

RULE

Australian Energy Market Commission

CONSULTATION PAPER

**NATIONAL ELECTRICITY AMENDMENT
(PRIORITISING ARRANGEMENTS FOR
SYSTEM SECURITY DURING MARKET
SUSPENSION) RULE 2021**

PROPONENT

COAG Energy Council

17 DECEMBER 2020

INQUIRIES

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ABOUT THE AEMC

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

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SUMMARY

On 26 May 2020, the Council of Australian Governments (COAG) Energy Council¹ submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) seeking to clarify the applicability of the National Electricity Rules (NER or the Rules) during periods of market suspension with the aim of providing the Australian Energy Market Operator (AEMO) with appropriate flexibility to prioritise arrangements for system security during such periods.

The rule change request follows recommendations made by the AEMC in its *Mechanisms to Enhance Resilience in the Power System – Review of the South Australian Black System Event* report published in December 2019, which considered systemic issues that contributed to the black system event in South Australia.²

In its rule change request, the COAG Energy Council suggests that:³

- The applicability of the NER is unclear during a period of market suspension, and this has the potential to create uncertainty for market participants and AEMO, and compromise efforts by AEMO to co-ordinate with market participants to resolve the issues which have resulted in suspension of the market.
- A rigid requirement for AEMO to comply with all elements of the NER, particularly those of a more administrative nature, may compromise its ability to focus on and prioritise actions needed to manage the security and safety of the power system during this period.

The COAG Energy Council proposes that, when AEMO has declared the spot market to be suspended:⁴

- AEMO continues to comply with existing provisions of the NER that explicitly relate to periods of market suspension (such as pricing arrangements under clause 3.14.5);
- for remaining provisions of the NER, AEMO has some flexibility where compliance with a particular rule would impose a material risk on its ability to maintain power system security during the market suspension; and
- AEMO reports, as soon as practicable, those provisions of the NER with which compliance would impose a material risk on its ability to maintain power system security, the reasons why it considers that compliance would pose such a risk, and whether it proposes any alternative arrangements to apply.

The COAG Energy Council considers that the proposed rule change will enhance AEMO's ability to resolve the matters leading to market suspension events and therefore advance the

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

2 For more information, see: https://www.aemc.gov.au/sites/default/files/documents/aemc_-_sa_black_system_review_-_final_report.pdf

3 COAG Energy Council, *Rule change request: Market suspension*, p. 1.

4 Ibid.

National Electricity Objective (NEO) by enhancing the safety and security of the national electricity system. In the COAG Energy Council's view, the proposed rule change will establish a transparent framework which will provide AEMO and market participants with clarity on the applicability of the NER during a period of market suspension, and AEMO with clear flexibility to prioritise system security related matters.⁵

In order to assess this rule change proposal against the NEO, the Commission needs to understand the materiality of the issues identified by the COAG Energy Council and whether the problem continues to exist after the recent improvements made by AEMO to its internal processes (see Appendix B). Therefore, this consultation paper first seeks feedback on the materiality of the issues and whether they require a regulatory solution through a rule change. In relation to the problem definition, the Commission is interested in feedback on;

- whether there is a lack of clarity in the Rules as to how they apply during periods of market suspension, and
- whether AEMO needs more flexibility to prioritise core system security requirements during a period of market suspension such that it does not have to comply with other provisions, and
- which particular provisions of the Rules may be impractical or impossible for AEMO to comply with, despite the recent improvements made to its internal processes, during periods of market suspension.

To the extent these issues are significant and do require changes to the NER to address them, we are also asking for feedback on what would be the most appropriate approach to address the problems identified. The issues on which we are seeking feedback include:

Applicability of the Rules: The Commission considers there are a number of options for how the applicability of the Rules during periods of market suspension could be clarified. These include:

- COAG Energy Council's proposal: AEMO must continue to comply with the existing provisions of the NER that explicitly relate to periods of market suspension.
- Alternative options might include:
 - Confirm that the NER apply in full during a period of market suspension. This could be accompanied by a provision to allow AEMO to prioritise more critical obligations in extraordinary circumstances.
 - Taking a prescriptive approach by explicitly setting out specific provisions of the NER in relation to which AEMO would be able to exercise some flexibility during a period of market suspension.
 - Taking a principles-based approach by setting out some guiding principles that would allow AEMO to exercise flexibility as to which provisions of the NER may not be complied with during a period of market suspension.

⁵ Ibid.

Providing AEMO with additional flexibility: The COAG Energy Council proposes to provide AEMO with additional flexibility during periods of market suspension. An alternative option may be to not provide additional flexibility to AEMO.

If stakeholders consider that additional flexibility is needed, the Commission is interested in feedback on:

- How significant would be the potential impact of uncertainty for market participants.
- Whether the benefits of additional flexibility will outweigh the costs associated with uncertainty.
- Whether principles should be introduced to guide AEMO in how to prioritise its obligations.

Reporting requirements: The Commission is interested in stakeholder views on what information should be part of the reporting requirements if additional flexibility is provided to AEMO. Further, the Commission would like to understand whether the reporting requirements proposed by the proponent would be less onerous than the current requirement to issue notices.

Submissions to this consultation paper close on **4 February 2021**.

CONTENTS

1	Introduction	1
2	Background	2
2.1	Background to the rule change request	2
2.2	Summary of the market suspension framework in the NER	3
2.3	Issue identified with the current arrangements	6
3	Details of the rule change request	8
3.1	Issues raised in the rule change request	8
3.2	Solutions proposed in the rule change request	9
4	Assessment framework	10
4.1	Achieving the NEO	10
4.2	Assessment framework	10
4.3	Making a more preferable rule	12
4.4	Making a differential rule	12
5	Issues for consultation	13
5.1	Defining the problem	13
5.2	Applicability of the Rules	14
5.3	Providing AEMO with additional flexibility	16
5.4	Reporting requirements	18
6	Lodging a submission	20
	Abbreviations	21
	APPENDICES	
A	Market suspension framework	22
A.1	Declaration of market suspensions and recommencement	22
A.2	Dispatch during market suspension	23
A.3	Market suspension pricing	23
A.4	Power system security	25
A.5	Notices	26
A.6	Constraints	26
A.7	Directions	27
B	AER compliance investigation	29
	TABLES	
Table B.1:	Summary of the AER's recommendations in relation to market suspension arrangements and their status to date	29
	FIGURES	
Figure 2.1:	Market suspension framework	5

1 INTRODUCTION

On 26 May 2020, the Council of Australian Governments (COAG) Energy Council⁶ submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) seeking to clarify the applicability of the National Electricity Rules (NER or the Rules) during periods of market suspension with the aim of providing the Australian Energy Market Operator (AEMO) with appropriate flexibility to prioritise arrangements for system security during such periods.

The COAG Energy Council considers that the proposed rule change will enhance AEMO's ability to resolve the matters leading to the market suspension and therefore advance the National Electricity Objective (NEO) by enhancing the safety and security of the national electricity system. In the COAG Energy Council's view, the proposed rule change will establish a transparent framework which will provide AEMO and market participants with clarity on the applicability of the Rules during a period of market suspension, and AEMO with clear flexibility to prioritise system security related matters.⁷

The rule change request follows recommendations made by the AEMC in its *Mechanisms to Enhance Resilience in the Power System – Review of the South Australian Black System Event* report (BSE report) published in December 2019, which considered systemic issues that contributed to the black system event in South Australia.⁸ The rule change request does not include a proposed rule. The rule change request can be found on the AEMC website.⁹

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

This paper:

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

Submissions on this consultation paper are due by no later than **Thursday, 4 February 2021**.

Details on how to lodge a submission are contained in Chapter 6 of this consultation paper.

6 On 29 May 2020, it was announced that the Council of Australian Government (COAG) will cease and a new National Federation Reform Council (NFRC) will be formed, with National Cabinet at the centre of the NFRC.

7 COAG Energy Council, *Rule change request: Market suspension*, p. 1.

8 For more information, see: https://www.aemc.gov.au/sites/default/files/documents/aemc_-_sa_black_system_review_-_final_report.pdf

9 <https://www.aemc.gov.au/rule-changes/prioritising-arrangements-system-security-during-market-suspension>

2 BACKGROUND

This chapter sets out:

- background to the rule change request
- market suspension framework set out in the NER
- the issues identified through past work relating to the market suspension framework.

2.1 Background to the rule change request

South Australia experienced a 'black system' event at 16:18 Australian Eastern Standard Time (AEST) on Wednesday 28 September 2016. Approximately 850,000 South Australian customers lost electricity supply. Most electricity supply was restored in eight hours; however, a number of customers suffered a prolonged loss of supply. The economic cost of the black system event was estimated at 367 million dollars.¹⁰

The South Australian black system event highlighted the fact that the National Electricity Market (NEM) power system faces a new and pressing set of system security challenges. Addressing these challenges is critical to ensuring that the NEM continues to deliver a secure supply of energy for customers.

In response to the black system event in South Australia, the market bodies have published the following reports. The below summarises these with a particular focus on the consideration of market suspension arrangements:

- In March 2017, AEMO published a *Black System South Australia* report making 19 recommendations to improve the resilience of the South Australian power system in the context of the changing generation mix. The key conclusion in relation to market suspension was that there was a lack of detailed procedures on how to operate the power system under extended periods of market suspension. The recommendation was for AEMO to develop detailed procedures for power system operations during periods of market suspension.¹¹
- In December 2018, the Australian Energy Regulator (AER) published the *Black system compliance report* reviewing the compliance by various NEM participants against the NER regarding the operation of the South Australian region of the NEM in the period surrounding the blackout. Specifically, the report looked at the pre-event period, system restoration and market suspension. The AER's report did not cover the event aspect of the black system event, which was subject to a separate investigation. Some related issues are now before the Federal Court.¹² The report identified 13 recommendations and remedial actions to improve processes and the overall Rules framework in key areas, with

10 Business SA, Blackout survey results, [https://www.business-sa.com/Commercial-Content/Media-Centre/Latest-MediaReleases/September-Blackout-Cost-State-\\$367-Million](https://www.business-sa.com/Commercial-Content/Media-Centre/Latest-MediaReleases/September-Blackout-Cost-State-$367-Million)

11 AEMO, *Black System South Australia 28 September 2016*, March 2017, p. 9. For more information, see: https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2017/Integrated-Final-Report-SA-Black-System-28-September-2016.pdf

12 For more information, see: <https://www.aer.gov.au/news-release/south-australian-wind-farms-in-court-over-compliance-issues-during-2016-black-out>

the recommendations made in relation to market suspension arrangements summarised in Appendix B of that report.¹³

- In December 2019, the AEMC published a final report on *Mechanisms to enhance resilience in the power system* (BSE report). The report identified systemic issues that contributed to the black system event in South Australia and recommended changes to existing regulatory and market frameworks necessary to address these issues. Among other recommendations, the AEMC recommended providing AEMO with greater flexibility to prioritise arrangements for system security during a period of market suspension. This recommendation was actioned by the COAG Energy Council by submitting this rule change request.¹⁴

The reports published by the market bodies highlighted that, during the period of market suspension in South Australia, there were different interpretations on the degree to which the NER (which are silent of their applicability during a period of market suspension) apply when the market is suspended. This issue is the subject of this consultation paper.

2.2 Summary of the market suspension framework in the NER

Market suspension refers to when AEMO declares the spot market to be suspended in a region. AEMO may declare the spot market suspended if any of the following occur:¹⁵

- the power system has collapsed to a 'black system'¹⁶
- a participating jurisdiction has declared a state of emergency under its emergency services or equivalent legislation and has subsequently directed AEMO to suspend the market
- AEMO has determined that it is impossible to operate the spot market in accordance with the NER, for example due to an IT failure or a power system emergency.

Market suspension in the NEM is rare, having occurred only twice since commencement of the NEM in 1998.

1. The first market suspension was declared on 8 April 2001 following an IT system failure. All regions of the NEM were suspended for a two-hour period commencing at 23:30.
2. The second market suspension was declared on 28 September 2016 following the black system event in South Australia and subsequent ministerial direction. The South Australian region was suspended for nearly two weeks from 16:30 on 28 September to 22:30 on 11 October 2016.

These abnormal circumstances mean that the ordinary operation of the NEM is not possible, and so the market is suspended. Although market suspension is a major event impacting the market, there are relatively few obligations in Chapter 3 of the NER explicitly governing the arrangements for what happens in the market during periods of suspension. AEMO therefore

13 For more information, see: <https://www.aer.gov.au/wholesale-markets/compliance-reporting/investigation-report-into-south-australias-2016-state-wide-blackout>

14 For more information, see: <https://www.aemc.gov.au/markets-reviews-advice/review-of-the-system-black-event-in-south-australi>

15 Clause 3.14.3(a) of the NER. AEMO lists possible IT failures in its Market Suspension and Systems Failure procedure.

16 Chapter 10 of the NER defines 'black system' as the absence of voltage on all or a significant part of the transmission system or within a region during a major supply disruption affecting a significant number of customers.

has some discretion, and it is open to manage the market suspension as it considers appropriate, subject to being in accordance with any applicable Rules.

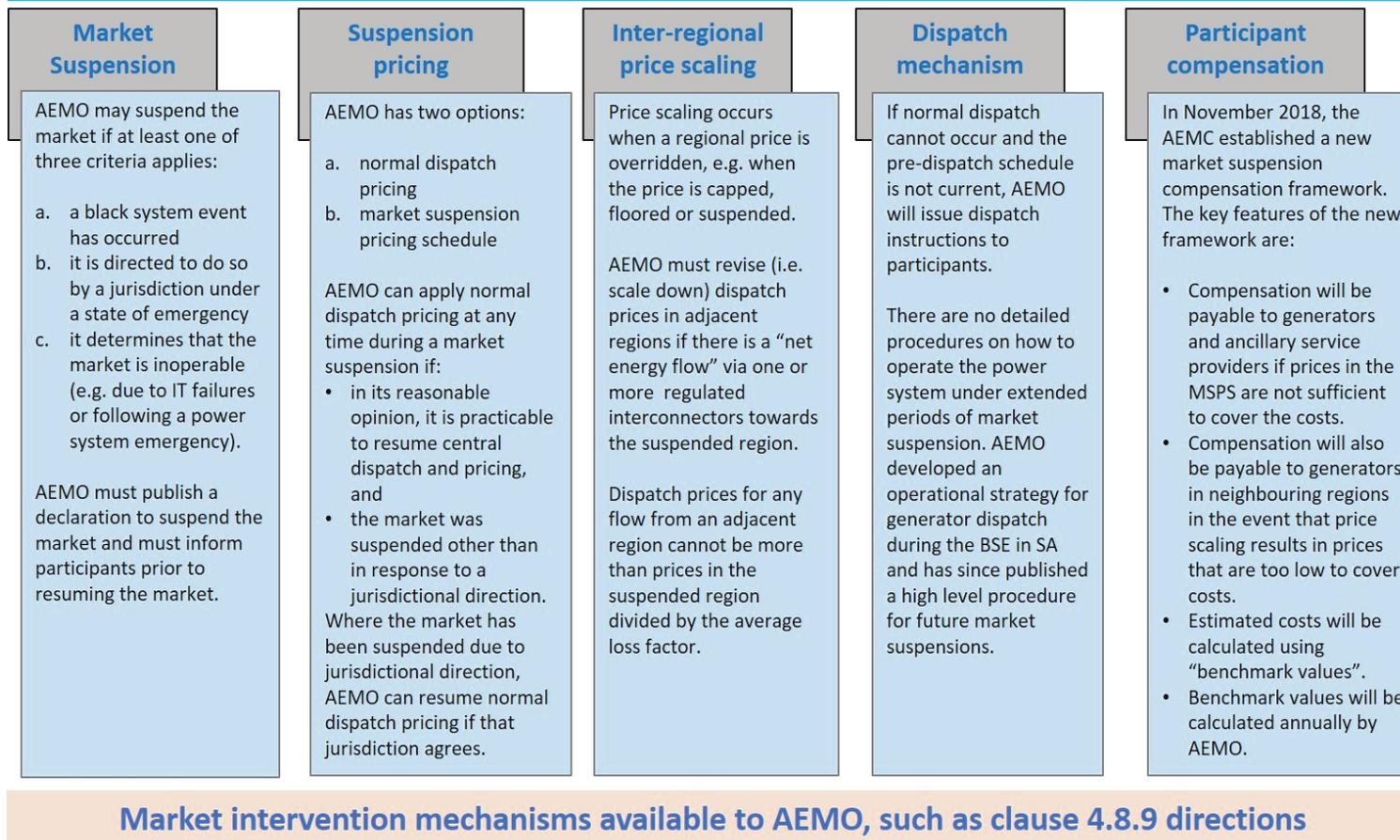
The NER set out key obligations during a period of market suspension. These obligations primarily relate to how spot prices will be set. The requirements specifically relating to market suspension are:

- Clause 3.14.3 - sets out the circumstances in which AEMO can suspend the spot market and requires AEMO to review and report on the market suspension.
- Clause 3.14.4 - sets out the high-level process for declaring a market suspension, and subsequently AEMO's ability to issue clause 4.8.9 directions (see Appendix A of this paper) and to set pricing in accordance with clause 3.14.5. It also reiterates the requirement for AEMO to report on the market suspension.
- Clause 3.14.5 - provides for AEMO to determine dispatch, spot and ancillary service prices, which are to continue in line with rules 3.8 and 3.9 of the NER (provisions detailing how the spot market is to be dispatched and prices determined when the market is not suspended), to the extent practicable. If not practicable, then the Market Suspension Pricing Schedule applies (see Appendix A of this paper). This clause allows AEMO discretion to determine when it is practicable to resume central dispatch and the determination of prices under rules 3.8 and 3.9, (pending approval from the relevant jurisdiction in circumstances where the jurisdiction had directed AEMO to suspend the market).
- Clauses 3.14.5A and 3.14.5B were introduced by the AEMC in November 2018 in response to a rule change request from AEMO in the wake of the 2016 market suspension in South Australia. The AEMC established a new compensation framework so that certain market participants who incur a loss during a market suspension event can be compensated (see Box A.1).¹⁷

Figure 2.1 below summarises the market suspension framework currently in place under the Rules. The market suspension framework is discussed in more detail in Appendix A.

¹⁷ For more information, see: <https://www.aemc.gov.au/rule-changes/participant-compensation-following-market-suspensi>

Figure 2.1: Market suspension framework



Source: AEMC

2.3 Issue identified with the current arrangements

This section summarises the key findings and recommendations made by the AEMC following the 'black system' event in South Australia in relation to market suspension. Appendix B summarises the findings of the AER's compliance investigation.

Key findings

On 12 December 2019, the AEMC published a final report on *Mechanisms to enhance resilience in the power system (Review of the black system event in South Australia)*.¹⁸ In relation to market suspension, the report identified the following systemic issue:¹⁹

Existing arrangements do not specify the applicability of arrangement applying to operation of the power system during a period of market suspension outside those areas noted in section 10.2 of this chapter [requirements specifically relating to market suspension such as clauses 3.14.3 and 3.14.5]. The AER's compliance investigation identified different interpretations on the degree to which NER arrangements (which are silent of their applicability during a period of market suspension) apply when the market is suspended. AEMO considered that, due to the adverse circumstances that are likely to apply, it should have discretion on whether to comply with more administrative NER requirements, such as requirements to issue market notices when complying with such a requirement would impose a material risk on its ability to maintain power system security.

In its submission to the AEMC's review, AEMO:²⁰

- argued that during a period of market suspension, it should be afforded a degree of flexibility, and that an overly prescriptive framework could unintentionally create additional risks to system security, and
- expressed the view that current uncertainty in the applicability of market Rules was best addressed through the application of flexible principles, rather than detailed specification of obligations that should, should not, or could apply during a period of market suspension. AEMO recommended the Rules be amended to reflect the principle that AEMO would always endeavour to operate the power system and market during suspension in accordance with the NER, to the extent it is reasonably practicable to do so.

No other stakeholders commented on issues related to market suspension.

18 For more information, see: <https://www.aemc.gov.au/markets-reviews-advice/review-of-the-system-black-event-in-south-australi>

19 AEMC, *South Australian black system review*, final report, December 2019, p. 137

20 AEMO, Submission to the AEMC's *South Australian black system review Issues and Approach paper*, p. 8.

Recommendations

In relation to market suspension, the AEMC recommended clarifying the applicability of existing market Rules and providing AEMO with appropriate flexibility to prioritise arrangements for system security during a period of market suspension.²¹

The AEMC recommended that AEMO be required to continue to comply with existing provisions of the NER that explicitly relate to periods of market suspension (such as pricing arrangements under clause 3.14.5); and NER requirements be clarified on:²²

- the applicability of market Rules during market suspension,
- flexibility for AEMO to prioritise core system security requirements during a period of market suspension, and
- for remaining provisions of the NER, AEMO has some flexibility where compliance with a particular rule would impose a material risk on its ability to maintain power system security during the market suspension.

It was also proposed that AEMO be required to inform the market of its decision to prioritise certain obligations during periods of market suspension. In doing so, it was proposed that AEMO report, as soon as practicable, on those provisions of the Rules with which compliance would impose a material risk on its ability to maintain power system security, the reasons why it considered that compliance would pose such a risk, and whether it proposes any alternative arrangements to apply.

These recommendations resulted in the COAG Energy Council submitting a rule change request, which is the subject of the consultation paper, to the AEMC to action these recommendations.

²¹ AEMC, *South Australian black system review*, final report, December 2019, p. 134.

²² Ibid.

3 DETAILS OF THE RULE CHANGE REQUEST

The rule change request from the COAG Energy Council proposes that the NER be amended to clarify the applicability of existing market Rules and provide AEMO with some flexibility to prioritise arrangements for system security during a period of market suspension.

This chapter sets out:

- the issues raised by the COAG Energy Council in the rule change request, and
- details of the COAG Energy Council's proposed solution to these issues.

The rule change request does not include a proposed rule. The rule change request can be found on the AEMC website.²³

3.1 Issues raised in the rule change request

3.1.1 The applicability of the existing market Rules

The COAG Energy Council considers that the existing arrangements do not explicitly set out the applicability of the NER provisions during a period of market suspension, and the extent to which AEMO must comply with these. Other than the provisions relating to pricing during periods of market suspension²⁴ (see section 2.2 of this paper), the NER are silent on the extent other NER provisions apply during a period of market suspension.²⁵

In the COAG Energy Council's view, the silence on the applicability of other elements of the NER during a period of market suspension has the potential to create uncertainty for market participants and AEMO, and compromise efforts by AEMO to co-ordinate with market participants to resolve the issues which have resulted in suspension of the market.²⁶

3.1.2 Flexibility to prioritise arrangements for system security

The COAG Energy Council notes that a period of market suspension may be accompanied by challenging or uncertain power system conditions. AEMO's power system operations staff may face unique challenges during this time. The COAG Energy Council argues that a rigid requirement for AEMO to comply with all elements of the NER, particularly those of a more administrative nature, may compromise its ability to focus on and prioritise actions needed to manage the security and safety of the power system during this period.²⁷

The COAG Energy Council considers that, for AEMO to effectively resolve such issues, it needs to have appropriate levels of flexibility to prioritise. Failure to appropriately prioritise, given limited resources, during a period of market suspension may compromise the safety and security of the power system.²⁸

²³ <https://www.aemc.gov.au/rule-changes/prioritising-arrangements-system-security-during-market-suspension>

²⁴ Clauses 3.14.4 and 3.14.5 of the NER.

²⁵ COAG Energy Council, *Rule change request: Market suspension*, p. 2.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Ibid, p. 2

The COAG Energy Council is concerned that the current rule arrangements do not explicitly provide AEMO with flexibility to prioritise core system security requirements during a period of market suspension. The rule change request seeks to provide AEMO with such flexibility.²⁹

3.2 Solutions proposed in the rule change request

Given the above issues, the COAG Energy Council has proposed to amend the NER to clarify which provisions of the NER continue to apply during periods of market suspension. It has proposed that:³⁰

- AEMO continues to comply with existing provisions of the NER that explicitly relate to periods of market suspension (such as pricing arrangements under clause 3.14.5); and
- for remaining provisions of the NER, AEMO has some flexibility where compliance with a particular rule would impose a material risk on its ability to maintain power system security during the market suspension.

The COAG Energy Council has also proposed that AEMO be required to inform the market of its decision to prioritise certain obligations during periods of market suspension. In doing so, it has proposed that AEMO report, as soon as practicable, those provisions of the Rules with which compliance would impose a material risk on its ability to maintain power system security, the reasons why it considers that compliance would pose such a risk, and whether it proposes any alternative arrangements to apply.³¹

To implement the above proposal, the rule change request seeks amendments to clause 3.14.4 of the NER that:³²

- clarify which provisions of the NER continue to apply during periods of market suspension (such as pricing arrangements under clause 3.14.5);
- provide additional flexibility where it is impossible to comply with a rule obligation (particularly an administrative-type requirement) without materially risking AEMO's ability to maintain power system security; and
- impose reporting requirements on AEMO to demonstrate to the market why it chose to prioritise certain system security obligations.

The rule change request is discussed in more detail in chapter 5 of this consultation paper.

29 Ibid, p. 3.

30 Ibid, p. 1.

31 Ibid.

32 Ibid.

4 ASSESSMENT FRAMEWORK

This chapter sets out the requirements under the National Electricity Law (NEL) that the AEMC must satisfy in considering the rule change request and provides detail of the proposed approach for assessing the rule change request. This framework may be refined during the rule change process, such as in response to stakeholder feedback.

The Commission's assessment of this rule change request must consider whether the proposed rule promotes the National Electricity Objective (NEO).

4.1 Achieving the NEO

Under the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).³³ This is the decision making framework that the Commission must apply.

The NEO is:³⁴

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

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

Based on a preliminary assessment, the most relevant aspects of the NEO for the purpose of this rule change request are the efficient operation and use of electricity services for the long-term interests of consumers of electricity with respect to the safety and security of the national electricity system.

4.2 Assessment framework

At this stage, the Commission is seeking stakeholder views on its proposed assessment framework which includes the following criteria to assess whether the proposed rule is likely to promote the NEO, namely the impact the rule change request would have on:

- **Promoting power system security and safety:** The operational security of the power system relates to the maintenance of the system within pre-defined limits for technical parameters such as voltage and frequency during normal system operation conditions and in an event of certain pre-defined faults i.e. credible contingencies. System security underpins the operation of the energy market and the supply of electricity to consumers. Safety can be understood to mean that the transmission and distribution systems and the generation and other facilities connected to them are safe from damage and are not a source of injury and danger. It is necessary to have regard to whether the proposed changes to the Rules will benefit system security and safety during extreme events, weighed against the likely costs.

³³ Section 88 of the NEL.

³⁴ Section 7 of the NEL.

- **Efficient framework design:** When considering potential changes or additions to the regulatory framework we need to consider whether these modifications are made in an efficient way, balancing the benefits against costs in such a way that promotes the long-term interests of consumers.
- **Ensuring Rules flexibility and clarity:** Regulatory arrangements must be flexible to changing market and external conditions. They must be able to remain effective and clear in achieving desired outcomes not only under a business-as-usual system operation, but also during periods of extreme events, such as a period of market suspension. The market suspension framework is expected to provide AEMO and market participants with clarity on the applicability of the market Rules during a period of market suspension. Solutions implemented in the Rules should be flexible enough to accommodate different circumstances and should be effective in facilitating security outcomes when required, while not imposing undue costs on market participants. The Commission also acknowledges the importance of continued learning from past examples of market suspension events and improving practices and procedures. If the frameworks are very specific, adoption and continued improvement may not be possible. Further, simple frameworks tend to result in more predictable outcomes and are lower cost to implement and administer.
- **Promoting transparency and predictability:** There is likely to be significant uncertainty as to the safety and security of the national electricity system during a market suspension event. In these circumstances, it is important to maintain predictability and transparency of AEMO's potential actions for market participants to make informed and efficient operational decisions. The costs of potential uncertainty should be weighed against the benefits of this additional flexibility provided to AEMO.
- **Maintaining clear and singular accountability:** Organisations should be accountable for how they have met their objectives. System security is managed directly by AEMO in accordance with applicable technical standards. Maintaining the security of the power system is one of AEMO's key functions. Following a contingency event or significant change in power system conditions, AEMO must take all reasonable actions to return the power system to a secure operating state within 30 minutes.³⁵The Commission will consider how to provide clear and singular accountability for system security in the NEM.
- **Minimising administrative burden during a period of market suspension:** A period of market suspension may be associated with a significant level of uncertainty in terms of underlying power system conditions. The power system is likely to be in a condition where system security is compromised, and new risks may emerge rapidly. Having regard to possible resourcing constraints in addressing highly uncertain conditions during a period of market suspension, it should be considered whether some NER provisions may impose an unnecessary administrative burden on AEMO during this challenging period. If this may be the case, it should be considered how this administrative burden can be minimised without compromising transparency and predictability of AEMO's actions.

³⁵ Clause 4.2.6(b) of the NER.

- **Ensuring appropriate governance arrangements are in place:** The rule change request proposes to provide significant flexibility to AEMO in complying with the NER during periods of market suspension. When assessing the proposal, we will consider whether it adheres to good governance principles. If the rule is made, appropriate governance structures and reporting requirements must be put in place to limit the degree of uncertainty, by providing transparency as to how AEMO will use its powers.

QUESTION 1: ASSESSMENT FRAMEWORK

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

4.3 Making a more preferable rule

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

4.4 Making a differential rule

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

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

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

As the proposed rule related to parts of the NER that currently do not apply in the Northern Territory (i.e. Chapter 3), the Commission does not propose to assess the proposed rule against additional elements required by the Northern Territory legislation.³⁶

³⁶ From 1 July 2016, the NER, as amended from time to time, apply in the NT, subject to derogations set out in regulations made under the NT legislation adopting the NEL. Under those regulations, only certain parts of the NER have been adopted in the NT. (See the AEMC website for the NER that applies in the NT.) National Electricity (Northern Territory) (National Uniform Legislation) Act 2015.

5 ISSUES FOR CONSULTATION

Taking into consideration the assessment framework, a number of issues have been identified for initial consultation. Stakeholders are encouraged to comment on these issues as well as any other aspect of the rule change request or this paper, including the proposed assessment framework.

This chapter provides a more detailed discussion of the proposed rule, its practical implications and, where applicable, alternative options. The chapter discusses the following issues during a period of market suspension:

- applicability of the NER;
- providing AEMO with additional flexibility to comply with the NER; and
- reporting requirements/transparency arrangements.

5.1 Defining the problem

The COAG Energy Council considers that the existing arrangements do not explicitly set out the applicability of the NER provisions during a period of market suspension, and the extent to which AEMO must comply with these elements. Other than the provisions relating to market suspension pricing (see section 2.2 of this paper),³⁷ the NER are silent on the extent other NER provisions apply during a period of market suspension.³⁸

In the COAG Energy Council's view, the silence on the applicability of other elements of the NER during a period of market suspension has the potential to create uncertainty for market participants and AEMO, and compromise efforts by AEMO to co-ordinate with market participants to resolve the issues which have resulted in suspension of the market.³⁹

The COAG Energy Council argues that a rigid requirement for AEMO to comply with all elements of the NER, particularly those of a more administrative nature, may compromise its ability to focus on and prioritise actions needed to manage the security and safety of the power system during this period.⁴⁰

The COAG Energy Council considers that, for AEMO to effectively resolve such issues, it needs to have appropriate levels of flexibility to prioritise. Failure to appropriately prioritise, given limited resources, during a period of market suspension may compromise the safety and security of the power system.⁴¹

The proponent is concerned that the current arrangements do not explicitly provide AEMO with flexibility to prioritise core system security requirements during a period of market suspension. The rule change request seeks to provide AEMO with such flexibility.⁴²

³⁷ Clauses 3.14.4 and 3.14.5 of the NER.

³⁸ COAG Energy Council, *Rule change request: Market suspension*, p. 2.

³⁹ *Ibid.*

⁴⁰ *Ibid.*

⁴¹ *Ibid.*, p. 2.

⁴² *Ibid.*, p. 3.

In this context, the Commission notes that the existing compliance and enforcement regime recognises that AEMO and registered participants may have to prioritise the more critical obligation in the extraordinary circumstances when simultaneous compliance is not possible. All the facts and circumstances will be assessed by the AER as the enforcement agency in determining what compliance or enforcement action, if any, is to be taken for breaches of the Rules.

The Commission is interested in understanding whether stakeholders agree with the proponent's problem definition and whether stakeholders consider the existing enforcement regime is appropriate for periods of market suspension.

QUESTION 2: DEFINING THE PROBLEM

- Do stakeholders agree with the proponent's problem definition?
- Is the existing enforcement regime appropriate for periods of market suspension?
- What do stakeholders see as essential functions of AEMO which must occur during a period of market suspension?

5.2

Applicability of the Rules

5.2.1

The proponent's proposal

As described in Chapter 3 of this paper, the proponent has requested amendments be made to the NER to clarify the applicability of market Rules during a period of market suspension thereby reducing uncertainty for AEMO and market participants.⁴³

Specifically, it has proposed an amendment to clause 3.14.4 of the NER that will clarify that AEMO must continue to comply with existing provisions of the NER that explicitly relate to periods of market suspension (such as pricing arrangements under clause 3.14.5).⁴⁴ This will effectively mean that for remaining relevant provisions of the NER, AEMO would have some flexibility where compliance with a particular rule would impose a material risk on its ability to maintain power system security during the market suspension.⁴⁵

The rule change request also states that the potential uncertainty as to how AEMO may choose to use its power to prioritise compliance is countered by the fact that the proposed rule retains the overarching requirement for AEMO to comply with the NER and new transparency obligations (an issue of providing AEMO with additional flexibility is discussed in section 5.3 of this paper).⁴⁶ The Commission notes that the description of the proposed rule does not seem to include this overarching requirement for AEMO to comply with the NER during periods of market suspension

⁴³ COAG Energy Council, *Rule change request: Market suspension*, p. 3.

⁴⁴ *Ibid*, p. 1.

⁴⁵ *Ibid*.

⁴⁶ *Ibid*, p. 4.

QUESTION 3: MATERIALITY OF THE ISSUE

- Do stakeholders consider that there is a lack of clarity in the Rules as to how they should be applied during periods of market suspension?
- If the applicability of the Rules during periods of market suspension is not clear, why is this so, and how material is this problem?
- What aspects of the rules may be problematic during market suspension?

5.2.2

Alternative options

The Commission considers there are two potential alternative options to address the proponents concerns:

1. **Confirm the NER applies unaffected during the period of market suspension.**

This option would clarify that AEMO and registered participants must continue to comply with the NER during a period of market suspension. The difference between this option and the proposed rule change is that under this approach there would not be any segmentation between which clauses AEMO must comply with during a market suspension event and other clauses where AEMO has flexibility to deviate from. It would be clear that AEMO must attempt to comply with all relevant NER clauses in all circumstances. This option would rely on enforcement action decisions from the AER in relation to non-compliances, which would take into account all the circumstances that existed at the time.

This option could also be accompanied by a provision that provides that in extraordinary circumstances where AEMO is unable to simultaneously comply with an obligation critical to system security and a more administrative obligation, it is appropriate that the more critical obligation is prioritised (section 5.3 of this paper discusses providing AEMO with additional flexibility in more detail). As discussed in the next sections, this decision making may need to be supported by some principles and reporting requirements.

2. **Explicitly set out provisions of the NER in relation to which AEMO will be able to exercise some flexibility during a period of market suspension.** Under this option, the NER would specify that AEMO must continue to comply with existing Rules during a period of market suspension except for those identified provisions that would allow flexibility for non-compliance in specified conditions.

The Commission is interested in stakeholder views on the most appropriate arrangements for ensuring that the Rules applicability during a market suspension period is clear for all parties, and whether this would promote the NEO. Any option will need to be assessed against the counterfactual of not amending the NER in response to this rule change request.

QUESTION 4: APPLICABILITY OF THE RULES

- Do stakeholders agree that the Rules should be amended?
- Do stakeholders agree with the proponent's proposed solution to achieving clarity on the Rules applicability during periods of market suspension?
- Do stakeholders have any views on the two alternatives described above?
- Are there any other options to address the identified issue that were not described above?

5.3 Providing AEMO with additional flexibility

The rule change request is seeking to enable some flexibility in how AEMO complies with its functions during an extreme event of a market suspension where it is appropriate. Effectively, this requires consideration of trade-offs on how AEMO should prioritise its focus and resources during such an event. To help with the preliminary assessment of the rule change request and alternative options, the Commission is seeking stakeholder views on the following potential prioritisation of outcomes during a period of market suspension:

1. System security should be the first priority for AEMO during a market suspension event and the Rules should allow for this to be executed in practice.
2. Resumption of efficient dispatch and pricing outcomes is the second priority for AEMO during a market suspension event.
3. Transparency and predictability of market participants and AEMO's actions during a market suspension event must be maintained.

The Commission is interested in stakeholder views on how the market should be governed during periods of market suspension.

QUESTION 5: OPERATIONS DURING A PERIOD OF MARKET SUSPENSION

- How do stakeholders want the market to operate during a period of market suspension? Do the Rules potentially preclude achieving this preferred outcome?
- What should be the priorities for AEMO during a period of market suspension?
- Are there additional priorities to those listed above that should be taken into account?

5.3.1 The proponent's proposal

As described in Chapter 3, the COAG Energy Council proposes to amend the NER by providing AEMO with flexibility to prioritise system security obligations if compliance with a rule provision (particularly an obligation of a more administrative nature) would place a

material risk on their ability to maintain power system security during a period of spot market suspension.⁴⁷

The COAG Energy Council is of the view that this amendment to the NER would enhance AEMO's ability to resolve the matters leading to the market suspension and therefore advance the NEO by enhancing the safety and security of the national electricity system. The COAG Energy Council also considers that the change would help market participants and policymakers make more efficient decisions during a period of market suspension since arrangements applying to all parties will be clearer.⁴⁸

The COAG Energy Council recognises that it is possible that participants may face some uncertainty as to how AEMO may choose to use its power to prioritise compliance with power system security elements of the NER. More specifically, participants may face some uncertainty as to AEMO's actions, if it elects to not comply with administrative elements of the NER, such as the issuance of market notices. This uncertainty may create some costs for market participants, and ultimately customers, if it results in less efficient operational decision-making.⁴⁹

The COAG Energy Council argues that this uncertainty is countered by the fact that the proposed rule retains the overarching requirement for AEMO to comply with the NER (discussed in section 5.2.1 of this paper).⁵⁰ AEMO must also follow transparency obligations when it decides to use these powers. In the COAG Energy Council's view, this should help to limit the degree of uncertainty, by providing some transparency as to how AEMO will use its powers. It therefore considers any costs of uncertainty are outweighed by the benefits gained through providing additional flexibility.⁵¹

5.3.2 Alternative options

A threshold issue that arises is whether additional flexibility for AEMO to prioritise system security during periods of market suspension is in fact required. An alternative option may be not to provide AEMO with additional flexibility during a period of market suspension.

Under this option (effectively the status quo):

- compliance with the administrative obligations would be required
- it would be appropriate for AEMO to prioritise the more critical obligation if simultaneous compliance is not possible
- the AER would investigate all instances of non-compliance to determine what compliance or enforcement action, if any, is to be taken.

47 COAG Energy Council, *Rule change request: Market suspension*, p. 3.

48 *Ibid*, p. 4.

49 *Ibid*.

50 We note that the proposed amendments to clause 3.14.4 of the NER do not explicitly mention this overarching requirement for AEMO to comply with the NER.

51 COAG Energy Council, *Rule change request: Market suspension*, p. 4.

In its Black system event compliance report, the AER recommended three actions to ensure AEMO's compliance with these administrative requirements in the future. AEMO has completed all actions recommended by the AER (see Appendix B).

The Commission is interested in stakeholders' views on whether these actions completed by AEMO may have already addressed the problem of AEMO not being able to comply with administrative requirements during periods of market suspension and whether granting flexibility in relation to administrative requirements to AEMO is still needed.

QUESTION 6: PROVIDING AEMO WITH ADDITIONAL FLEXIBILITY

- Does AEMO need more flexibility to prioritise core system security requirements during a period of market suspension?
- How significant is the potential impact of uncertainty for market participants?
- Can the scope and timeframe for flexibility be tightly defined?
- Do stakeholders consider that the benefits of additional flexibility will outweigh the costs associated with uncertainty?
- If AEMO is provided with additional flexibility during periods of market suspension, should principles be introduced to guide AEMO in how to prioritise its obligations? If yes, what should the principles be?

5.4 Reporting requirements

The COAG Energy Council considers that additional flexibility provided to AEMO to prioritise rule obligations for system security over others during a period of market suspension should be subject to transparency and governance obligations. The COAG Energy Council proposes to amend clause 3.14.4 of the NER to impose reporting requirements on AEMO to demonstrate to the market why it chose to prioritise certain system security obligations.⁵² This includes requiring AEMO, as soon as practicable, to inform the AER and all affected participants of:⁵³

- the provisions of the NER with which compliance would pose a direct risk to AEMO's ability to maintain power system security during the suspension
- the reasons why AEMO considers that compliance would pose such a risk, and
- whether AEMO proposes any alternative arrangements to apply.

The COAG Energy Council's view is that this requirement should help to limit the degree of uncertainty, by providing some transparency as to how AEMO will use its powers. The Council considers that enhanced transparency would assist the AER in its compliance activities, would

⁵² Ibid, p.1.

⁵³ Ibid.

enhance market participant confidence in AEMO's actions and assist co-ordination between AEMO and market participants.⁵⁴

The Commission recognises the importance of reporting requirements if additional flexibility is provided to AEMO. However, these would need to be carefully designed so as not to contribute to the administrative burden on AEMO during periods of market suspension - the very problem they are proposed to address. The Commission is interested in stakeholder views on whether the reporting requirements, as proposed by the COAG Energy Council, would simplify AEMO's operations during periods of market suspension comparing to the existing administrative requirements i.e. issuing notices.

If there are to be reporting requirements, then these should facilitate for learnings to be identified following an event and responses to be improved for future events. The Commission is interested in stakeholder views on how to ensure that learnings are identified after a market suspension event.

QUESTION 7: REPORTING REQUIREMENTS

- If additional flexibility is provided to AEMO, what information should be part of the reporting requirements?
- Do stakeholders agree that the reporting requirements as proposed by the proponent would be less onerous than the current requirement to issue notices?
- Under the existing market suspension arrangements, do stakeholders consider that the reporting requirements on AEMO are appropriate?
- How can learnings from past events be incorporated going forward?

54 Ibid, p. 4.

6 LODGING A SUBMISSION

Written submissions on the rule change request must be lodged with Commission by 4 February 2021 online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code ERC0305.

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

Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions on rule change requests.⁵⁵ The Commission publishes all submissions on its website, subject to a claim of confidentiality.

All enquiries on this project should be addressed to James Tyrrell on (02) 8296 7842 or james.tyrrell@aemc.gov.au.

⁵⁵ This guideline is available on the Commission's website www.aemc.gov.au.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
COAG	Council of Australian Governments
Commission	See AEMC
MSPS	Market Suspension Pricing Schedule
NEL	National Electricity Law
NEM	National Electricity Market
NEMDE	National Electricity Market Dispatch Engine
NEO	National electricity objective
NER	National Energy Rules
NFRC	National Federation Reform Council
Rules	See NER

A MARKET SUSPENSION FRAMEWORK

This appendix provides further detailed background to the market suspension framework introduced in section 2.2 of this paper and summarised in Figure 1.

A.1 Declaration of market suspensions and recommencement

NER clause 3.14.4 provides for AEMO to declare a market suspension in the circumstances described in section 2.2. of this paper. Such a declaration:

- allows AEMO to suspend central dispatch if necessary, and to determine prices in accordance with the Market Suspension Pricing Schedule⁵⁶ while the underlying problem is being resolved (AEMO can revert to dispatch pricing during a market suspension period in certain circumstances)
- informs market participants that a significant issue is occurring in the market.

In its *Market Suspension and Systems Failure* procedure, AEMO defines the threshold for suspending the spot market. If the impact of a jurisdictional direction or the impact of a power system emergency results in dispatching generation, load or market network services using manual dispatch instructions with a cumulative effect on at least 20 per cent of the predicted regional load, then AEMO will determine that it is impossible to operate the market in accordance with the provisions of the Rules. However, AEMO may suspend the market where the impact is less than 20 per cent, if AEMO determines that it is nevertheless not possible to operate the spot market.⁵⁷

NER clause 3.14.4(d) provides the mechanism for concluding a market suspension event. For this to occur, AEMO must inform all registered participants that the spot market is to resume and the time that this will occur. The NER do not set out the decision-making criteria for AEMO to determine if a market suspension event can be concluded. AEMO, therefore, has some discretion in determining when the spot market is to resume. In the *Market Suspension and Systems Failure* procedure, AEMO specifies the following conditions for market resumption:⁵⁸

1. (if applicable) the black system condition no longer exists
2. (if applicable) the jurisdictional direction to suspend the spot market has been revoked
3. the original cause of the market suspension has been eliminated or sufficient steps have been taken to exclude its influence on market processes and AEMO assesses that the possibility of suspending the spot market within the next 24 hours due to the same cause is minimal, and
4. AEMO determines that it can operate the market in accordance with the provisions of the NER.

⁵⁶ Section A.3 of this paper explains how AEMO may choose to apply the Market Suspension Pricing Schedule.

⁵⁷ AEMO, *Market Suspension and Systems Failure procedure*, December 2017, p. 6.

⁵⁸ *Ibid*, p. 11.

A.2 Dispatch during market suspension

If a market suspension is in effect, AEMO is required to follow normal dispatch procedures where possible.⁵⁹ However, the NER are not prescriptive about what the dispatch procedures are if AEMO cannot use normal central dispatch processes. The NER also do not specify how AEMO should assess if normal dispatch is possible. In its *Market Suspension and Systems Failure* procedure, AEMO defines a failure of the dispatch process as follows:⁶⁰

1. six or more consecutive dispatch intervals have been missed, leading to a failure to communicate dispatch instructions to a significant proportion of Market Participants within the region; and
2. the appropriate IT system is not expected to be available within a further 10 minutes; and
3. changes in power system conditions since the last valid dispatch run result in errors in dispatch exceeding:
 - 200 MW in the New South Wales region (suspension in the NSW region only); or
 - 200 MW in the Victorian Region (suspension in the VIC region only); or
 - 150 MW in the Queensland region (suspension in the QLD region only); or
 - 80 MW in the South Australian region (suspension in the SA region only); or
 - 80 MW in the Tasmanian region (suspension in the TAS region only); or
 - 350 MW in two or more regions (suspension in all regions).

As set out in its Procedures, AEMO has developed a tiered approach to bidding and dispatch during market suspension, depending on the circumstances of the market suspension:

- bidding and dispatch will continue normally where AEMO considers it is practical and reasonably possible to do so. Where possible, dispatch instructions will be issued electronically via the automatic generation control system. Otherwise, AEMO may issue dispatch instructions in any form that is practical in the circumstances
- if, in AEMO's reasonable opinion, it is not possible to continue bidding and dispatch normally, then AEMO may use the most recent published valid pre-dispatch schedule if it is still current
- if necessary, AEMO will issue directions to registered participants in accordance with the National Electricity Law (NEL) and NER.⁶¹

A.3 Market suspension pricing

This section describes how electricity and ancillary service prices are set during a market suspension. It reflects amendments to the NER made in late 2017 and therefore these arrangements differ from those that governed the market suspension in SA in late 2016.

⁵⁹ NER, clause 3.14.5(a)

⁶⁰ AEMO, *Market Suspension and Systems Failure procedure*, December 2017, p. 7.

⁶¹ See AEMO website: <https://aemo.com.au/energy-systems/electricity/emergency-management/guide-to-market-suspension-in-the-nem>, viewed 2 December 2020. Under clause 4.8.9 of the NER, AEMO may require a registered participant to do any act or thing if AEMO is satisfied that it is necessary to do so to maintain or re-establish the power system to a secure operating state, a satisfactory operating state, or a reliable operating state.

Under the current Rules, there are two options for setting prices during a market suspension:

1. **normal dispatch pricing:** if the cause of a market suspension is not affecting AEMO's ability to run central dispatch and determine dispatch prices, spot prices and ancillary service prices in accordance with rules 3.8 and 3.9 of the NER, this process should continue to be used. It allows for orderly bidding and dispatch, supporting efficient market outcomes.⁶²
2. **Market Suspension Pricing Schedule:** if, in AEMO's reasonable opinion, it is not practicable to operate central dispatch and pricing then AEMO must set dispatch and ancillary service prices in accordance with the Market Suspension Pricing Schedule. This schedule is published weekly, 14 days in advance of the first day to which the schedule relates.⁶³ AEMO calculates a rolling average of half-hourly prices for weekdays and weekends, using spot prices over the previous four weeks.⁶⁴

AEMO can apply normal dispatch pricing at any time during a market suspension if, in its reasonable opinion, it is practicable to continue or resume central dispatch and the determination of dispatch prices and ancillary service prices. The exception is where the market was suspended in response to a jurisdictional direction. If the Market Suspension Pricing Schedule was used to set prices, the relevant jurisdiction must agree to a return to normal dispatch pricing before AEMO can apply this pricing regime.⁶⁵

Inter-regional price scaling

The NER require prices in a neighbouring region or regions to be scaled when:⁶⁶

- the Market Suspension Pricing Schedule is being used to set prices in the suspended region, and
- there is a net energy flow on one or more regulated interconnectors from the neighbouring region/s toward the suspended region.

Prices in neighbouring region/s must not exceed the Market Suspension Pricing Schedule price, scaled by the average loss factor applicable to the energy flow from the neighbouring region to the suspended region.⁶⁷ The purpose of price scaling is to prevent, or manage, the accumulation of negative inter-regional settlement residues, which consumers end up paying for. During the South Australia market suspension, prices were scaled in Victoria, New South Wales and Queensland as a result of the application of the Market Suspension Pricing Schedule in South Australia.⁶⁸

62 NER, clause 3.14.5(a)

63 For more information, see: <https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/market-management-system-mms-data/market-suspension-pricing-schedule>

64 NER, clauses 3.9.2(e)(5), 3.14.5(b) and 3.14.5(e).

65 NER, clause 3.14.5(d)(3).

66 NER, clause 3.14.5(f).

67 NER, clause 3.14.5(f)

68 Further detail on the extent of the price scaling is available in section 6.3.2 of the AEMO report on the Black System event. See: AEMO, Black System South Australia 28 September 2016, March 2017, p. 85

BOX 1: RECENT RULE CHANGES RELATED TO MARKET SUSPENSION

Participant compensation following market suspension

On 15 November 2018, the Commission made a final rule establishing a new compensation framework so that certain market participants who incur a loss during a market suspension event can be compensated. This responded to a rule change request from AEMO in the wake of the 2016 market suspension in South Australia.

The aim of the framework is to make sure that, when prices in the Market Suspension Pricing Schedule are too low to cover generators' short run costs, compensation is available so that generators do not incur a loss. This was designed to remove the incentive that previously applied for generators to withdraw from the market and await direction by AEMO when Market Suspension Pricing Schedule prices are low.

Pricing during market suspension

On 10 October 2017, the AEMC made a rule in relation to pricing arrangements during periods of spot market suspension. The final rule simplified the process for setting prices if the spot market is suspended, and establishes a simpler, more workable market suspension pricing framework.

The new rule removed two market suspension pricing regimes from the NER: neighbouring region pricing and pre-dispatch pricing schedule regimes. It also allowed AEMO to apply dispatch pricing at any time during a market suspension if: it is practicable to resume central dispatch and the determination of dispatch prices and ancillary service prices, and the market was suspended other than in response to a jurisdictional direction. Where AEMO has suspended the market in response to a jurisdictional direction, the relevant jurisdiction must agree to a return to dispatch pricing before this pricing regime can apply.

Note: For more information on *Participant compensation following market suspension* rule change see: <https://www.aemc.gov.au/rule-changes/participant-compensation-following-market-suspension>

Note: For more information on *Pricing during market suspension* rule change, see: <https://www.aemc.gov.au/rule-changes/pricing-during-market-suspension>

A.4 Power system security

NER clause 4.3.1 sets out AEMO's responsibility regarding power system security. It stipulates, among other things, AEMO's obligation to maintain power system security and to ensure that the power system is operated within the limits of the technical envelope (which is defined under clause 4.2.5). The NER requires AEMO to use reasonable endeavours to maintain power system security.⁶⁹

The power system is secure when technical parameters such as voltage and frequency are maintained within defined limits and will remain so following the occurrence of a credible contingency event. Credible contingency events are events that AEMO considers to be reasonably possible to occur; and have the potential for a significant impact on the power

⁶⁹ NER, clause 3.8.1(a).

system e.g. the loss of a single element or generation; or a single phase or phase to phase line fault.

AEMO's obligations to maintain power system security are unchanged during times of market suspension.

A.5 Notices

Under clause 4.8.5A of the NER, AEMO must immediately publish a notice of any foreseeable circumstances that may require AEMO to implement an intervention event. AEMO issues market notices through its Market Management System. AEMO's website states they are updated in real time to notify Market Participants about events that impact the market. These include advising of low reserve conditions, status of market systems, over-constrained dispatch, price adjustments, constraints, market directions, market interventions, and market suspensions.⁷⁰

As part of AEMO's responsibilities and obligations in managing power system security, it must publish as appropriate, information about the potential for, or the occurrence of, a situation which could significantly impact, or is significantly impacting, power system security.⁷¹

As is discussed in Appendix B of this paper, there are different interpretations of the NER in relation to the applicability of the requirement to publish market notices during a period of market suspension.

A.6 Constraints

Network limits are managed through constraint equations in which the National Electricity Market Dispatch Engine (NEMDE) determines the optimal dispatch of generators, subject to these technical limits defined by the constraints. These "network constraints" determine the maximum allowable output of multiple generators in proportion to the impact of each generator on the flow on the relevant transmission element that the constraint is managing as variables in the one constraint equation. AEMO's ability to utilise network constraints is predominantly set out in clause 3.8.10 of the NER.

Sometimes, however, a constraint can be applied to a single generator to determine that generator's output. This mechanism can be used even if a generator has not been formally directed. Typically, these "quick energy constraints" are used when:

- a generator fails to respond to a dispatch instruction and is deemed to be "non-conforming", or
- a generator is issued a formal clause 4.8.9 direction to ensure that the generator is dispatched consistent with the direction, noting that the generator offer may mean that it would not normally be dispatched. When a generator is directed this results in its dispatch being out of merit order and it may be compensated for any financial loss it incurs.

⁷⁰ AEMO, Events and Reports—<https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Market-notice-and-events>

⁷¹ NER, clause 4.3.1(m).

AEMO's explicit authority to modify or override dispatch outcomes in these two situations is set out in clause 3.8.21(i) of the NER.

As is discussed in Appendix B of this paper, the recent investigations revealed that there are differing interpretations as to whether a constraint (where the generator was constrained on at an output level above the output level it had offered to be dispatched at, a particular price) is an AEMO intervention event⁷² during a period of market suspension and so whether or not clause 4.8.5A (regarding the publication of market notices) applies.

A.7 Directions

Under clause 4.8.9 of the NER, AEMO may issue directions to registered participants where it is necessary to do so to maintain or return the power system to a secure or reliable operating state. These are most likely to be:

- a direction to a scheduled generator to achieve a particular output level to the extent that this is physically possible and safe to do so, or
- a clause 4.8.9 instruction to a network service provider to disconnect load.

AEMO formally intervened on two occasions by issuing clause 4.8.9 directions during the market suspension period of the SA Black System Event. The clause sets out a process for AEMO to follow when it may need to intervene in the market, including the timely publication of market notices.

BOX 2: DIFFERENCES BETWEEN A DIRECTION, A CONSTRAINT AND A DISPATCH INSTRUCTION

There are fundamental differences between a direction, a constraint and a dispatch instruction:

- A **dispatch instruction** is a product of the automated processes of NEMDE to achieve an efficient dispatch of all generation.
- A **constraint** is an obligation or restriction applied by AEMO that alters the normal NEMDE processes/outcomes for relevant generators for technical reasons to manage the power system.
- A **direction** is a formal intervention in the market by AEMO to a Market Participant (under clause 4.8.9 of the NER) which alters normal market outcomes for that generator, typically for reliability or security reasons, and for which Market Participants may be eligible to claim compensation.

Additionally, a constraint that requires a generator to run in circumstances where it otherwise

⁷² 'AEMO intervention event' is defined in Chapter 10 of the NER as an event where AEMO intervenes in the market under the Rules by: (a) issuing a direction in accordance with clause 4.8.9; or (b) exercising the reliability and emergency reserve trader in accordance with rule 3.20 by dispatching scheduled generating units, scheduled network services or scheduled loads in accordance with a scheduled reserve contract; or activating loads or generating units under an unscheduled reserve contract.

would not under normal NEMDE processes only applies where a generator has made a bid to participate in the dispatch but has not been selected by NEMDE “in merit”. A generator that has bid itself “unavailable” is not able to be constrained on by AEMO in this manner. In that sense, a generator has some measure of control over whether it is subject to this kind of constraint, as opposed to when it receives a direction.

During the market suspension period, some participants advised that there was confusion as to whether they were being directed by AEMO under clause 4.8.9 or being asked by AEMO to follow dispatch instructions which were a result of the constraints used to maintain sufficient inertia to manage power system security.

Source: AER, *Black system compliance report*, December 2018, p. 163.

B AER COMPLIANCE INVESTIGATION

Key findings

In its assessment of the South Australian black system event, the AER made a number of findings in relation to what occurred during the market suspension. The AER's report identified differing interpretations of the market operation and system security Rules framework which apply during market suspension.

The key differing interpretations were:⁷³

- **Is compliance with the NER required during a period of market suspension?**

For example, the Rules are only specific about pricing during periods of market suspension (Clause 3.14.5) – so are these the only Rules that apply, or does the broader NEM framework apply during periods of market suspension?

- **Are the Rules clear whether or not there is an obligation on AEMO to publish market notices during a period of market suspension?**

For example, in the extraordinary circumstances, do the Rules allow AEMO to prioritise system security over the other NER requirements, such as to publish notices?

In 2018, the AER found AEMO to be non-compliant in terms of its administrative obligations to issue market notices, when there were foreseeable circumstances that may have required AEMO to intervene in the market through clause 4.8.9 directions in relation to the SA black system event. The AER also found administrative non-compliances where market notices were not issued sufficiently immediately.

Despite these administrative breaches, the AER found that overall AEMO satisfied its obligation to use reasonable endeavours to maintain power system security during the pre-event period considering the various steps it took to maintain a secure operating state. In making these findings, the AER did not elect to take any enforcement action.⁷⁴

Recommendations

In relation to the market suspension compliance the AER made the following recommendations, which AEMO then implemented.

Table B.1: Summary of the AER's recommendations in relation to market suspension arrangements and their status to date

RECOMMENDATION	IMPLEMENTATION STATUS
Improved training for AEMO operators regarding the specific language used to ensure operators clearly state whether they are making a request, issuing instructions, or	Completed. AEMO updated its training program to include regular practice for control room operators in issuing market notices. Scripts for issuing directions were

⁷³ Further information can be found: AER, *The Black System Event Compliance Report*, November 2018, p. 158-159.

⁷⁴ *Ibid*, p. 17.

RECOMMENDATION	IMPLEMENTATION STATUS
otherwise issuing clause 4.8.9 directions.	improved, and AEMO conducts biannual market intervention scenario-based training, which includes practising scripts.
AEMO ensures that it publishes market notices, without delay, after it becomes aware of any foreseeable circumstances that may require AEMO to implement an intervention event and that it updates its procedures and guidelines accordingly.	Completed. AEMO updated its internal control room guidance to reflect this requirement.
AEMO ensures that its procedures more closely align with what is prescribed in the Rules particularly regarding directions (clause 4.8.9) and market notices (clause 4.8.5A).	Completed. AEMO conducted public consultation on its Procedures for Issue of Directions and clause 4.8.9 Instructions, with revised procedures published September 2019. Amongst other things, the procedures were rewritten to provide a more comprehensive description of the AEMO processes before and after issuing a direction or clause 4.8.9 instruction.

Source: AER, *The Black System Event Compliance Report: Recommendations Outcomes*, 28 February 2020.