RELIABILITY PANEL AEMC

DETERMINATION

Reliability Panel AEMC

# FINAL DETERMINATION

# REVOKING THE SOUTH AUSTRALIAN PROTECTED EVENT

14 SEPTEMBER 2023

## INQUIRIES

Reliability Panel
c/- Australian Energy Market Commission
Level 15, 60 Castlereagh Street
Sydney NSW 2000

E aemc@aemc.gov.au
T (02) 8296 7800
F (02) 8296 7899

Reference: REL0088

## CITATION

Reliabilty Panel, Revoking the South Australian protected event, 14 September 2023

## ABOUT THE RELIABILITY PANEL

The Panel is a specialist body within the Australian Energy Market Commission (AEMC) and comprises industry and consumer representatives. It is responsible for monitoring, reviewing and reporting on reliability, security and safety on the national electricity system, and advising the AEMC in respect of such matters. The Panel's responsibilities are specified in section 38 of the National Electricity Law.

## ACKNOWLEDGEMENT OF COUNTRY

The AEMC acknowledges and shows respect for the traditional custodians of the many different lands across Australia on which we all live and work. We pay respect to all Elders past and present and the continuing connection of Aboriginal and Torres Strait Islander peoples to Country. The AEMC office is located on the land traditionally owned by the Gadigal people of the Eora nation.

## COPYRIGHT

## RELIABILITY PANEL MEMBERS

Charles Popple (Chair) – Commissioner, AEMC
Stephen Clark, Project Director – Marinus Link, TasNetworks
Joel Gilmore, General Manager Energy Policy & Planning, Iberdrola Australia
Ken Harper, Group Manager Operational Support, AEMO
Craig Memery, Project team leader – Energy & Water Consumer's Advocacy Program, PIAC
Melissa Perrow, General Manager Energy, Brickworks Limited
Peter Price, Chief Engineer, Energy Queensland
Keith Robertson, General Manager Wholesale Risk and DER, Origin Energy
Damien Sanford, Executive General Manager Operations, Tilt Renewables
Rachele Williams, General Manager of Project Delivery, Australian Renewable Energy Agency

# SUMMARY

1 In response to a request from AEMO, the Panel has determined to revoke the existing protected event declaration that applied to help manage the risk of destructive winds for South Australia. The Panel is satisfied that the SA protected event declaration is no longer required as AEMO can use the revised contingency reclassification framework to manage the risks associated with destructive winds in South Australia.

## 2 The South Australian protected event

3 A "protected event" is a non-credible contingency event that the Reliability Panel has declared to be a protected event under clause 8.8.4 of the NER. Declaring a non-credible contingency event as a protected event supports AEMO taking pre-emptive action to manage the associated risks to the system. These actions can include the coordination of Emergency Frequency Control Schemes (EFCS), purchase of frequency control ancillary services (FCAS) and constraining dispatch. The Panel is tasked to assess the costs and benefits of declaring a non-credible contingency event as a protected event following a request from AEMO.[1]

4 The South Australian destructive winds protected event was declared on 20 June 2019 and is defined as "the loss of multiple transmission elements causing generation disconnection in the South Australia region during periods where destructive wind conditions are forecast by the Bureau of Meteorology."

5 The event declaration included target capabilities relating to how AEMO would manage the power system to mitigate the associated risks. These operational arrangements included limiting flow on the Heywood Interconnector (HIC) to 250 MW during destructive wind conditions and the operation of the System Integrity Protection Scheme (SIPS). SIPS is designed to detect power swings on HIC associated with a loss of generation within SA and trigger power injection from SA batteries and/or shed load in SA to stabilise the region and prevent separation.

## 6 AEMO's request to revoke the existing protected event

7 AEMO considers that the existing protected event arrangements may not be fit for purpose following the connection of PEC Stage 1 and requested that the Panel revoke the protected event prior to the expected connection of Project EnergyConnect (PEC) Stage 1. PEC is a new 330kV AC interconnector between Robertstown in South Australia and Wagga Wagga in New South Wales. Stage 1 is expected to commence inter-network testing from April 2024 and will provide a single circuit connection with an increased transfer capacity between SA and Buronga in NSW of 150 MW.[2] Stage 2 is expected to be completed in December 2024 and will provide an increased transfer capacity and extension through to Wagga Wagga in NSW.[3]

8 As noted in its request, AEMO considers that there will be no negative consequences due to the removal of the protected event. AEMO has determined that it can better manage the

---

1 NER clause 8.8.4.

2 Project EnergyConnect, industry Update slides, 17 August 2023. Available at: https://www.projectenergyconnect.com.au/moreInformation.php?page=3

3 AEMO, Transmission Augmentation Information - December 2022, 16 December 2022.

event under the contingency event framework, as amended by the *Enhancing operational resilience in relation to indistinct events rule 2022.* Further information on the procedure for reclassification of contingency events is available in AEMO's *Power system security guidelines_SO_OP_3715*.

## 9 The Panel's determination to revoke the SA protected event

10 The Panel has made a final determination to revoke the South Australian protected event and the associated protected event Emergency Frequency Control Scheme (EFCS). This final determination is consistent with AEMO's request and will help promote the National Electricity Objective (NEO) by maintaining a secure and resilient power system while promoting the long-term interests of consumers by likely avoiding costs from over-constraining the power system following the connection of PEC Stage 1.

11 The Panel received one submission — from CS Energy — in response to its draft determination. CS Energy expressed support for the revocation of the protected event and noted that the revised contingency reclassification framework allows AEMO to manage this risk to deliver efficient and effective market outcomes.

12 The Panel is satisfied that AEMO can use the contingency reclassification framework to maintain system security prior to and following the connection of PEC Stage 1. AEMO has indicated that, following the connection of PEC Stage 1 and subject to final advice from ElectraNet, the current 250 MW SA import limit on HIC could be increased. The limits on HIC and PEC are aimed at mitigating the risks from a 500 MW generation loss in SA due to destructive winds and are designed to avoid the separation of the SA region following such an event. AEMO expects no change in operational outcomes from managing destructive winds in SA if the protected event is revoked.

13 The Panel notes stakeholder concerns in relation to transparency of the operational measures that will be applied by AEMO to manage the risk of destructive winds in SA following the revocation of the protected event. The existing reporting obligations set out in the NER in relation to contingency reclassification and the *General Power System Risk Review* (GPSRR) will provide transparency to market participants and industry stakeholders in relation to the operational arrangements put in place by AEMO to manage the risk of destructive winds, including the appropriateness of these controls and how they might change to reflect future changes in the power system. The Panel expects that AEMO would review and report on the effectiveness and appropriateness of the arrangements to manage the risk of destructive winds in South Australia as part of its annual GPSRR. Furthermore, following the revocation of the protected event, the existing reclassification framework requires AEMO to report on the reasons for any reclassification decisions and the appropriateness of the related mitigation measures every six months.

14 The Panel considers that revoking the protected event is likely to avoid excessive costs to consumers. AEMO has advised that the existing protected event arrangements are likely to over-constrain the network following the connection of PEC Stage 1, which may result in excessive costs being faced by consumers. The Panel considers that revoking the protected event will allow AEMO and ElectraNet to make suitable arrangements to manage events in an efficient and low cost way that avoids excessive costs to consumers.

15 The revocation of the SA protected event will take effect on **30 March 2024** in advance of the expected synchronisation and testing of PEC Stage 1 in April 2024. [4] This date is different to the date set out in the draft determination and AEMO's original request, for the protected event to be revoked on 1 October 2023. However, the Panel considers that the revised date is appropriate due to the later expected date for commencement of service of PEC stage 1.

**16 The Panel expects that AEMO publish updated flow limits for NEM interconnectors**

17 The Panel recognises the need for market participants to be informed of the expected operating limits that will be applied by AEMO in its operation of the electricity system during normal operation and abnormal conditions. One benefit of the current protected event declaration is that it provides certainty in relation to the limits that will be applied to manage the risk that destructive winds pose to the SA region. While the Panel's declaration is to revoke the protected event, it expects that AEMO will continue to provide market participants with transparency around the flow limits that will apply on HIC and PEC prior to and following the connection of PEC Stage 1. The Panel notes that this transparency could be provided through AEMO's publication of revisions to the *Interconnector Capabilities* document, which documents the nominal flow limits for each of the NEM interconnectors.[5]

18 The Panel recommends that AEMO expand on the current *Interconnector Capabilities* document to not only include nominal flow limits for normal operation, but also publish the flow limits that will be applied in the event of a known priority risk, as identified through the GPSRR. The expected outcome is that the *Interconnector Capabilities* would document the flow limits that AEMO intends to apply for HIC and PEC in the event of forecast destructive winds in SA.[6] This would provide a similar level of transparency to market participants as under the existing arrangements, while also allowing flexibility for AEMO to adjust the flow limits as required to reflect the changing grid topology and operational experience.

**19 The Panel supports a review of the protected event framework**

20 The Panel notes the proposal by CS Energy that the revocation of the SA protected event presents an opportunity to assess the utility and efficacy of the Protected Event Framework, now and into the future. This aligns with AEMO's recommendation from the *2023 General power system risk review* that it would review the protected event framework by Q4 2023 and consider the submission of a rule change proposal to enhance the protected event framework.

21 The Panel notes that since the introduction of the protected event framework in 2017, there has been only one protected event declared — the SA destructive winds protected event. In the context of the revocation of this protected event and the commencement of the revised contingency reclassification framework on 9 March 2023, the Panel consider that it is timely that the protected event framework be reviewed.

---

4 Project EnergyConnect, industry Update slides, 17 August 2023. Available at: https://www.projectenergyconnect.com.au/moreInformation.php?page=3

5 AEMO, *Interconnector Capabilities - For the National electricity market*, 3 November 2017, Available at: https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/system-operations/congestion-information-resource/network-status-and-capability

6 The final limits to be applied to HIC and PEC stage 1 during forecast SA destructive wind conditions are being analysed by AEMO as part of the 2024 GPSRR.

# CONTENTS

# 1 THE PANEL HAS MADE A FINAL DETERMINATION

This chapter provides an overview of:

- Section 1.1 — the Panel's final determination.
- Section 1.2 — the consultation process.
- Section 1.3 — the Panel's consideration of stakeholder views and submissions.
- Section 1.4 — the Panel's support for a review of the protected event framework.

The Panel's consideration of the National Electricity Objective (NEO) and assessment criteria is set out in chapter 2.

## 1.1 The Panel's final determination to revoke the South Australian protected event

The Panel's determination is to revoke the SA protected event in accordance with AEMO's request received on 11 April 2023.

The SA protected event was declared on 20 June 2019 and is defined as:[7]

> The loss of multiple transmission elements causing generation disconnection in the South Australia region during periods where destructive wind conditions are forecast by the Bureau of Meteorology.

The Panel is satisfied that there will likely be no negative consequences arising from the revocation of the SA protected event as AEMO can manage operational risks from destructive wind conditions with the contingency reclassification framework. This change will also provide AEMO with greater operational flexibility and likely avoid costs associated with excessively constraining the power system, following the synchronisation of PEC Stage 1 in early 2024. It also allows for AEMO to adapt the operational arrangements as the power system continues to transform and additional transmission elements are added or modified, such as PEC Stage 2 which is expected to commence service in December 2024.[8]

The Panel's reasons for revoking the SA protected event include:

- AEMO can manage the risk of destructive winds through the revised contingency reclassification framework, which allows AEMO to reclassify the distributed loss of up to 500 MW of generation in SA as a credible contingency event where destructive wind conditions are forecast by the Bureau of Meteorology.
- Revoking the protected event will allow for operational arrangements to be revised to reflect network changes, this includes the commencement of inter-network testing of PEC Stage 1 in April 2024 as well as the future commencement of PEC Stage 2, planned for December 2024.

7 Reliability Panel, AEMO Request for Protected Event Declaration – Final determination, 20 June 2019, p.22.

8 AEMO, NEM Transmission Augmentation Information, July 2023.

- Revoking the protected event will likely avoid excessive costs from the application of constraints that excessively constrain the power system following the commencement of PEC Stage 1.

Further detail on the reasoning for this determination is available in, the Panel's draft determination.[9]

The revocation of the SA protected event will take effect on 30 March 2024 in advance of the expected synchronisation and testing of PEC Stage 1 in April 2024. [10] This date is different to the date set out in the draft determination and AEMO's original request, for the protected event to be revoked on 1 October 2023. However, the Panel considers that the revised date is appropriate due to the later expected date for commencement of service of PEC stage 1.

## 1.2 The Panel followed the expedited rules consultation procedure in making this determination

The Panel followed the expedited rules consultation procedure as it considered that AEMO's request was a 'Non-material Proposal' under clause 8.9.1(a) of the NER. A 'Non-material Proposal' under clause 8.9.1(a) of the NER is a proposal that is unlikely to have a significant effect on the NEM or the activities of registered participants.

The Panel opted to use the expedited procedure as it was satisfied that the revocation of the protected event would not have any adverse impacts on power system security or market participants.

The expedited rules consultation procedure requires one round of public consultation on a draft determination followed by a final determination (this document).

In accordance with clause 8.9.3(b) of the NER, the Panel invited any person to submit a written objection to the use of the expedited rules consultation procedure by 20 July 2023. The Panel did not receive any such objections.

The Panel received one submission — from CS Energy — in response to its draft determination. CS Energy expressed its support for the Panel's draft determination to revoke the SA protected event.[11]

## 1.3 The Panel has considered stakeholder views and submissions

In considering AEMO's request to revoke the SA protected event, Panel members and representatives held discussions with interested stakeholders and invited formal submissions. This section summarises how these discussions and submissions have informed the Panel's determination to revoke the SA protected event.

---

9 Reliability Panel, Revoking the South Australian protected event - Draft Determination, 6 July 2023. Available on the project page.

10 Project EnergyConnect, industry Update slides, 17 August 2023. Available at: https://www.projectenergyconnect.com.au/moreInformation.php?page=3

11 CS Energy, submission to the draft determination, 7 August 2023.

### 1.3.1 The Panel's draft determination responded to stakeholder concerns in relation to the transparency of operational arrangements following the connection of PEC Stage 1

The Panel notes stakeholder concerns in relation to the transparency of operational measures that will be applied by AEMO to manage the risk of destructive winds in SA following the revocation of the protected event.

**AEMO is required to report on contingency reclassifications and the appropriateness of measures used to manage priority risks**

The existing reporting obligations set out in the NER for contingency reclassifications and the *General Power System Risk Review* (GPSRR) will provide transparency to market participants and industry stakeholders on the operational arrangements put in place by AEMO to manage the risk of destructive winds, including the appropriateness of these controls and how they might be adapted to reflect future changes in the power system.

The Panel expects that AEMO will review and report on the effectiveness and appropriateness of the arrangements used to manage the risk of destructive winds in South Australia as part of its annual *General Power System Risk Review* (GPSRR). This is based on the understanding that the risk of destructive winds in SA is likely to be a 'priority risk', as it has the potential to lead to cascading outage or a major supply disruption.[12] The GPSRR also provides an opportunity for AEMO to consider and consult on potential changes to the mitigations in place including constraints on HIC and PEC during destructive winds.

Furthermore, following the revocation of the protected event, the existing reclassification framework requires AEMO to report every six months on the reasons for any reclassification decisions and the appropriateness of the related mitigation measures. These reports must include AEMO's reasons for any reclassification decisions made during the reporting period as well as AEMO's appraisal of the appropriateness of the reclassification criteria and the applied risk mitigation measures.[13]

**The draft determination included clarification of the expected operational arrangements that would apply following the revocation of the SA protected event**

In response to stakeholder discussions, AEMO provided a supplementary note with additional information on the existing and proposed arrangements to manage the risks associated with destructive wind conditions in SA. This note was published alongside the draft determination.

AEMO clarified that the management of the event as a credible contingency event would need to meet the FOS requirements for a network event and that AEMO would be required to contain the frequency between 49 Hz and 51 Hz.[14] Correspondingly, AEMO would apply measures when the event is reclassified to keep frequency above 49 Hz to avoid separation of the SA region and the use of under-frequency load shedding (UFLS). This is consistent with AEMO's current operational approach to managing the SA protected event to contain system frequency above 49 Hz (compared to 47 Hz typically expected for a protected event

12 Clause 5.20A.1(a) of the NER.

13 Clause 4.3.2A(i) of the NER.

14 AEMO, AEMO Request to Revoke Protected Event – Additional information, June 2023, p.3.

under the FOS) and avoid UFLS and the separation of the SA region from the rest of the NEM.

***AEMO's proposed approach to managing the risk of destructive winds for the SA region***

AEMO has indicated that, following the revocation of the SA protected event and prior to the connection of PEC Stage 1, it would continue with its current operational arrangement to manage the risk of destructive winds in SA under the contingency reclassification framework.[15] This includes:

- applying a pre-contingency limit of 250 MW to imports into SA over HIC during destructive wind conditions
- utilising SIPS to trigger power injection from SA batteries and/or shed load in SA in response to power swings on HIC associated with a loss of generation within SA.[16]

Following the connection of PEC Stage 1, and subject to final advice from ElectraNet, AEMO intends to revise these arrangements by:[17]

- modifying SIPS to account for changes in network topology from the connection of PEC Stage 1
- reviewing the appropriateness of the current 250 MW SA import limit on HIC to account for the changed network topology.

### 1.3.2 Stakeholder submissions to the draft determination supported the revocation of the SA protected event

The Panel received one written submission in response to its draft determination. This submission, from CS Energy, supported the revocation of the SA protected event.

**CS Energy supported the revocation of the SA protected event**

In its submission, CS Energy noted that it was satisfied with the justification for revoking the SA protected event, given the "detailed scrutiny performed by the Reliability Panel" and in the context of the commencement of the revised contingency reclassification framework. It noted that the proposed approach would be "agile and adaptable to the NEM power system that is undergoing constant change and expected transformation". CS Energy considers that:[18]

> The revised contingency reclassification framework enables AEMO to initiate appropriate operational actions to maintain the power system in a secure operating state accompanied by market outcomes that are efficient and effective.

15 AEMO, AEMO Request to Revoke Protected Event, April 2023, p.13.

16 SIPS is a remedial action scheme that reduces the risk of HIC tripping due to loss of SA generation. It acts by triggering power injection from SA batteries and/or load shedding in SA when it detects a large power swing on HIC. An upgraded version of SIPS, known as the Wide Area Protection Scheme (WAPS), will improve its effectiveness and is planned for implementation by ElectraNet in 2023.

17 AEMO, AEMO Request to Revoke Protected Event – Additional information, June 2023, p.5.

18 CS Energy, Submission to the Draft determination, 7 August 2023.

**CS Energy proposed a review of the protected event framework**

CS Energy noted in its submission that the protected event framework is arguably not fit for purpose and should be reviewed, noting that:[19]

> The completion of the revised contingency reclassification framework has provided an opportunity to assess the utility and efficacy of the Protected Event Framework, now and into the future. The authorisation process to approve and revoke is time consuming. Any material changes to the technical envelope may result in a material impact to an approved protected event necessitating a change in accordance with the National Electricity Rules (NER). The Protected Event Framework process does not represent the agile and adaptable capability required and delivered by the revised contingency reclassification framework.

CS Energy also reiterated its views on the protected event framework set out in its submission to AEMO's 2023 GPSRR:[20]

> CS Energy encourages AEMO to consider if the conditions for a protected event are too onerous and warrant review to obtain the appropriate conditions while achieving the appropriate economic outcome. This review is important to determine if the efficacy envisaged with the protected event is being delivered, and if not, initiate the necessary changes before increasing the number of protected events in the NEM.

The Panel's views in relation to this proposal are set out below in section 1.4.

### 1.3.3 The Panel expects that AEMO publish updated flow limits for NEM interconnectors

The Panel recognises the need for market participants to be informed of the expected operating limits that will be applied by AEMO in its operation of the electricity system during normal operation and abnormal conditions. One benefit of the current protected event declaration is that it provides certainty in relation to the limits that will be applied to manage the risk that destructive winds pose to the SA region. While the Panel's declaration is to revoke the protected event, it expects that AEMO will continue to provide market participants with transparency around the flow limits that will apply on HIC and PEC prior to and following the connection of PEC Stage 1. The Panel notes that this transparency could be provided through AEMO's publication of revisions to the *Interconnector Capabilities* document, which documents the nominal flow limits for each of the NEM interconnectors.[21]

The Panel recommends that AEMO expand on the current *Interconnector Capabilities* to not only include nominal flow limits for normal operation, but also publish the flow limits that will be applied in the event of a known priority risk, as identified through the GPSRR. The

19 Ibid.

20 Ibid.

21 AEMO, *Interconnector Capabilities - For the National electricity market*, 3 November 2017, Available at: https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/system-operations/congestion-information-resource/network-status-and-capability

expected outcome is that the *Interconnector Capabilities* would document the flow limits that AEMO intends to apply for HIC and PEC in the event of forecast destructive winds in SA.[22] This would provide a similar level of transparency to market participants as under the existing arrangements, while also allowing flexibility for AEMO to adjust the flow limits as required to reflect the changing grid topology and operational experience.

Given project EnergyConnect is now scheduled to commence inter-network testing from April 2024, the Panel has determined that the protected event be revoked from 30 March 2024.[23] This timing aligns with the project delivery schedule for Project EnergyConnect and allows for AEMO to prepare and publish a revised *Interconnector Capabilities* document to include the limits that AEMO intends to apply to HIC to manage the risk that destructive winds pose to the SA region prior to the protected event revocation.

## 1.4 The Panel supports a review of the protected event framework

The Panel notes CS Energy's proposal that the revocation of the SA protected event presents a timely opportunity to review the effectiveness of the protected event framework, which commenced in the NEM from 6 April 2017 as a result of the *Emergency frequency control schemes rule 2017 (EFCS Rule).*

A protected event is a special type of non-credible contingency event which is declared by the Reliability Panel in response to a request from AEMO stemming from its GPSRR. AEMO must maintain the power system in a secure operating state in relation to protected events, including by managing power system frequency within the frequency operating standard following the occurrence of the event.[24]Protected events can be managed using ex-ante measures such as constraints on dispatch and procurement of ancillary services, as well as limited generation or load shedding. They differ from credible contingency events, for which automatic generation and load shedding are not allowed.

Under the NER, the Panel may declare a non-credible contingency event to be a protected event in response to a request from AEMO.[25]The Panel's determination on such a request must have regard to the NEO and be informed by AEMO's estimate of the likelihood and consequences for the power system if the event were to occur, along with the costs associated with proposed mitigation measures, including operational measures and network-based emergency frequency control schemes.[26]

Since the commencement of the EFCS Rule, AEMO has only submitted one request for a protected event and only one protected event has been declared — the SA protected event.

22 The final limits to be applied to HIC and PEC stage 1 during forecast SA destructive wind conditions are being analysed by AEMO as part of the 2024 GPSRR.

23 Project EnergyConnect, industry Update slides, 17 August 2023. Available at: https://www.projectenergyconnect.com.au/moreInformation.php?page=3

24 Clause 4.2.4(a) of the NER.

25 Clause 8.8.4 of the NER.

26 Clause 5.20A.4 of the NER.

### AEMO has raised concerns with the protected event framework and recommended a review and potential rule change

The Panel notes that AEMO's most recent GPSRR highlights a number of concerns with the protected event framework:[27]

> AEMO considers that the NER requirements for managing power system security for protected events mean that the framework may not be fit for purpose, in that it does not facilitate transparent and expedient implementation of efficient management measures targeted to minimise critical power system risks as they are identified.
>
> To effectively support the energy transition, any risk management framework must allow for efficient and timely changes to be made in the face of rapidly changing system conditions and network configurations. An alternative to the current protected events framework could consider approaches that are less prescriptive, and do not necessarily require all aspects of power system security (other than the primary risk being managed) to be managed to the same limits as a credible contingency event.

In the 2023 GPSRR, AEMO committed to undertake a review of the protected event framework by Q4 2023 and to consider the submission of a rule change proposal to enhance the protected event framework.[28]

### The Panel supports a review of the protected event framework

In light of the aligned proposals from AEMO and CS Energy, the Panel supports the proposed review of the protected event framework and potential submission of a rule change to request reforms to the protected events framework, if this is identified as necessary and beneficial.

The Panel notes that the revised contingency reclassification framework allows AEMO to take action to mitigate risks posed by events relating to abnormal conditions. However, it is important that the regulatory arrangements also effectively support AEMO to take prudent actions to manage priority risks that have the potential to cause cascading system failure but that may not be directly related to abnormal conditions that increase the likelihood of the event occurring.

27 AEMO, 2023 General Power System Risk Review Report, 10 July 2023, p.101.

28 Ibid.

# 2 REVOKING THE PROTECTED EVENT ALIGNS WITH THE NATIONAL ELECTRICITY OBJECTIVE

In making a determination that declares a non-credible contingency event to be a protected event, or revokes that declaration, the Panel must have regard to the National Electricity Objective (NEO).[29]

The NEO is set out under section 7 of the National Electricity Law (NEL) and prescribes that:

> The objective of this law is 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:
>
> - price, quality, safety, reliability and security of supply of electricity; and
> - the reliability, safety and security of the national electricity system.

The aspects of the NEO relating to the security of supply of electricity, and of the national electricity system, are particularly relevant to AEMO's request. Maintaining the power system within technical limits allows it to operate effectively, efficiently and safely.

The SA protected event was declared to support system security by reducing the risk of cascading failures from non-credible contingency events, similar to the 2016 South Australia black system event.[30] The Panel's final determination is that AEMO can maintain power system security and manage the risk of destructive winds in SA through the revised contingency reclassification framework as set out in its Power system security guidelines_SO_OP_3715.

With respect to the NEO, the Panel considers that revoking the SA protected event will allow AEMO to adapt its operational arrangements to reflect the changing technical envelope of the power system following the connection of PEC Stage 1. This will avoid excessive costs associated with the application of constraints that are beyond what is necessary to maintain the system in a secure operating state when PEC Stage 1 is in service, thereby lowering the long term costs to consumers. The Panel is satisfied that the revised contingency reclassification framework will be sufficient for AEMO to manage the risks to the security of the power system, in the absence of the protected event.

**Considering the upcoming emissions reduction component of the NEO**

In May 2023, Energy Ministers approved amendments to the national energy laws to implement their previous decision to incorporate an emissions reduction objective into the NEO, National Energy Retail Objective, and National Gas Objective.[31]

29 Clause 8.8.4(e) of the NER.

30 For more information on the 2016 black system event, refer to AEMO, Black System in South Australia - Final Integrated Report, 28 March 2017.

31 Department of Climate Change, Energy, Environment and Water, Energy and Climate Change Ministerial Council meeting communique, 19 May 2023.

The legislative process to introduce an emissions reduction objective into the national energy objectives is currently in train, and is expected to be completed in September 2023.[32]

Although the emissions reduction component of the NEO is not yet in effect, the Panel has considered emissions reduction in the context of this request, as the change to the NEO is expected to take effect soon. The Panel does not consider that emissions would be a material factor in relation to the revocation of the SA protected event. The Panel's options in relation to this request are either to revoke or maintain the existing protected event declaration, and the Panel does not consider that either option would affect the ability to meet government emission reduction targets.

### The Panel's assessment criteria

In its assessment of AEMO's request to revoke the SA protected event, the Panel has considered how this change would promote the NEO. The Panel identified the following assessment criteria to support that objective:

- Promote power system security with the appropriate allocation of risk
- Flexible and efficient investment in, and operation of, energy resources to promote secure supply
- Transparent, predictable and simple regulatory arrangements
- Consumer preferences.

Further detail on the Panel's consideration against these criteria is included in chapter 2 of the draft determination.[33]

32 The Statutes Amendment (National Energy Laws) (Emissions Reduction Objectives) Bill 2023 was introduced into South Australian Parliament on 14 June 2023.

33 Reliability Panel, Revoking the South Australian protected event - Draft Determination, 6 July 2023. Available on the project page.

# ABBREVIATIONS

| | |
|---|---|
| AEMC | Australian Energy Market Commission |
| AEMO | Australian Energy Market Operator |
| AER | Australian Energy Regulator |
| Commission | See AEMC |
| DPV | Distributed photovoltaics |
| FCAS | Frequency Control Ancillary Services |
| FOS | Frequency operating standard |
| GPSRR | General Power System Risk Review |
| HIC | Heywood interconnector |
| MCE | Ministerial Council on Energy |
| NEL | National Electricity Law |
| NEO | National electricity objective |
| NSP | Network service provider |
| Panel | Reliability Panel |
| PEC | Project EnergyConnect |
| PSFRR | Power System Frequency Risk Review |
| SA | South Australia |
| SCADA | Supervisory Control and Data Acquisition |
| SIPS | System Integrity Protection Scheme |
| TNSP | Transmission network service provider |
| WAPS | Wide Area Protection Scheme |