are opposed in principle to the expanded procurement of RERT because they consider this will increase cost impacts on customers. The Commission considered the following three key issues about RERT costs that were raised in submissions:

- multi-year contracts of RERT is a more expensive option than an in-market responses to reliability shortfalls
- the costs of long-notice RERT can be multiples of the MPC and this indicates that the costs of multi-year contracts of RERT will be high
- short and medium notice RERT should be used instead of long-notice RERT and multi-year contracts because under these mechanisms the customer is only charged when the RERT is used.

The Commission considered the concern that providing AEMO with the option of multi-year contracting for a limited time in Victoria would result in an expanded procurement of RERT with the increased costs being borne by customers, and that this would be more costly than an in-market response. The Commission notes the concern about the costs of the RERT and the preference for in-market responses to reliability shortfalls. It agrees that in-market mechanisms should be prioritised over out-of-market mechanisms given the market is better placed to deliver efficient outcomes. Nonetheless, the RERT is a necessary part of the reliability framework that is to be used as a last resort where the market fails and shortfalls arise. The Commission considers that the final rule is consistent with the reliability framework, which prioritises the use of in-market reserves ahead of RERT.

The Commission also considered the view that RERT costs can be extremely high and multiples of the MPC up to the VCR (from 26 March 2020). It is interesting to note the costs associated with recent activation of the RERT.

ERM Power commented that the events of 4 January and 23 January 2020 in New South Wales showed efficient management of reserve shortfalls in New South Wales through the use of short-notice RERT. The unit costs of RERT for these events on 4 January and 23 January 2020 were \$31,318/MWh and \$19,344/MWh (respectively), which are above the MPC of (\$14,700 per MWh).²⁸⁰

The Commission notes AEMO has reported that the average amount payable by AEMO for the RERT activated in Victoria on 30 December was \$14,148.12 per MWh, which is below the MPC (\$14,700 per MWh) and the average VCR for Victoria (\$41,210 per MWh).²⁸² The Commission also notes that this costing does not include the \$1.15 million in long notice RERT availability charges paid by AEMO during the 4th quarter of 2019.²⁸³

AEMO will need to consider all RERT costs (that is, availability, pre availability and dispatch costs) against the average estimated VCR, following the full commencement of the *Enhancement to the RERT* rule on the 26 March 2020. This is in respect of the requirement

²⁸⁰ AEMO, Estimated payments and Volumes for RERT activation on 4 January 2020, p.1.

²⁸² AEMO, 2019 Q4 RERT Report, p. 3.

²⁸³ AEMO, 2019 Q4 RERT Report, p. 6.

on AEMO to have regard to the following new RERT principle when entering into RERT contracts: "the average amount payable by AEMO under reserve contracts for each MWh of reserves for a region should not exceed the estimated average VCR for that region."²⁸⁴

The Commission has also considered the view that short and medium notice RERT should be used instead of long notice RERT because long notice RERT involve the payment of availability charges which are passed onto consumers, regardless of whether the RERT was used. There are operational reasons why AEMO requires long notice RERT to be contracted ahead of a shortfall. These operational reasons relate to having the appropriate volume and types of RERT available should a shortfall materialise. Only relying on short and medium notice RERT may mean that AEMO are not able to contract the volume of RERT it needs at the lowest possible cost. The Commission notes that RERT has been activated in Victoria for the past three consecutive summers. As this trend could continue as the market transitions, the option to reduce direct costs through multi-year contracting may prove to be valuable in the short to medium term in Victoria. The time limited nature of the derogation limits the impact on direct costs in the long term. In the context of the RERT being used more regularly, short and medium notice RERT, that can have very high activation charges, may not always be the most cost effective option²⁸⁵.

5.5.2

Is the trigger appropriate?

The trigger in the final rule is as follows: AEMO must not enter into a multi-year contract unless it has declared an LRC for the region, and more than 12 months prior to the identified shortfall. Accordingly, the shortfall identified in the LRC declaration must occur within the first 12 months of the contract. Notably, there was no requirement in the draft rule for the LRC declaration to apply beyond the first year of the multi-year contract.

In addition to complying with the trigger prior to entering into reserve contracts, AEMO must ensure that the term of a multi-year contract is no more than is reasonably necessary to ensure reliability of supply in Victoria (and must not, in any event, be more than 3 years).

The Commission has considered the following three issues regarding the appropriateness of the trigger:

- the appropriateness of the LRC trigger for year one of a multi-year contract in light of AEMO's clarification about the LRC inputs
- the appropriateness of the trigger for years two and three of a multi-year contract
- whether AEMO's suggestion for minor drafting changes in relation to the requirement for an LRC declaration should be adopted.

AEMO's clarification regarding the LRC trigger

The Commission notes AEMO's intention to amend the RSIG to expand the types of inputs into an LRC declaration. The RSIG currently indicates that MT-PASA is the primary tool used

²⁸⁴ Clause 3.20.2(b)(3) NER (post 26 March 2020)

²⁸⁵ See Appendix C listing the recent more frequent use of the RERT

for determining reliability shortfalls and AEMO is in favour of the guidelines also stating that the ESOO can be an input.²⁸⁶

The Commission has considered whether this proposal from AEMO weakens the design of the trigger. It has concluded that the trigger is still based on a breach of the reliability standard and notes that the market operator has discretion and flexibility as to how to operationalize the reliability standard, subject to consultation. The Commission would encourage stakeholders who would like to have input into what drives a LRC declaration to participate in the consultation that AEMO is required to undertake for amending the RSIG. Under the NER, AEMO will need to consult with the Reliability Panel, Registered participants and other interested parties in accordance with the Rules consultation procedures.²⁸⁷

The appropriateness of the trigger for years two and three of a multi-year contract

The Commission has considered the following two suggestions regarding the trigger for years two and three of a multi-year contract:

- that an LRC declaration should be required for each of the 12 month periods under a multi-year contract
- that the test that the contract length be based on what is "reasonably necessary for maintaining reliability of supply in Victoria" should be changed to a test that includes a materiality component.

The Commission considers that as there is a test for the need for emergency reserves during the second and third year of a contract, the Commission does not consider the derogation leads to significant residual risks for consumers as suggested by some stakeholders. The requirement for AEMO to determine the length of the contract based on what is "reasonably necessary" provides AEMO with flexibility to make its own judgement as to whether a multi-year contract is needed and would be the best option for providing an affordable and reliable supply to consumers. The AEMC considers that as market operator, AEMO is well-placed to make this judgement. In addition, the Commission notes that AEMO is to have regard to the RERT principles, which include that the actions AEMO takes should aim to maximise the effectiveness of reserve contracts at the least cost to end use consumers of electricity.

Further, the Commission is of the view that requiring an LRC trigger for each 12 month period of a multi-year contract would significantly limit AEMO's discretion regarding the appropriate length of the contracts. Placing strict restrictions on the trigger for procurement as suggested by some stakeholders could limit AEMO's ability to enter into multi-year contracts where they are likely to lead to lower costs for consumers. The Commission therefore does not support the requirements for an LRC declaration for each of the 12 month periods of a multi-year contract and considers that the final rule sufficiently balance the need to provide AEMO with sufficient flexibility in procuring reserves to manage reliability shortfalls while minimising the cost impacts on customers.

²⁸⁶ AEMO, Reliability standard Implementation Guideline, p.12.

²⁸⁷ Clause 3.9.3D (c) of the NER.

The Commission has also considered the suggestion from AGL, that in order for AEMO to procure multi-year reserves, AEMO should have to be reasonably satisfied "that there is a material factor (not captured in the reliability forecasts) that poses a heightened risk that the reliability standard is not being met".²⁸⁸ In the Commission's view, a requirement to consider what is reasonably necessary to ensure reliability of supply serves as a greater restriction on AEMO than a requirement to be satisfied of a material factor. Further, the Commission considers the "reasonably necessary" test is appropriate as it is consistent with AEMO's obligations elsewhere in rule 3.20. A materiality based test would be harder to implement due to the need to consider the meaning of material. Additionally, the reporting requirements which require AEMO to explain its reasoning for choosing multi-year contracts would cover the need for AEMO to have material reasons or factors that justify the use multi-year contracts.

The Commission therefore considers that, for the purposes of this derogation in Victoria, the trigger requirements as set out in the draft are sufficient and remain appropriate for minimising the risks of AEMO procuring unnecessary amounts of RERT or RERT that is unjustifiably costly on a per unit basis.

Should the minor changes to the drafting of the trigger be adopted?

Finally, as suggested by AEMO, the final rule clarifies that the obligation of AEMO under clause 3.20.3(a) of the NER (post-26 March) to ensure that reliability of supply meets the reliability standard be made subject to the requirements relating to multi-year contracts under clause 9.5.3 of the final rule.

5.5.3

Are further restrictions on the types of multi-year contracts required?

The Commission has considered the following additional restrictions suggested by the stakeholders on the types of multi-year contracts that AEMO could enter into. These are that:

- AEMO can only enter into multi-year contracts where the cost of any availability or facility fees for a multi-year contract is less than or equal to these costs for a twelve-month contract
- AEMO cannot enter into a multi-year contract with a provider that does not have availability costs (that through spreading over a longer contract would deliver cheaper per unit RERT).

The Commission considers that requiring the total availability charges over the course of a multi-year contract (\$/MW) to be the same or lower than the availability charge for single year contract (\$/MW), as suggested by ERM Power, would set a threshold that may be too high for some potential RERT providers and could disqualify bids of RERT contracts that could be cheaper than single year RERT contracts over the same period. It could also lead to unintended consequences, as some RERT providers could respond by changing their charging structure in a way that does not lead to overall lower costs of reserves.

²⁸⁸ AGL submission to the draft determination, p.2

The Commission has considered the suggestion from AGL that AEMO should be prevented from entering into multi-year RERT contracts with potential RERT providers that face low availability costs.

The Commission as a matter of course adopts a technology-neutral approach in reviewing the NER and assessing rule change requests. To maximise efficiency, its strong preference is to provide appropriate frameworks and constraints, within which various technologies can compete.

The Commission notes that the purpose of introducing multi-year contracting is to provide AEMO with a means of procuring RERT at lower direct costs through enabling upfront costs to be spread over multiple years. Under the final rule, AEMO is required to consider the RERT principles for minimising costs and is also subject to reporting requirements in relation to its decision-making (including a new requirement outlined later this chapter).

The Commission therefore considers the additional restrictions suggested by ERM Power and AGL are not required, and could have the effect of unnecessarily restricting AEMO's ability to use multi-year contracts and preventing AEMO from procuring more cost effective RERT for customers in Victoria.

5.5.4

Are the transparency and accountability elements relating to minimising direct costs appropriate?

The Commission notes the general stakeholder support for the transparency requirements in the draft rule. The Commission also notes that two stakeholder submissions expressed the view that additional accountability measures are required in order to increase the likelihood that multi-year contracts of RERT will be in the best interest of consumers. These suggestions are that:

1. the AER have an approval role in relation to multi-year contracts
2. the AER conduct an annual review of RERT procurement.

The Commission has considered the following questions in its analysis of these two proposals:

- what is the AER's approach to compliance?
- should AEMO be required to submit proposals to enter into multi-year contracts with the AER for approval?
- should the AER be required to conduct an annual review of AEMO's RERT procurement?
- are additional reporting requirements required to increase the likelihood that multi-year contracts will be cost effective?

AER's approach to compliance

The primary source of the AER's functions and powers in relation to the NEM are set out in section 15 of the NEL which includes broad regulatory power to monitor compliance by market participants, investigation of breaches of the NEL, wholesale market monitoring and reporting functions, and other corresponding powers necessary to carry out its functions.

Relevant to this rule, the AER also has general compliance and monitoring functions in relation to AEMO.²⁸⁹

Given the breadth of its responsibilities, the AER takes a risk-based approach in discharging its compliance obligations, in line with compliance priorities. These are currently set on an annual basis in consultation with stakeholders, including consumer groups. The AER is also able to take compliance action outside of the priority areas when the need arises.

Proposal for the AER to have an approval role in relation to multi-year contracts

The Commission has considered ERM Power's suggestion that AEMO should be required to submit all the relevant information to the AER for review and approval *before* entering into a multi-year contract.

The Commission recognises the concern that transparency about RERT procurement can be limited by commercial-in-confidence considerations. It is understood that because of this, ERM Power has suggested the AER be given a pre-approval role regarding multi-year contracts to provide an "independent safeguard" for consumers.²⁹⁰

The proposal of pre-approval by the AER of multi-year contracts would suggest that an additional level of scrutiny is required on AEMO's discharge of functions in this particular area, such that the benefits of the AER undertaking this approval function would outweigh the costs. As multi-year contracts under the provisions proposed in this derogation have not been in place previously, there is no evidence to suggest that this pre-approval step is warranted in regards to the benefits (eg avoidance of inefficient decisions) would outweigh the costs (eg resources and additional time in the process). In applying a risk based approach to compliance, it is open to the AER to decide that a proactive compliance approach is warranted. Therefore, the Commission does not consider such an additional obligation would be appropriate.

An analogy can also be drawn with the RRO - while the AER approves AEMO's request for a T-3 or T-1 instrument to be made, this results in obligations on market participants. The AER is not required under that mechanism to approve the procurer of last resort contracts that AEMO may enter into.

From a legal perspective, while additional functions can be conferred on the AER through the NEL, such as the AER's role in relation to the RRO, the Commission notes that the RRO is a NEM-wide and permanent feature of the framework. For mechanisms like the RRO it would be appropriate for the NEL to be more prescriptive in relation to what compliance activities the AER undertakes. However, such an approach is not considered necessary for this derogation, that applies only in Victoria and only for a time limited period.

In any case, this option would not be available via an amendment to the NEL. The primary source of the AER's functions and powers in relation to the NEM are set out in s 15 of the NEL. These do not confer on the AER a general power to *pre-approve* AEMO's procurement

²⁸⁹ The AER's general compliance and monitoring functions in relation to AEMO are set out at s15(1)(a) of the NEL.

²⁹⁰ ERM Power submission to the draft determination, page 8.

decisions in relation to the RERT. The Commission has power to make Rules that confer functions on the AER.²⁹¹ However, those Rules must be consistent with the AER's existing functions and powers under the NEL. This is mandated by schedule 2, s. 42 of the NEL, which requires that the NEL are to be construed so as not to exceed the legislative power of the Legislature of the South Australia jurisdiction or the power conferred by the NEL.

On the basis of the points outlined above, the Commission has decided not to include this suggestion in the final rule.

Proposal for the AER to conduct an annual review of RERT procurement

The Commission notes the EUAA's suggestion for the AER to assess AEMO's RERT procurement process on a yearly basis.

If the EUAA is suggesting that the AER conduct an annual review in relation to all RERT procurement, rather than just multi-year contracting in Victoria, then the proposal is beyond the scope of this rule change. (The scope of this rule change process is limited to considerations relating to multi-year contracts in Victoria and does not extend to the procurement of RERT in general.)

However, if the EUAA is suggesting that the AER should conduct an annual review of AEMO's procurement of multi-year contracts only then the Commission's view is as follows.

As discussed above, the AER has discretion as to the compliance activities it undertakes, however it is able to take action where issues warrant investigation.

Additionally, the AER recommends that to proactively foster compliance, it is good practice for obligations to be clear and unambiguous. On this basis, the Commission considers the inclusion of the further reporting requirement — for AEMO to report, each quarter, on how multi-year contracts are more cost effective than consecutive single year contracts -- aids clarity regarding the obligations on AEMO and will also improve the level of information available to the public in its quarterly reports.

This requirement will complement the other reporting requirements including that AEMO report on how it had regard to the RERT principle regarding minimising impacts on customer bills. The Commission considers that this will help to ensure that AEMO provides a greater level of information as to its justification for entering into a multi-year contract, allowing for greater scrutiny of its decision-making.

The Commission also considers that as the AER has a general compliance function, it would be an unusual outcome for the rules to require the AER to report annually on compliance specifically with respect of AEMO's actions in exercising multi-year RERT contracts. This is because the AER would be monitoring this anyway under its NEL compliance function, and potentially through its wholesale monitoring report.

Therefore, the Commission considers that enhancing AEMO's reporting obligations is a more preferable option to requiring the AER to conduct annual reviews.

Are any other reporting requirements needed?

²⁹¹ Section 34(3)(c) of the NEL

The Commission has considered whether the reporting requirements could be strengthened to further encourage AEMO to only enter into multi-year contracts where they have lower direct costs.

As noted in the draft determination, the Commission considers that the reporting requirement on AEMO to publicly explain each quarter how it had regard to the RERT principles would encourage AEMO to only enter multi-year contracts where it could demonstrate they were the more cost-effective option. The inclusion of this requirement in the draft determination was welcomed by stakeholders, including AEMO.

The Commission is of the view that providing for a greater level of detail in AEMO's reports, regarding cost considerations, would enhance transparency and accountability. The Commission has determined to add a related, additional reporting obligation -- that AEMO explain in its RERT quarterly report whether the total payments made by AEMO under a multi-year contract are likely to be lower than the aggregate payments it would have made under single-year contracts for the same period.

The final rule therefore includes the following reporting requirements with respect to multi-year contracts:

- identify any reserve contracts that have a term greater than 12 months
- include an explanation of why AEMO considered the:
 - term to be reasonably necessary to ensure the reliability of supply in the Victorian region and
 - amount of reserve procured to be, for the first year of the term, reasonably necessary to address the relevant low reserve condition, and for the remainder of the term, reasonably necessary to ensure reliability of supply in the Victorian region
 - how AEMO had regard to the potential impact of, and interaction with, the retailer reliability obligation (in relation to the term and volume of a multi-year contract)²⁹²
- outline the basis on which AEMO had regard to the *RERT principles* when entering into the multi year contracts
- outline how total payments made by AEMO under the multi-year contract are likely to be lower than the aggregate payments that AEMO would have made under single year RERT contracts for the same period of time.

5.6

Conclusion

The Commission has assessed the potential for multi-year contracting in Victoria to increase direct costs. This assessment was completed as part of the Commission's determination as to whether the final rule will or is likely to contribute to the achievement of the NEO, and additionally, whether the final rule better contributes to the achievement of the NEO than that proposed by the Victorian Government.

²⁹² Refer to Chapter 7 for discussion about the inclusion of this reporting requirement

The Commission has concluded that the introduction of multi-year contracting, subject to appropriate checks and balances, should assist in minimising the direct costs of long notice RERT for a limited time in Victoria, given the particular circumstances in that region at this time. The confidential data provided to the Commission by AEMO indicates the potential for reducing direct costs through the introduction of multi-year contracting. As explained in the draft assessment, under multi-year contracting, RERT providers may be able to offer in emergency reserves at a lower per unit cost.

A key risk that stakeholders highlighted in submissions is that multi-year contracting may lead to AEMO procuring unnecessary volumes of RERT and this would increase costs that would be passed onto consumers. This risk was also analysed in the draft determination. The Commission maintains its view that there are sufficient restrictions in the final rule to minimise this risk. These include:

- the trigger based on a breach of the reliability standard
- the requirement for AEMO to consider what is reasonably necessary for maintaining reliability of supply in Victoria when determining the length of the contract and the volume of RERT procured
- the RERT principles that AEMO must have regard to before making a decision to enter to a multi-year contract (these are the principles to minimise impacts on customer bills and market distortions, and for the costs to be under VCR)
- the transparency requirements for AEMO to publish in the RERT quarterly reports justifications for any decision to enter into a multi-year contract.

However, as noted above, the Commission has also concluded that an additional reporting requirement to those set out in the draft rule be included in this final determination and rule, specific to ensuring multi-year contracts are more cost effective. This will strengthen transparency and accountability in procuring and using multi-year contracts under the derogation.

6 INDIRECT COSTS

In assessing whether the Victorian government's proposed rule is likely to contribute to the achievement of the NEO, the Commission has considered the principle of minimising market distortions in order to minimise indirect costs.

In the draft determination, the Commission assessed the potential for multi-year contracting in Victoria to distort the wholesale electricity market. The impacts were examined from the perspective of both the operation of the wholesale market and investment in the market over time. The Commission concluded that the potential for indirect costs arising from the draft rule were likely to be minimised due to the:

- changes to apply under the *Enhancement to the RERT* final rule
- time-limited nature of this derogation
- Commission's view that the type of resource providers that may become more cost competitive with regard to the RERT would be unlikely to participate in the wholesale market as they would be largely supply-side.

The Commission continues to hold these views in the final determination.

This chapter outlines:

- the Victorian Government's views put forward in the rule change proposal regarding the potential distortionary impacts of multi-year RERT contracting on the wholesale market
- stakeholders' submissions to the consultation paper
- the Commission's analysis and conclusions in the draft determination
- stakeholders' responses to the draft determination
- the Commission's final analysis and conclusions.

6.1 Victorian Government's views

The Victorian Government considered that "the derogation will not adversely impact investment in the NEM, given its limited scale and duration (to 2025)".²⁹³ Additionally, "the derogation does not propose adjustment to the reliability standard or reliability settings which underpin long-term investment incentives".²⁹⁴

6.2 Stakeholder views to the consultation paper

In responding to the consultation paper, stakeholders expressed divergent views on whether multi-year contracts could impose indirect costs on consumers.

Views that consider the proposed derogation would have a distortionary impact on the market

²⁹³ Rule change request, p.8

²⁹⁴ Rule change request, p.8

Several stakeholders considered that emergency reserves under multi-year contracts would distort the market. They stated that a three year RERT would be seen as a long-term, lower risk alternative to participating in the market. Hence, it would result in a less secure wholesale market, discourage investment, worsen reliability and increase costs – not just costs of the RERT but also wholesale electricity prices.²⁹⁵ For example, ERM Power stated that the²⁹⁶:

"prospect of receiving availability payments as well as the potential for dispatch payments above the market price cap may prove to be generous enough that some supply which would otherwise be planning 'on market' investment choosing not to enter the market and instead attempt to negotiate a RERT contract with AEMO for Victoria".

As this capacity would remain "off-market", multi-year contracts would lead to increased wholesale prices and thereby increased costs for consumers.²⁹⁷

Snowy Hydro noted that, if generators do not have an opportunity to earn an adequate return on their investment, they would have no choice but to reduce their level of investment. As a consequence, AEMO would need to continually grow its shadow fleet to fill the gap.²⁹⁸

Engie, EUAA and ERM Power also stated that the proposed derogation could also have a distortionary impact on the operation of the RRO.²⁹⁹ Engie considered that multi-year contracting could reduce the ability for retailers to attract in-market capacity (either to meet RRO obligations or simply to manage their own risk) by making RERT contracts even more attractive an option for capacity providers.³⁰⁰

Stakeholders reiterated that the primary mechanism for meeting reliability in the NEM is the market, and not the RERT mechanism.³⁰¹ Snowy Hydro submitted that the proposal was contrary to the design of the NEM and that a multi-year RERT represented a de-facto capacity market.³⁰²

The AER suggested the AEMC consider whether the proposed rule change would lead to a deferral of investment or demand side participation, noting that under the proposal once the RERT mechanism is triggered the maximum three-year contract duration would remain regardless of the ESOO unserved energy forecasts in subsequent years.³⁰³

Views that consider the proposed derogation would not have a distortionary impact on the market

295 Submissions to consultation paper: AEC, p. 2; Snowy Hydro, p. 1; ENGIE, p. 2; AGL, p. 2, Origin Energy, p. 1; EUAA, p. 9; ERM Power, p. 2.

296 ERM Power submission to the consultation paper, p.2.

297 ERM Power submission to the consultation paper, p.2.

298 Snowy Hydro submission to the consultation paper, p.2.

299 Submissions, to the consultation paper: ERM Power, p. 5; EUAA, p. 9; Engie, p. 2.

300 Engie submission to the consultation of the paper, p.2.

301 Submissions to the consultation paper: EUAA, p. 3, AGL, p.1.

302 Snowy Hydro, submission to consultation paper, p. 1.

303 AER, submission to consultation paper, p. 1.

Both AEMO and Mondo did not consider it likely that the derogation would lead to market distortions.³⁰⁴ AEMO "believes that resource providers that participate in the LNRERT [long notice RERT] are unlikely, for various reasons, to participate as a Market Participant in the NEM".³⁰⁵ AEMO also noted that it would make decisions on multi-year contracting in a transparent and considered manner "in accordance with the RERT principles and guideline", which include the principle of minimising market distortions.³⁰⁶

Mondo considered that incentives in wholesale market are muted due to several reasons. It stated that:³⁰⁷

- Under stable conditions, Mondo broadly supports the operation of the market as the default means for encouraging new generation.
- The ongoing transition to new generation technologies, unpredictability of operational demand growth, and uncertain policy environment is likely to create medium term risks that may mute efficient market-based investment in new supply.

6.3 Draft rule determination assessment

The Commission's draft determination analysed:

- from an economic perspective, efficient electricity markets and the risk of distortionary outcomes
- the potential for multi-year contracting in Victoria to distort the real time operation of the wholesale market, and investment in supply and demand response.

6.3.1 Efficient electricity markets and indirect costs

For an economic perspective, efficient electricity markets are characterised by the:

- provision of, and investment in, electricity services at lowest possible cost through employing the least-cost combination of inputs
- ability of the market to readily adapt to changing supply and demand conditions over the long-term.

When making changes to the regulatory framework, the Commission bears in mind that any distortion to efficient market outcomes should be minimised or mitigated. That is, any regulatory changes should not detract from the ability of the wholesale market to provide for the least cost combination of supply-side and demand-side options at any point in time.

In considering whether the proposal set out in the rule change request would create indirect costs, the key aspects are whether allowing multi-year contracting would:

- detract from the efficient provision of, and investment in, electricity services in the wholesale market

304 Mondo submission to the consultation paper, p.2.

305 AEMO submission to the consultation paper, p.5.

306 *ibid.*

307 Mondo, submission to consultation paper, p. 2.

- reduce the ability of the market to adapt to changes in supply and demand over the long term.

To the extent that indirect costs would arise, these need to be weighed against the potential benefits to consumers of allowing multi-year contracts under the RERT. Allowing multi year contracts to be entered into under the RERT would be in the long term interests of consumers if the savings with regard to the provision of emergency reserves outweighed the potential for inefficient outcomes in the wholesale market.

6.3.2 Indirect costs and the Enhancement to the RERT rule change

The Commission assessed the potential for multi-year contracting in Victoria to distort the wholesale electricity market in the context of the new suite of RERT requirements, introduced in the *Enhancement to the RERT* rule. The question of indirect costs was considered at length in the *Enhancement to the RERT* rule change process. The final *Enhancement to the RERT* rule introduced a number of provisions targeted at minimising indirect costs. These provisions focus on making sure the wholesale market remains the primary means by which reliability is delivered, so that reliability is delivered at lowest cost to consumers.

For example, in relation to scheduled emergency reserve providers (scheduled generators or scheduled loads), from 26 March 2020, AEMO must not enter into reserve contracts with scheduled emergency reserve providers that:

- have been in the energy market at any time during the 12 months prior to signing the contract
- are likely to participate in the energy market at any time during the term of the contract.

For unscheduled emergency reserves (such as demand response that is not scheduled, or non-scheduled generators), the out-of-market provisions remain largely unchanged. That is, unscheduled reserves cannot be both in RERT and in the energy market *for the trading intervals to which the RERT contract relates*.

However, the *Enhancement to the RERT* rule also introduced:

- an obligation on both scheduled and unscheduled RERT providers to comply with the respective out-of-market provisions
- a requirement on AEMO to provide clear guidance on how it intends to implement the out-of-market provisions for unscheduled emergency reserves.

In addition, the final rule:

- Introduced a definition for estimated average VCR (in \$/MWh) for the purposes of emergency reserves (i.e. the estimated average VCR determined by AEMO, but derived from the VCR values developed by the AER and having regard to the RERT guidelines).
- Introduced a new RERT principle that the average amount payable by AEMO under emergency reserve contracts for each MWh of emergency reserves for a region should not exceed the estimated average VCR for that region.
- Required the RERT guidelines to provide more guidance on how the average VCR would be determined by AEMO.

- Required AEMO to report on how it will determine the average VCR. The final rule aimed to minimise the direct costs of the RERT, noting that the costs of the RERT are ultimately borne by consumers.

6.3.3

Potential for indirect costs

How might indirect costs arise in regards to the long notice RERT?

As highlighted by stakeholders, the buying and selling of electricity through the contract and wholesale markets is the main mechanism through which the desired level of reliability is delivered in the NEM. Market participants make investment and operational decisions based on these market signals.

Prices in the wholesale market provide signals for generation and demand-side resources to be built and dispatched. Wholesale prices also give the market information about the balance of supply and demand across different places and times. As the expected supply-demand balance tightens, spot prices will rise which will inform operational decisions and provide an incentive for entry and expansion, addressing any potential reliability problems as or before they arise.

Strategic reserves, like the RERT, can have the potential to distort the operational and investment incentives of wholesale market participants, creating indirect costs. For example, if market participants consider that they might get a higher payment from participating in a strategic reserve than they would in the wholesale market, they may withdraw capacity that is currently available in the wholesale market to participate in RERT. This could increase wholesale prices and create reliability concerns due to a lack of supply of reserves within the wholesale market.

In the draft determination, the Commission assessed the potential for indirect costs to arise in the wholesale market as a result of the rule change proposal, both in terms of the operation of the wholesale market and the investment signals provided by the market.

Operational time frames

The spot price in the wholesale market signals to market participants the value of additional supply. In the draft determination the Commission did not consider it likely that allowing for multi-year RERT contracts for a limited time in Victoria would result in distortions to the wholesale market over operational time frames. The Commission considered that:

- Multi-year contracts would not change the way the RERT is operationalised. Regardless of whether long-notice RERT contracts have been signed for 12 months or three years, the impact on the real time operation of the wholesale market should remain unchanged.
- The use of the RERT should not distort the wholesale prices. Through intervention pricing (which applies when the RERT is dispatched), the wholesale price signal should be maintained for all market participants. In effect, the wholesale market should still provide the same operational signal to market participants.

As such, the Commission did not consider that extending the duration of RERT contracts from one to up to three years in Victoria for a time-limited period would likely result in a material

distortion to the real-time operation of the wholesale market. To the extent that the dispatch of the RERT has real-time implications for market participants, this would be the case irrespective of contract duration.

Investment time-frames

In the draft determination, the Commission noted concerns raised by some stakeholders that the proposed derogation could lead to indirect costs by reducing incentives for market participants to invest in the market or respond to market signals, and thereby provide reliability at minimal cost. Stakeholders stated that the derogation would lead to generators being denied opportunities to capture periods of peak spot prices, leading to investors choosing to invest in out-of-market RERT assets instead of within the Victorian wholesale market.

The Commission examined the extent of potential impacts of the proposed derogation on investment signals. The Commission concluded that while the derogation proposal could impact investment signals, these impacts are likely to be minimised due to a number of factors, explained below.

Enhancement to the RERT has already limited indirect costs

The changes made under the *Enhancement to the RERT* final rule should have the effect of minimising indirect costs because:

- Participants already in the market cannot enter into RERT contracts (either single or multi-year contracts) until they have been out of the market for 12 months.
- AEMO must have regard to the costs of emergency reserves, relative to the VCR, when entering into RERT contracts.
- The trigger for entering into emergency reserve contracts under the *Enhancement to the RERT* rule would also apply to multi-year contracts. That is, AEMO could not enter into a long notice RERT contract unless there is a declaration of a LRC, with the only inputs into that trigger being the USE forecasts in AEMO's MTPASA and/or AEMO's EAAP.³⁰⁸

As these constraints would still operate in relation to multi-year contracts,³⁰⁹ the Commission considered that increased indirect costs from the derogation would be minimised.

The Commission considered that the changes made under the *Enhancement to the RERT* rule should provide clear signals to the wholesale market that the RERT is an out-of-market service that is only to be used once market responses have been exhausted. This means that the market, through investment in new generation or demand response in market if required, would remain the primary means by which reliability is met in the NEM, and at lowest cost to consumers. The draft rule also preserved the use of the RERT as a last resort during times of

³⁰⁸ The Commission notes that AEMO has stated in its submission to the draft determination that it intends to revise the RSIG in the future to modify the trigger for a LRC. The Commission notes that the NER requires that this process be subject to public consultation.

³⁰⁹ As noted in Chapter 5, the trigger only needs to be met for the first year. The trigger for RERT procurement in years two and three of a multi-year contract are also discussed in that chapter.

market failure, and so would not be contrary to the design of the market as suggested by some stakeholders.

The Commission noted concerns raised by stakeholders that the draft rule would lead to existing in-market demand response providers going out-of-market to participate in RERT and becoming unavailable to retailers. As noted above under the provisions introduced in the *Enhancement to the RERT* rule unscheduled market reserves (such as demand response) can not participate in the RERT and also be subject to another arrangements for the relevant trading intervals for which the RERT may be required. The *Enhancement to the RERT* rule also introduced an obligation on participants to comply with the out-of-market provisions. Therefore, the Commission considered that these provisions should minimise demand response moving out of the market to provide emergency reserves.

These constraints already limit the incentives for potential providers to partake in the behaviour described above, such as withdrawing capacity from the wholesale market. Importantly, they do not restrict providers from moving from providing emergency reserves into the wholesale market once the RERT contract is completed (or in the case of unscheduled reserves, after the end of the trading intervals to which the contract relates). This is appropriate as reliability is best met through the market first and foremost - the Commission would want to encourage reserve providers to move from the RERT, into the market delivering reliability at a lower cost to consumers.

In the draft determination, the Commission stated that in some ways multi-year contracting could be considered similar to the aims of the ARENA demand response trial, which was to pay upfront payments to participants to cover the upfront costs of making customers demand response ready. Some investors may choose to invest in the RERT for the life of the contract or derogation (whichever comes first), and then choose to move their assets into the market once a RERT contract or the derogation ends. This is particularly the case since the derogation is time limited (discussed below).

Time limited derogation

In the draft determination the Commission considered that the time-limited nature of the derogation would also act to minimise indirect costs. The risk of investors choosing to invest in assets to provide RERT instead of investing in the market would be reduced due to the time limited nature of the derogation.. Investors are unlikely to gain adequate certainty regarding cost recovery. This is especially the case for supply-side resources (such as peaking plant), since RERT contracts under the draft proposal will last up to three years, which may not give adequate certainty on cost-recovery vis-à-vis entering into three-year or longer cap or swap contracts offered within the market.

The Commission considered that these effects would be strengthened given the RRO. If there were to be a shortage of in market reserves, then the RRO would likely be triggered. Retailers would then need to meet their obligations under the RRO and seek to enter into contracts either with existing participants or new investments. Given there would be a shortage of in market reserves compared to what is being demanded, prices for such in-

market reserves would increase. This would therefore make offering contracts into the market more attractive, again minimising indirect costs.

Type of generation and providers

Having regard to confidential information provided by AEMO, the Commission considered that the type of resource providers that would become more cost competitive if multi-year contracts were offered under the RERT would be unlikely to participate in the market because they would be largely supply-side. This is consistent with information that the Victorian Government included in its derogation request. It is also supported by AEMO's view in its submission to the consultation paper where it noted that RERT providers that participate in the long-notice RERT are unlikely, for various reasons, to participate as a market participant in the NEM. Therefore, AEMO considers that having the flexibility to procure long-notice RERT over multiple years would not result in indirect costs to the wholesale electricity market.

Diesel generation sets could be expected to provide emergency reserves fairly easily,³¹⁰ but they would not necessarily have the characteristics to operate in the market on an enduring basis. The Commission noted that this is supported by there being a relatively small amount of diesel fuelled scheduled generation in market, with none registered in the Victorian market. This could further minimise indirect costs.

6.3.4

Reasons for previous exclusion of multi-year contracting

In its final determination for the *Enhancement to the RERT* rule change request, the Commission decided against allowing long term RERT contracts over multiple years. While allowing for emergency reserves to be procured for multiple years could potentially result in cheaper emergency reserves being provided, the Commission considered in that determination that the increased costs to consumers would outweigh these potential benefits. This was because:³¹¹

- consumers would pay for emergency reserves every year regardless of whether or not the emergency reserves are required — thereby increasing electricity costs.
- it would likely disincentivise investment in the market which would lead to higher wholesale market prices, further increasing costs to consumers.

However, in the final determination, the Commission recognised that some jurisdictions consider there needs to be interim measures in place in order for them to have higher levels of emergency reserves to assist in managing the system as the transition takes place.³¹²

While the Commission decided against multi-year contracting for the *Enhancement to the RERT* rule, the issue considered at that time was different from what was proposed by the Victorian Government under this rule change request. Under the *Enhancement to the RERT* rule change process, the Commission considered the proposition of introducing multi-year contracting for emergency reserves as a permanent feature of the NEM reliability framework.

³¹⁰ This was partly why these were installed in South Australia following the system black.

³¹¹ AEMC, *Enhancement to the RERT*, May 2019, pp. x-xi.

³¹² *ibid.*

This derogation proposal sought a time limited derogation applicable to one jurisdiction in the NEM. The draft determination also included principles to guide AEMO when entering into multi-year contracts.

6.4 Stakeholder views on draft rule determination

Stakeholders' feedback on the draft determination addressed the potential for the draft rule to:

- negatively impact investment decisions and market efficiency, by increasing investment uncertainty and inequity, attracting in-market reserves out of market including fast starting diesel and gas fuelled reciprocating engines and impacting the development of a demand response mechanism
- distort the market in other NEM regions
- further mitigate market distortions should the final rule provide for a shorter duration derogation.

Derogation would negatively impact investment decisions and market efficiency

Several arguments put forward by stakeholders suggested that the Commission's assessment of the potential for market distortion needed revisiting.

Snowy Hydro argued that the Commission did not sufficiently recognise the significant long-term indirect costs and that these would overshadow any marginal reductions in direct costs.³¹³ In Snowy Hydro's view, longer duration contracts for emergency reserves would undermine market efficiency by adding uncertainty to investment decisions in generation in the wholesale market, notwithstanding the limited duration of the derogation and intervention pricing. Snowy Hydro considers that "it is inequitable that out-of-market generation contracted by the RERT should be entitled to earn revenues based on the value of customer reliability, whereas market participants, who ultimately underwrite security of supply by risking their own capital, are limited to the much lower market price cap."³¹⁴

The EUAA also considered that the derogation could increase the risk of market failure as it would likely increase the chance that reserves currently in the wholesale market would move out of the market into RERT contracts. This would lead to more RERT interventions in the market and "overpaying for resources that would have been in the market in any case".³¹⁵

Regarding resource types, ERM Power considered that the Commission has incorrect assumptions regarding the types of resources that participate in the RERT compared to the wholesale market. ERM Power considers that: "fast starting diesel or gas fuelled reciprocating engine generators of small to medium capacity operating in banks of multiple units may potentially meet the future requirement of a wholesale energy market that requires flexible

313 Snowy Hydro submission to the draft determination, p. 3

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

315 EUAA submission to the draft determination.

plant operation as dispatchable back up supply resources to intermittent generation", including after five-minute settlement is implemented.³¹⁶

The AEC is also concerned that the vendors would see multi-year contracts as an alternative to the market itself.³¹⁷ AEC regards the willingness of vendors to offer terms over multiple years as an indication of the potential for market distortion.³¹⁸

ERM Power also noted its concern about the potential for the derogation to delay the commencement of or distort the operation of the Commission's proposed Demand Response Mechanism (DRM), as the draft rule would allow multi-year long-notice RERT contracts to extend into the period where the proposed DRM may well be active.³¹⁹

Distortional impacts in other NEM regions

AGL expressed concern that the distortional impacts of the derogation would not be contained to the Victorian region. According to AGL, distortional impacts would arise if RERT providers that face low availability charges could secure multi-year RERT contracts. AGL also expressed concern about increased market uncertainty if new supply-side resources participating in multi-year contracts would then gain a financial advantage in the wholesale market over existing generators. AGL is concerned that distortional impacts "will often flow through to other NEM jurisdictions, further degrading market signals and potentially further undermining long term reliability across the NEM".³²⁰

Impact of the length of the derogation

A number of stakeholders argued for a shorter derogation period to minimise the risk of distortions to the market arising from this derogation. For example, AGL considered that making the length of the derogation as short as possible would help to minimise any distortive effect on the market.³²¹ These and other stakeholder comments on the length of the derogation, including those relating to the RRO, are summarised and analysed in the next chapter.

6.5 Final determination assessment

The Commission has examined the following issues that were raised in response to the draft determination:

- The extent to which some supply-side RERT resources, such as fast-starting diesel or gas fuelled reciprocating engine generators, could participate in the market in the future.
- Whether the derogation would encourage resources currently in the market to leave the market to provide RERT emergency reserves.

³¹⁶ ERM Power submission to draft determination, p. 8.

³¹⁷ AEC submission to the draft determination, p. 2.

³¹⁸ AEC submission to the draft determination.

³¹⁹ ERM Power draft determination, p. 4.

³²⁰ AGL submission to the draft determination, p. 3.

³²¹ AGL submission to the draft determination.

- The potential for multi-year contracting to delay the commencement of, or compromise the efficiency of, a future two-sided market and/or demand response mechanism.
- Whether the draft rule, if made, could lead to market distortions in other NEM regions.

The extent to which supply-side RERT resources could participate in the market in the future

As outlined previously, in its draft determination the Commission's view was that the resources that would become cost competitive as a result of multi-year contracts would be largely supply-side and therefore unlikely to participate in the wholesale market. The view that supply-side resources are the resource most likely to become cost competitive under multi-year RERT contracts was formed on the basis of confidential information provided by AEMO. It was also consistent with information provided to the Victorian Government and views expressed by AEMO.

ERM Power has proposed that fast-starting diesel or gas fuelled reciprocating engine generators could potentially participate in the market to meet the market need for flexible plant operation, including after five-minute settlement is implemented.

The Commission has re-examined this issue and concluded that while limited fast-start plant (such as reciprocating-engine plant) currently exists in the NEM (Barker Inlet in South Australia is the only fast-start plant that has entered the NEM in the past few years), this type of plant may be likely to increasingly enter the wholesale market in the future, given the likely changes in the profile of intra-day electricity demand and the move to five-minute settlement.³²²

When considering whether to participate in the RERT vis-a-vis the wholesale market, investors in fast-start plant would be likely to consider a number of aspects, which would include the revenue it would expect from the wholesale market versus the RERT (that is, the potential for payments under the RERT, as well as the possibility it would be activated; versus the expected payments from the spot and contract markets). The Commission has considered these factors and still considers it is more likely that such a participant would compete in the wholesale market, and not the RERT, given the participants earnings from the wholesale market are likely to be more certain (though lower in value) compared to higher, but more uncertain payments from the RERT.

Relatedly, AGL was concerned that uncertainty facing current market participants would increase as *new* supply side providers could be "subsidised" by first participating in RERT multi-year contracts and then enter the wholesale market.³²³ This potential issue arises for new supply side resources as they would not be restricted from immediately participating in multi-year RERT contracts since they would not already be covered by the out-of-market provisions applying to scheduled generators (given they were new resources).

In addition to the Commission's view above (that it is more likely that such a participant would compete in the wholesale market rather than the RERT), the Commission considers

³²² Rai, A., Esplin, R., Nunn, O., and Nelson, T., The times they are a changin': current and future trends in electricity demand and supply, *The Electricity Journal*, 32(6), pp. 24-32, <https://doi.org/10.1016/j.tej.2019.05.017>

³²³ AGL submission to the draft determination, p.3.

that, if new fast-start plant were to first participate in multi-year contracts, then the size of any potential financial "benefit" accruing to them would likely be small taking into account the capital cost of fast-start plant relative to the availability charges historically paid for RERT.

Potential for market distortions from 'in market' capacity moving 'out of market' for the RERT

The Commission remains of the view, expressed in the draft determination, that the provisions introduced under the *Enhancement to the RERT* final rule will limit the incentives for generation, storage or demand response to withdraw from the market in order to participate in long notice RERT including in multi-year contracts. Key provisions of that final rule are to come into effect from 26 March 2020 and will apply to multi-year contracts under this final rule. Specifically:

- Scheduled generation and scheduled load that is already in the market cannot enter into RERT contracts (either single or multi-year contracts), until they have been out of the market for 12 months.
- Unscheduled emergency reserves (such as demand response that is not scheduled, or non-scheduled generators), cannot be both in RERT and in the wholesale market, for the trading intervals to which the RERT contract relates.
- A requirement on AEMO to provide clear guidance on how it intends to implement the out-of-market provisions for unscheduled emergency reserves.
- An obligation on both scheduled and unscheduled RERT providers to comply with the respective out-of-market provisions.
- The RERT remains a last resort mechanism to be used once market responses have been exhausted

Future demand response mechanism and a two-sided market

The Commission is investigating the development of a two-sided market, in conjunction with the ESB and the other market bodies. The Commission is also progressing a related rule change for the introduction of a demand response mechanism. Consideration is being given to how a wholesale demand response mechanism would help with transitioning to a two-sided market in the future.

The potential for distortionary impacts on other NEM regions

Regarding the argument that the derogation could lead to distortionary impacts on other (neighbouring) NEM regions, the Commission is of the view any such distortions are likely to be small, if not non-existent. Specifically:

- The potential distortions within Victoria are considered small, particularly given the derogation is time limited, and so by extension so are the potential distortions in the neighbouring regions of South Australia, Tasmania and New South Wales.
- The size of any potential distortion to the neighbouring region is influenced by expected interconnector flows *at the times the RERT is likely to be activated*. RERT reserves have historically been activated at peak-demand times. Expected interconnector flows at peak-demand times therefore determine the potential RERT reserves that could be shared

inter-regionally, in turn influencing the amount of RERT procured in each of the neighbouring regions. It follows that the smaller the expected interconnector flow at RERT activation times, the lower the extent of inter-regional RERT sharing (as emergency reserves are unable to be transferred between regions), and therefore the lower the potential inter-regional distortion caused by the RERT.

AEMO's 2019 ESOO noted Victorian imports from South Australia during historical USE periods in Victoria were on average 125 MW, barely one-sixth of the combined maximum Heywood-Murraylink interconnector capacity (720 MW). These lower inter-regional flows generally were not due to transmission limitations. Instead, they occurred because South Australia and Victoria have positively correlated peak demands due to correlated weather patterns.³²⁴ Given these limited flows, the potential for RERT resources in Victoria to be distortionary for the South Australian market is limited, both currently and under the derogation.

6.6 Conclusion

The Commission has assessed the potential for multi-year contracting in Victoria, as proposed, to distort the wholesale electricity market. This assessment was completed as part of the Commission's determination as to whether the final rule will or is likely to contribute to the achievement of the NEO, and whether the final rule better contributes to the achievement of the NEO than that proposed by the Victorian Government. This is also discussed in Chapter 3.

The impacts have been examined from the perspective of both operational and investment timeframes.

The Commission remains of the view that the potential for indirect costs to arise from the rule are likely to be minimised due to the following factors:

- The changes made in the *Enhancement to the RERT* final rule.
- The Commission's view that the type of resource providers that may become more cost competitive as a result of the derogation would be unlikely to participate in the wholesale market as they would be largely supply-side.
- The limited potential for RERT resources in Victoria to be distortionary for the market in South Australia and other regions.
- The time-limited nature of the derogation (see next Chapter).

The final rule has also minimised the possibility of RERT multi-year contracts pulling resources, chiefly demand response, out of the market for periods covered by the RRO. This is discussed further in Chapter 7.

³²⁴ AEMO's 2019 ESOO also noted that, in over 80% of the periods of ESOO-modelled Victorian load shedding, S.A. is using all available resources to support itself and where possible, Victoria. Furthermore, in 12% of Victorian load shedding periods, S.A. is itself experiencing USE. AEMO's 2019 ESOO is available at https://aemo.com.au/-/media/Files/Electricity/NEM/Planning_and_Forecasting/NEM_ESOO/2019/2019-Electricity-Statement-of-Opportunities.pdf

7 DURATION OF DEROGATION

The Commission has considered the length (or duration) of the derogation with respect to the NEO by balancing the following principles:

- **Promoting reliability of the power system:** how long the derogation would need to be in place in order to address reliability issues in Victoria.
- **Minimising market distortions:** what duration would be the most appropriate for addressing reliability issues while also minimising market distortions and indirect costs.
- **Minimising direct costs:** what duration would best minimise direct costs and also improve AEMO's ability to manage reliability issues in Victoria.

In the consultation paper, the Commission sought stakeholder views on the proposed expiration date for the derogation of 30 June 2025. This was the expiration date that the Victorian Government requested in their rule change request. This allowed for multi-year contracts entered into in 2025 to be in place through to June 2028.

In response to stakeholder concerns about the proposed duration of the derogation, in the draft determination the Commission reduced the duration of the derogation to approximately three years, rather than five as proposed by the Victorian Government. Ending the derogation on 30 June 2023 would mean that the derogation expires prior to the 2023-24 summer, the reasoning being that this period would be covered by the RRO mechanism in Victoria. In order to provide flexibility to AEMO, the draft determination allowed for AEMO to enter into multi-year contracts that could cover the period up until June 2026, if reasonably necessary to maintain reliability of supply in Victoria.

This chapter outlines the:

- Victorian Government's views about the length of the derogation
- stakeholder views about the proposal in the consultation paper
- Commission's draft rule determination assessment regarding the derogation duration
- stakeholder views on the Commission's draft determination
- Commission's final assessment of these issues.

7.1 The Victorian Government's view

As outlined in Chapter 4, the Victorian Government stated in their derogation proposal that the state could face reliability problems in the short to medium term. The upcoming closure of the Liddell power station in 2022-2023 is said to represent "the next significant danger period for the Victorian supply reliability beyond the current forecast of shortfall and the coming online of new generation."³²⁵

The Victorian Government anticipated that supply reliability will be resolved over the longer term by other measures including:

- on market investment in generation and transmission augmentation

³²⁵ Victorian derogation proposal, pp.4-5.

- the Retailer Reliability Obligation; and
- the Energy Security Board's post-2025 Market Design for the NEM.³²⁶

The rule change request considered that the new measures contained in the *Enhancement to the RERT* would not be able to meet the immediate short-term reliability challenges in Victoria.³²⁷ Similarly, the Victorian Government considered that the market measures incorporated into the RRO, which came into effect on 1 July 2019, could not assist in resolving the shortages forecast for the 2019-20 summer peak period in Victoria as the RRO is a long-term solution to forecast capacity shortages.³²⁸

The Victorian Government therefore stated that "this derogation is a short-term measure designed to address a short-term reliability problem — consequently, it will expire after five years".³²⁹

7.2 Stakeholder views on consultation paper

In responding to the consultation paper stakeholders generally considered that the duration of the derogation should reflect the length of time that Victoria will experience reliability issues.

As noted in Chapter 4, while several stakeholders expressed concern about the introduction of multi year contracting in Victoria if it were to be permanent, some considered it acceptable as a short term measure in order to help address the reliability issues in the state. Others, such as EUAA and ERM Power noted that as proposed it is not a "short term derogation" as it would remain operational several years after closure of Liddell and the commencement of the RRO.

Several stakeholders noted that the RRO is available to address the reliability issues, and so the duration of the derogation should be reduced to take this into account.³³⁰ The AEC commented that if the 2020 ESOO triggers the RRO then it will be able to address reliability issues from the 2023-2024 summer. Therefore, the derogation should end in June 2023 (running for three years rather than five).³³¹

AGL and ERM Power noted that the proposed commencement of the Demand Response mechanism in June 2022 will also help to address reliability issues.³³²

Other options suggested by stakeholders for the derogation duration included:

- A derogation sunset period ending on 26 March 2020.³³³

³²⁶ *ibid*, p.8.

³²⁷ *Ibid*, pp.4-5. The key changes in the *Enhancement to the RERT* final rule come into effect from 26 March 2020 (after 2019-20 peak summer period).

³²⁸ *ibid*, p.5.

³²⁹ *Ibid*, p.4.

³³⁰ Submissions to the consultation paper: AEC, p. 4; ERM Power, p. 4; AGL, p. 2; AER, p. 2; Engie, p. 2.

³³¹ AEC submission to the consultation paper, 20 November 2019, p. 4.

³³² Submissions to the consultation paper: AGL, p. 2; ERM Power, p. 4.

³³³ Engie submission to the consultation paper, 21 November 2019, p. 3.

- Ending the derogation on 30 June 2023, and allowing three-year contracts to be signed up until 30 June 2022 and after that allowing two-year contracts to be signed up until 30 June 2023 – enabling contracts to be in place until 30 June 2025.³³⁴
- Ending the derogation on 30 June 2023, enabling contracts to be in place until 30 June 2026.³³⁵
- A mid-point review to assess where the AEMC could assess data and determine whether the derogation should continue.³³⁶

7.3 Draft rule determination assessment

The Commission determined in the draft rule that the derogation should end on 30 June 2023. Given the reliability challenges facing Victoria, the Commission proposed in the draft determination that AEMO should have the flexibility to enter into multi-year RERT contracts up until such time the RRO could next address reliability issues in Victoria, which is the 2023-24 summer peak.

As examined in Chapter 4, the Commission agreed that Victoria is facing a set of challenging reliability challenges in the short-medium term. As discussed in section 2.2.4, the RRO can only be triggered three years out of a forecast shortfall. As noted by some stakeholders, the 2019 ES00 did not forecast a breach of the standard after 2019-20. Thus, should circumstances in Victoria change or deteriorate such that the reliability standard in that state is forecast to be breached in the 2020-21 or 2022-23 summers, the RRO would not be able to address these shortfalls as it can only now be triggered for the 2023-24 summer peak period and beyond, based on AEMO's 2020 ES00.

Furthermore, in the draft determination the Commission's view was that the ability of AEMO to enter into multi-year contracts should end prior to the time at which, were the RRO to be triggered, retailers would be required to enter into contracts to meet their share of expected system peak demand. Otherwise, the time-frame for contracting for emergency reserves would overlap with the obligations and incentives market participants face under the RRO. If this were to occur it would diminish the incentives for liable entities to contract under the RRO in Victoria since AEMO would also be in the market at the same time procuring three year RERT contracts.

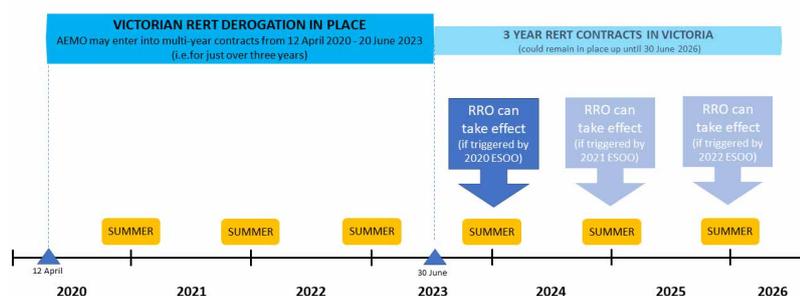
Therefore, the Commission considered that the ability of AEMO to enter into multi-year contracts in Victoria under the derogation should end in June 2023 (running for three years rather than five) as shown in the figure below.

334 ERM Power submission to the consultation paper, 21 November 2019, p. 3.

335 AEC submission to the consultation paper, 20 November 2019, p. 4.

336 Mondo submission to the consultation paper, 26 November 2019, p.3.

Figure 7.1: Duration of the Victorian jurisdiction derogation - RERT contracting



Source: AEMC

Note: RERT multi-year contracts would only extend beyond June 2023 where the trigger has been met and AEMO considers it to be reasonably necessary to maintain reliability of supply in Victoria.

The Commission also considered that AEMO should have the flexibility to enter into multi-year RERT contracts in the final year of the derogation — enabling them to be in place until June 2026 (for three-year contracts).

As illustrated in the figure, this was intended to provide for two summers post T-3, should the reliability outlook change given Victoria's reliability pressures. In other words, AEMO would have the flexibility to consider and enter into multi-year contracts, subject to the limitations on procurement and activation outlined in the preceding chapters, until June 2026.

In the draft determination, the Commission preferred a three-year duration to the AEMC conducting a mid-point review, as suggested by Mondo. The Commission considered there would be stronger incentive for the Victorian Government and AEMO to provide an evidenced-based case in the context of a new rule change proposing an extension of the derogation, rather than in response to the AEMC's calls for submissions to inform a mid-point review.

7.4 Stakeholder views on draft rule determination

On the whole stakeholders were supportive of the derogation having a shorter duration than the five years originally proposed by the Victorian Government in its rule change request. However, some stakeholders felt that the reduction to the duration of the derogation did not go far enough.

7.4.1 Stakeholder submissions supporting the derogation duration in the draft determination

In responding to the draft determination, the Victorian Government stated it supported the derogation being in place for a period of approximately three years and ending on 30 June 2023.³³⁷

"While the original rule change proposal asked for the derogation to be in place until 30 June 2025, the Victorian Government would expect that national reliability framework reforms will be in place by that time. The Victorian Government has sought to ensure that the current work being undertaken by the ESB, including the review of the Reliability Standard and the Post--2025 Market Design for the NEM, will provide additional mechanisms to improve reliability and reduce the need for multi-year contracts".

AEMO also agreed with the derogation being temporary. AEMO stated that it considers that the jurisdictional derogation for RERT contracting in Victoria is needed as an interim measure while the Retailer Reliability Obligation is embedded and the reliability standard metric is reviewed by the ESB, due to report back to the COAG Energy Council in March 2020.

While the AER and AGL have reservations about the interaction of multi-year contracting with the RRO (as detailed below), both stakeholders supported the reduced length of the derogation set out in the draft determination. AGL stated that:³³⁸

".....we are supportive of the derogation ceasing in July 2023, instead of June 2025 as proposed in the rule change request. We remain cautious of the potentially distortive impacts of multi-year RERT contracts and consider that making the length of the derogation as short as possible will help to minimise any distortive effect on the market."

7.4.2 Stakeholder submissions seeking changes to the proposed derogation duration

In response to the draft determination, stakeholders expressed concern about the potential for multi-year RERT contracts covering periods that would also be covered by the contracting periods (i.e. the period between a T-3 and T-1 reliability instrument) under the RRO, for two reasons. Firstly, if the RRO were to be operational for a particular period, stakeholders considered that this removed the justification for the same period to be covered by a multi-year contract of RERT. Secondly, an overlap would result in AEMO and market customers competing for the same resources and this would drive costs up, and these higher costs would be passed onto customers. These views are explained below in more detail.

Stakeholders also suggested a number of ways the rule could be amended to prevent an overlap between the RRO and multi-year contracts of RERT. These options are detailed below.

³³⁷ DELWP submission to the draft determination, p. 1.

³³⁸ AGL's submission to the draft determination, p. 1.

Finally, stakeholder also discussed the duration of the derogation in the context of the consideration of two-sided markets and the implementation of a demand response mechanism. Both of these matters are discussed in the previous chapter, Chapter 6.

Stakeholders suggested there is no need for RERT multi-year contracts to cover the contracting period between a T-3 and T-1 reliability instrument

The AEC's view was that if the RRO is triggered by the ESOO in consecutive years, starting with the 2020 ESOO, the RRO would cover periods from the 2023-24 summer and onwards. On this basis, the AEC considered it not justified for the derogation to allow for multi-year contracts to cover the period beyond June 2023.³³⁹ Snowy Hydro also emphasised the point that there would not be a need for a multi-year contract to cover the period after June 2023, as any reliability issues in Victoria would be addressed through market customers contracting to meet the RRO.³⁴⁰

Stakeholders suggested that an overlap of the contracting period between the T-3 and T-1 reliability instrument and RERT multi-year contract terms could drive up costs

ERM Power and the EUAA said that the overlap in time-frames would have the potential to place AEMO in direct competition with market customers for supply and demand side reserve contracts. This is because the rule would result in AEMO directly competing with market customers for contracts to cover the same period (i.e. market customers to cover a T-3 gap under the RRO and AEMO procuring multi-year contracts of emergency reserves for the RERT).

AGL noted that the duration of the derogation in the draft rule was designed to end multi-year contracting of RERT prior to the time at which, were the RRO to be triggered, retailers would be required to enter into contracts to meet their share of expected system peak demand. Otherwise, the time-frame would overlap with the obligations and incentives market participants face under the RRO. AGL stated that the "proposed rule potentially does not prevent the issues outlined by the AEMC for several years" and suggest changes to "preserve the RRO framework without unnecessarily limiting AEMO's ability to procure multi-year RERT up until 2023."³⁴¹

The EUAA also raised concerns that AEMO's willingness to pay more for reserves up to the VCR, compared to retailers who are willing to pay up to the much lower market price cap, might limit the amount of reserves that are available "in market" for the RRO.³⁴² ERM Power were also concerned about this, due to the potential for increasing costs and distortions to the wholesale market:³⁴³

In our view it is critical that RERT contracting activities by AEMO must not be allowed

339 AEC submission to the draft determination, page 1

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

341 AGL's submission to the draft determination, pp. 2-3

342 EUAA submission to the draft determination, p. 3.

343 ERM Power submission to the draft determination, p. 4.

to interfere with market customer contracting in the T-3 to T-1 time period. We believe, if a T-3 reliability instrument is triggered, then market frameworks must provide priority to allowing the reliability gap to be removed by 'in-market' resources. We believe that this will ensure the lowest costs to consumers over the long term..... Further it could divert capital funding away from the provision of in-market services to out-of-market services, due to AEMO's ability under this proposed RERT derogation to offer significant availability payments as well as dispatch activation payments which are a multiple of the market price cap on which the rate of return for in-market services may be calculated. This potential for diversion of capital funds away from in-market services was not considered as one of the potential market distortionary impacts in the Draft Determination but could significantly impact the costs of procurement to retailers and market customers, (and by extension, consumers), in fulfilling their RRO compliance obligations. It should also be noted that this diversion of capital funding may not be restricted only to the Victorian region, as capital funding may also be diverted from other regions due to the higher financial reward on offer by AEMO under this proposed multi-year RERT contracting framework.

Stakeholders suggested ways to amend the rule to avoid an overlap

Stakeholders proposed a number of ways to amend the rule to address the potential overlap. These included:

- an express exclusion from multi-year contracts of RERT from covering the same period as is covered by the RRO³⁴⁴
- a proposal that the duration of multi-year contracts depend on when a T-3 is triggered³⁴⁵
- that multi-year RERT contracts should not extend beyond 30 June 2023.³⁴⁶

AEMO suggested a clarification to the drafting of the rule

While AEMO did not seek a change to the policy position regarding the derogation duration, AEMO did request the following amendment to the draft rule 9.5.2:³⁴⁷

This draft rule states that rule 9.5 expires on 30 June 2023. We suggest that the rules clarify that multi-year Victorian contracts that are formed before 30 June 2023 but with terms that extend past that date are not affected by the expiry of rule 9.5, as noted in section 1.3 of the draft determination.

7.5 Final determination assessment

The Commission has examined the issues that were raised in response to the draft determination and considered whether the derogation duration as set out in the draft determination appropriately balances the following objectives of:

344 AGL submission to the draft determination, p. 3.

345 ERM Power and EUAA submissions to the draft determination

346 AEC and Snowy Hydro submissions to the draft determination.

347 AEMO submission to the draft determination, p.2.

- maintaining reliability in Victoria given the challenging circumstances currently present
- keeping downward pressure on consumers' bills and
- minimising market distortions.

As outlined in its draft determination, the Commission considers that ending the derogation on 30 June 2023 is appropriate for maintaining reliability in Victoria because the 2023-24 summer is the first summer that a T-3 instrument could apply, should AEMO identify a shortfall in the 2020 ESOO. If a T-3 is triggered at that time, market customers would be required to make sure they have adequate contracts in place to maintain reliability for the 2023-24 peak demand period and if market customers meet their obligations, other out of market responses may not be required.

The Commission has considered the view that there is no need for multi-year contracts that are entered into in the final year of the derogation to extend until June 2026 given that that is the period to which the RRO may apply. The Commission notes that while the 2020 ESOO may trigger a T-3 for the summer of 2023-24, and that future ESOO reports may subsequently trigger the RRO, this is not a given. As discussed in the draft determination, the RRO may not be triggered for this period and AEMO may reasonably consider it to be necessary to enter into multi-year contracts in order to maintain reliability of supply in Victoria.

It is possible that the situation could arise where a T-3 instrument under the RRO has not been triggered in Victoria but shortfalls are forecast for the coming one or two years. If for example in 2023, a reliability shortfall is forecast for the 2023-24 and 2024-25 periods (and these periods are not covered by the RRO), it may be more cost effective for AEMO to cover these using a multi-year contract rather than single year contracts. The Commission notes that this flexibility could prove to be important and therefore considers that it would not be appropriate to prevent a multi-year contract extending beyond June 2023 to up to June 2026.

The Commission has noted stakeholder concerns that there could be significant consequences for costs and the operation of the wholesale market were RERT multi-year contracts allowed to cover a period that is also subject to a T-3 reliability instrument. The Commission agrees that this could lead to competition for the same resources between AEMO and market customers, which could drive up costs that would be passed onto consumers as well as diminishing the ability of retailers to meet their obligations under the RRO.

The Commission also notes the view that in such a case, AEMO would have an advantage given it could pay providers of emergency reserves above the level of the market price cap and up to the VCR. The Commission is sympathetic to the view that this could have the effect of pulling resources, particularly demand response, out of market and hampering the ability of the RRO mechanism to address reliability cost-effectively, which could drive up costs for consumers.

The Commission also supports giving in-market reliability mechanisms priority over out-of-market mechanisms. This is because the competitive market is better placed to efficiently make investment decisions and allocate risk, and thereby supply electricity to consumers at the lowest cost.

Given the desire to preserve the integrity of in-market reliability mechanisms, such as the RRO, the Commission has considered whether the obligation placed on AEMO in the draft determination — that AEMO must give consideration as to whether the term of a multi-year contract is reasonably necessary to maintain reliability of supply in Victoria — would adequately protect against a contracting overlap with the RRO from occurring.

Arguably AEMO would not be likely to set a contract length that would cover a period that is being addressed by the RRO because it would be difficult to demonstrate that a multi-year contract would be required in addition to the RRO to maintain reliability. However, given the risk that multi-year contracts competing with the RRO could increase costs and market distortions, the Commission has decided in the final rule to introduce an additional requirement.

The final rule includes a requirement for AEMO to explicitly have regard to the RRO when AEMO considers both the term and the amount of reserve procured under a multi-year contract.

In addition, the final rule will require AEMO to report on how it had regard to the RRO in determining the term and amount of reserve procured under a multi-year contract, if relevant. A relevant circumstance would include the case where AEMO enters into a multi-year RERT contract in Victoria when, at the time of striking that contract, a T-3 instrument had been made. This information is to be included in the quarterly RERT reports.

The final rule also amends draft rule 9.5.2, as requested by AEMO, in order to clarify that multi-year contracts that are formed prior to the end date of the derogation, 30 June 2023 can continue past this date. The Commission considers the suggested amendment to be appropriate. Although not strictly necessary (as the AEMC cannot make rules that affect rights, privileges or liabilities acquired, accrued or incurred under the existing framework) we consider that this amendment would provide clarification for stakeholders as to the impact of the rule on the term of existing contracts.

7.6

Conclusions

The Commission has considered the length (or duration) of the derogation with respect to the NEO by balancing the following principles:

- **Promoting reliability of the power system:** how long the derogation would need to be in place in order to address reliability issues in Victoria.
- **Minimising market distortions:** what duration would be the most appropriate for addressing reliability issues while also minimising market distortions and indirect costs.
- **Minimising direct costs:** what duration would best minimise direct costs and also improve AEMO's ability to manage reliability issues in Victoria.

This assessment was completed as part of the Commission's determination as to whether the final rule will or is likely to contribute to the achievement of the NEO, and whether the final rule better contributes to the achievement of the NEO than that proposed by the Victorian Government. This is also discussed in Chapter 3.

Given the particular circumstances in Victoria at this time, the Commission has determined to make a final rule such that the derogation be in place for a period of approximately three years, rather than five, and end on 30 June 2023. This will give AEMO the ability to enter into multi-year contracts up until such time the RRO could be addressing reliability issues. Also, the term of multi-year contracts should be able to extend up to 30 June 2026 (provided the contract was entered into prior to 30 June 2023) to make sure AEMO has flexibility to address reliability issues in Victoria in the event the RRO is not triggered.

To address market efficiency and cost concerns about an overlap between multi-year contracts being in place for the RERT and contracts being held for the RRO, the final rule requires AEMO, to have regard to both what is reasonably necessary for maintaining reliability of supply in Victoria (for the purposes of the RERT), and also to any potential impact of, or interaction with, the RRO. For transparency, AEMO is to report on how it considered these obligations in each quarterly report.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ESB	Energy Security Board
Commission	See AEMC
EAAP	Energy Adequacy Assessment Projection
ESOO	Electricity Statement of Opportunities
LN RERT	Long notice RERT
LOR	Lack of reserve
LRC	Low reserve condition
MCE	Ministerial Council on Energy
MT-PASA	Medium Term Projected Assessment of System Adequacy
MW	MegaWatts
MWh	Megawatt hours
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
RERT	Reliability and Emergency Reserve Trader
RRO	Retailer Reliability Obligation
ST-PASA	Short Term Projected Assessment of System Adequacy
USE	Unserviced energy

A SUMMARY OF OTHER ISSUES RAISED IN SUBMISSIONS

This appendix sets out the issues raised in the three rounds of consultation on this rule change request and the AEMC's response to each issue. If an issue raised in a submission has been discussed in the main body of this document, it has not been included or cross-referenced in this appendix.

In making its final rule determination, the Commission has had regard to all submissions made during this rule change process, including those summarised in this appendix.

A.1 Summary of other issues raised in submissions to the consultation paper

Table A.1: Summary of other issues raised in response to the consultation paper

STAKEHOLDER	ISSUE	AEMC RESPONSE
AEC, Snowy Hydro, ENGIE, ERM Power, QEUN	The Commission should not be considering the derogation proposal as the issue was dealt with less than 12 months ago in the context of the Enhancement to the RERT rule.	The AEMC is not precluded from considering a rule change request on similar subject matter to a rule made or considered in the past 12 months. However, prior to doing so the AEMC must consider whether it would be appropriate. The Commission has considered this and concluded that there was a material change in circumstances with release of ESOO and its forecast for Victoria which included a breach of the reliability standard for the 2019-2020 summer as well as the increasing variability of reliability outcomes in Victoria.
Alinta Energy and Snowy Hydro	The proposed derogation adds further to the complexity and uncertainty facing industry in an already crowded policy and regulatory environment, characterised by several significant	The Commission agrees that there are currently a number of challenges in the NEM, however this cannot be a reason to avoid considering proposals that could assist in addressing the

STAKEHOLDER	ISSUE	AEMC RESPONSE
	reforms and regulatory changes under consideration or ready to be implemented.	reliability issues that arise in the context of the current transition.
AEC, ENGIE and Alinta Energy	The proposed derogation was contrary to a harmonised NEM.	Derogations are provided for under the NEL and are an important feature that allows for jurisdiction specific issues to be addressed.
Origin, EUAA, ERM Power, QEUN, the private resident from Victoria.	<p>The following alternatives to multi-year contracting of RERT were provided:</p> <ul style="list-style-type: none"> • That the Victorian Government acquire its own emergency reserves (Origin, EUAA and ERM Power) • That other innovative demand response initiatives be properly investigated (QEUN) • That technical changes are made to the way coal power stations operate and to create micro grids in weak parts of the grid (Victorian resident) 	While these suggestions have been noted, they are outside the of scope of this rule change request. These are being progressed through other processes on foot, such as the demand response mechanism rule changes and the ESB's work.
Victorian private resident	Concern was raised amount the emissions that would be generated from more supply side RERT procured under multi year contracts.	The Commission noted that the RERT is being called on more in recent times to address reliability issues arising in the context of a transition to a greater proportion of VRE. Multi-year contracting of RERT should be seen in the context of providing a response to managing this transition.
ERM Power	Emergency reserves under multi-year contracts be taken into account in AEMO's forecasts. In	The Commission considers that including emergency reserves, procured under multi-year

STAKEHOLDER	ISSUE	AEMC RESPONSE
	<p>particular, ERM Power raised concern that a greater volume of emergency reserves procured under multi-year contracting would not be taken into account of AEMO's assessment whether the RRO would be triggered.</p>	<p>contracts, in forecasts would not reflect the true status of the market. This would be distortionary because the signals to the market to respond to shortfalls would be muted. In addition, including emergency reserves in AEMO's RRO assessment could prevent the RRO from being triggered by including the emergency reserves in the assessment and this is unlikely to be a desirable outcome.</p>
ERM Power and Snowy Hydro	<p>Concern was raised that the implementation of a RERT rule which is specific to one jurisdiction would cause material complications for AEMO's management of power system operations across regions with asymmetric RERT arrangements.</p>	<p>The Commission notes that AEMO has not raised any concerns about complications for management of power system operations across regions with asymmetric RERT arrangements.</p>
AEC	<p>Due to the derogation only applying in Victoria, there is a risk that costs for consumers (either in Victoria or South Australia) will be increased by AEMO being constrained in its ability to purchase the most cost-effective reserves, due to geographic restrictions.</p>	<p>The proposed derogation does not constrain AEMO from acquiring cost effective RERT.</p>
Alinta Energy	<p>The derogation may be extended in the same way that other jurisdictional derogations have been.</p>	<p>The Commission notes that a challenging set of reliability challenges are currently being faced by Victoria that justify the need for a time-limited derogation.</p>
Alinta Energy	<p>The role of the RERT is not to attract investment in small-scale (or any type) of generation. The</p>	<p>The Commission agrees that the primary signal for investment is provided by the spot market</p>

STAKEHOLDER	ISSUE	AEMC RESPONSE
	primary signal for new investment in the NEM is that provided by spot market outcomes in the gross pool. The proposed rule will not enhance investor confidence in the Victorian generation market.	outcomes. As explained in Chapter 6, the Commission does not consider that derogation will lead to significant market distortions.
AGL	A multi-year contract under this derogation be provided with a different name, such as Victorian Emergency Reserves, to distinguish it from the normal operation of the RERT.	For the purposes of rule drafting, the Commission has referred to contracts under the derogation as <i>multi-year Victorian contracts</i> .
QUEN	It is crucial not to over-invest in generation assets or paid demand response as this over-investment will be borne by consumers for multiple years.	The Commission notes that decisions to invest in generation and demand response assets are made by market participants. Risks of over-investment in these assets will be largely borne by market participants.
ENGIE	If there is risk of tight supply-demand balance in Victoria, it follows that there should be a high chance of price cap events. These in turn should provide sufficient incentive for any cost-effective capacity to be built as a market-facing asset. If the rule change proponent considers that this incentive is not there, then this presents a more fundamental risk in the market.	The Commission notes the investment in the market driven by price signals provides better outcomes for consumers. The RERT mechanism serves as a last resort mechanism to maintain reliability when the market fails to respond.
ERM Power and AGL	The Commission should take into consideration the possible introduction of the wholesale demand response mechanism from July 2022, which could help address reliability challenges in	The Commission notes that is has recently extended the time frame for making a final determination for the wholesale demand response rule change request until 11 June

STAKEHOLDER	ISSUE	AEMC RESPONSE
	Victoria.	2020, with an expected second draft determination to be released in March 2020.

A.2 Summary of other issues raised in submissions to the draft determination

Table A.2: Summary of other issues raised in response to the draft determination

STAKEHOLDER	ISSUE	AEMC RESPONSE
Snowy Hydro	<p>It is disappointing that "the Commission should attempt to ascribe under-investment in new dispatchable capacity to the prospect of Snowy 2.0 in a highly simplified analysis." "It then deduces, from the apparent absence of such investment, and from its anecdotal conversations with unnamed 'investors', that the first reason for this lack of investment is the 'entry of Snowy 2.0'".</p> <p>"The most likely cause of under-investment is conspicuously absent from the Commission's analysis, namely the uncertainty caused by increased intervention, such as the RERT."</p>	<p>Information in the background section (Chapter 2) highlights factors other than investment signals (and indeed, investment signals other than Snowy 2.0) that may be impacting investment decisions at a broader level.</p> <p>The potential factors that may be deterring investment highlighted in section 2.4 are not listed in any particular order.</p>
AGL	Jurisdictional derogations generally add complexity to the market operation and increase regulatory burden on market bodies and market participants.	The Commission notes this view. The final rule seeks to minimise complexity to the greatest extent possible.
AGL	Upcoming market reforms and mechanisms are likely to address reliability concerns raised by the Victorian Government through existing policy developments	Concern about the potential for overlap between the RRO and multi-year contracts in addressed in Chapter 7. In relation to the ESB's post 2025

STAKEHOLDER	ISSUE	AEMC RESPONSE
	<p>such as the RRO and the Energy Security Board's (ESB) post 2025 review.</p>	<p>market design, the Commission notes that the review is currently under-way, with further milestones occurring throughout 2020.</p> <p>The AEMC is working with the ESB on these matters, but must consider the rule change request in front of it at this time, which seeks to address the challenging circumstances in Victoria in a timely manner.</p>
<p>Snowy Hydro</p>	<p>The RERT mechanism is non market based and there is a complete lack of transparency in both the tendering phase and also the cost of using the service, which is ultimately borne by customers.</p>	<p>The Commission is aware that the RERT is a non-market based mechanism of last resort and notes that the current reporting requirements and the new requirements due to come into effect from 26 March 2020 were put in under the Enhancement to the RERT rule change for the purpose of specifically increasing the transparency of the RERT. The Commission also notes the additional reporting requirements specific to multi-year contracting that have been included in the final rule.</p>
<p>AEC</p>	<p>Under Section 94(1)(c) of the National Electricity Law, for the AEMC to consider a rule change request, the subject matter of the request must not relate to a rule made in the 12 months immediately before the date of receipt of the rule change request.</p>	<p>The AEMC is not precluded from considering a rule change request on similar subject matter to rule made or considered in the past 12 months. However, prior to doing so the AEMC must consider whether it would be appropriate.</p> <p>The Commission has considered this and concluded that there was a material change in</p>

Rule determination

Victorian derogation - RERT contracting
12 March 2020

STAKEHOLDER	ISSUE	AEMC RESPONSE
		circumstances with release of ESOO and its forecast for Victoria which included a breach of the reliability standard for the 2019-2020 summer as well as the increasing variability of reliability outcomes in Victoria.

Source: Submissions to the draft determination

B 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.

B.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 the Honourable Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change, Minister for Solar Homes.

The Commission's reasons for making this final rule determination are set out in section 3.4.

The final rule, which is a more preferable rule, provides a time-limited jurisdictional derogation to allow AEMO to enter into multi-year reserve contracts (of up to three years) under the RERT mechanism in Victoria. A copy of the more preferable rule is attached to and published with this final rule determination. Its key features are described in section 3.4.

B.2 Power to make the rule

The Commission is satisfied that the more preferable rule falls within the subject matter about which the Commission may make rules. The more preferable rule falls within ss. 34(1)(a)(i) to (iii) and 34(1)(ab) of the NEL as it relates to regulating the operation of the NEM, the operation of the national electricity system for the purposes of the reliability of that system and the activities of persons participating in the NEM or involved in the operation of the national electricity system. Further, the more preferable rule falls within the matters set out in Schedule 1, item 6J of the NEL as it relates to the administration and exercise of the procurer of last resort (POLR) function by AEMO and related reporting, as the RERT is essentially the POLR function.

B.3 Commission's considerations

In assessing the rule change request the Commission considered:

- its powers under the NEL to make the rule
- the rule change request
- submissions received during first round consultation
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO
- confidential information provided by AEMO to the Commission
- recent AEMO reports covering reliability issues in Victoria, including the 2019 ESOO, the 2019 EAAP and the Summer Readiness 2019-20 Plan

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for this rule change request.³⁴⁸

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 the Australian Energy Market Operator (AEMO)'s declared network functions.³⁴⁹ The more preferable draft rule is compatible with AEMO's declared network functions because it is unrelated to those functions.

B.4 Civil penalties

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

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

B.5 Conduct provisions

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

The 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 COAG Energy Council that any of the proposed amendments made by the final rule be classified as conduct provisions.

³⁴⁸ Under s. 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy. On 1 July 2011, the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated council is now called the COAG Energy Council.

³⁴⁹ Section 91(8) of the NEL.

C USE OF THE RERT MECHANISM

Prior to 2017, AEMO had only entered into RERT contracts three times and it had never been dispatched. This changed in 2017, when AEMO entered into a number of emergency reserve contracts. Since that time, AEMO has used the RERT a number of times, including November 2017, January 2018, January 2019, December 2019 and most recently in January 2020. This increase in use of the RERT reflects the changing system needs, including a growing proportion of variable renewable generation, an aging fleet of thermal generation, a tightening supply-demand balance, peakier demand and higher temperature peaks. Below is a summary of the recent use of the RERT in Victoria.

November 2017

On 30 November 2017, RERT contracts were procured and dispatched in Victoria starting at 3:30pm and finishing at 9:20pm that same evening. AEMO activated 32 MW from three reserve contracts. This was the first time the RERT had been used.³⁵⁰

January 2018

On 18 January 2018 at 5pm, AEMO informed the market that it had entered into a RERT contract for the following afternoon and evening. Following insufficient market response on 19 January, AEMO activated 130 MW from across eight reserve contracts in Victoria and 6.5MW from two reserve contracts in South Australia. These contracts were deactivated as the large contingency event did not eventuate.³⁵¹

January 2019

A load shedding and RERT activation event occurred on 24 and 25 January 2019 in Victoria and South Australia, where approximately 375,000 householders were without power.³⁵² AEMO identified that the following factors contributed to the reliability issue:

- reductions in availability of electricity supply due to thermal inefficiencies
- unexpected equipment failures
- urgent maintenance activity and
- reduced generation capacity³⁵³

AEMO activated RERT contracts to reduce demand in Victoria and South Australia (South Australian contracts were only activated on 24 January). AEMO stated that:

- 1621 MWh of emergency reserves were dispatched on 24 Jan (Victoria and South Australia combined)
- 1472 MWh of emergency reserves were dispatched on 25 Jan (Victoria only).

350 See <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Security-and-reliability/Summeroperations-report/Summeroperations-report-2017-18>

351 Ibid.

352 AEMO, 2019 Electricity Statement of Opportunities, August 2019, page 72.

353 See https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2019/Load-Shedding-in-VIC-on-24-and-25-January-2019.pdf

The average cost of RERT for 24 and 25 January was approximately \$10,000/MWh, with a total cost of \$34.2 million (including compensation).

While the RERT reduced the amount of load shedding required, it was not enough to avoid the need to shed some load in Victoria to balance demand and supply. On 24 January 2019 266MW of load was shed and on 25 January 272 MW of load was shed, both in Victoria. AEMO noted that without RERT, it estimates that a further 1,252 MWh of load shedding would have been required.³⁵⁴

December 2019

On 30 December 2019, reserve contracts were entered into and activated by AEMO after a forecast LOR 2. AEMO identified that the following factors contributed to the decision to intervene:³⁵⁵

- Extreme weather conditions including high temperatures and bushfire conditions
- Volatile power system conditions with high forecast maximum demand with the following units out of service:
 - Loy Yang A2 (500 MW)
 - Loy Yang B2 (580 MW)
- De-rating of semi-scheduled and non-scheduled generation
- Bushfire in the vicinity of several transmission lines
- Lower Tumut – Wagga 051 330 kV transmission line getting tripped leading to limited flow on the Victoria – New South Wales interconnector that resulted in reduced level of support to Victoria from New South Wales by over 1000 MW.

According to AEMO, these events resulted in rapid deterioration in forecast minimum Victorian reserves from 1,135 MW to 223 MW that triggered a forecast LOR 2. As a result AEMO determined that activation of RERT contracts would be required, and it commenced negotiation with Panel members with a view to activate as soon as possible.³⁵⁶

AEMO activated five RERT contracts in total with the first being activated at 16:30 PM and last being de-activated at 23:00 PM. The total amount of reserve activated on 30 December 2019 was 283 MWh, with 262 MWh being delivered. AEMO reported that the total cost of exercising RERT during the event was \$3.72m, which equates to cost per MWh of \$14,148.12.³⁵⁷ In addition to these charges, \$1.15m availability charges were also payable during quarter 4 – 2019 for Victoria.

January 2020

On 30 January 2020 an actual LOR 2 was declared in Victoria following higher than forecast demand and generator unavailability caused by a trip at Loy- Yang A3. However, no RERT was activated or dispatched on that day.

354 Ibid.

355 AEMO, Reliability and Emergency Reserve Trader (RERT) Quarterly Report Q4 2019, p. 6.

356 AEMO, Reliability and Emergency Reserve Trader (RERT) Quarterly Report Q4 2019, p. 8.

357 AEMO, Reliability and Emergency Reserve Trader (RERT) Quarterly Report Q4 2019, p.11.

On 31 January 2020, an actual LOR 2 was declared in Victoria. AEMO notified the market that 560 MW of capacity reserves were required while 200 MW of minimum reserve was available.³⁵⁸ The Commission understands that the event occurred due to the tripping out of service of two transmission circuits caused by collapse of transmission towers which led to separation between Victoria and South Australia.³⁵⁹

In response, AEMO activated nine reserve contracts with a total capacity of 185 MW.³⁶⁰ AEMO also pre-activated but did not activate an additional contract with a capacity of 40 MW. The RERT contracts were activated from 15:30 PM to 21:30 PM.³⁶¹ AEMO provided estimates of 697 MWh of reserves being activated at a cost of \$6.47m.³⁶²

358 AEMO market notice 78183.

359 <https://www.aemo.com.au/news/updated-heatwave-conditions-vic-and-nsw>

360 AEMO, estimated payments and volumes for RERT activation on 31 January 2020, p. 1.

361 AEMO market notice 73243.

362 AEMO, estimated payments and volumes for RERT activation on 31 January 2020, p. 1.