

Review of Power System Reclassification Events – 1 May 2022 to 31 October 2022

March 2023

A report for the National Electricity Market





Important notice

Purpose

AEMO has prepared this report on its power system reclassification decisions in the National Electricity Market for the period 1 May 2022 to 31 October 2022 in accordance with clause 4.2.3A(i) of the National Electricity Rules. This is the final reclassification event review report under the current clause of 4.2.3A(i). Following the AEMC's National Electricity Amendment (Enhancing operational resilience in relation to indistinct events) Rule 2022, AEMO will review reclassification events for the next reporting period (1 November 2022 to 30 April 2023) under amended clause 4.2.3A(i) taking effect from 9 March 2023.

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1 Introduction

This report sets out AEMO's reasons for decisions to reclassify *non-credible contingency events* as *credible contingency events* under clause 4.2.3A(g) of the National Electricity Rules (NER).

AEMO is required by clause 4.2.3A(i) of the NER to report on reclassification decisions every six months. This report covers the period from 1 May 2022 to 31 October 2022 (reporting period). The report includes:

1. An explanation of how AEMO applied the criteria established in accordance with clause 4.2.3B for each of these decisions.
2. AEMO's analysis of reclassification trends during the reporting period, and its appraisal of the appropriateness of the relevant criteria applied in the case of each reclassification decision.

This is the final reclassification event review report under the current clause of 4.2.3A(i). Following the AEMC's National Electricity Amendment (Enhancing operational resilience in relation to indistinct events) Rule 2022, AEMO will review reclassification events for the next reporting period (1 November 2022 to 30 April 2023) under amended clause 4.2.3A(i) taking effect from 9 March 2023.

This document uses and italicises terms defined in the NER, with the same meanings.

References to times in this report, unless otherwise specified, are to Australian Eastern Standard Time (AEST).

2 Overview

There was a total of 217 reclassification events in this reporting period, compared to 373 reclassification events during the previous winter reporting period (1 May 2021 to 31 October 2021).

While the total number of reclassification events was lower compared to last winter period, it was similar to the historical winter period average (average of 228 reclassification events in winter since 2013).

All reclassifications in this reporting period were appropriately determined in accordance with the reclassification criteria in AEMO's Power System Security Guidelines SO_OP_3715¹, for bushfires, lightning, severe weather, or other reasons.

During the reporting period, AEMO took action to maintain power system security during nine abnormal conditions, including two *protected events*.

AEMO notified *Market Participants*, via Market Notices (MNs)², of the reasons for reclassifying each of these *non-credible contingency events*.

¹ AEMO, Power System Security Guidelines. Power system operating procedures are available at <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Security-and-reliability/Power-system-operation>.

² Market Notices are issued through the Market Management System. They are updated in real time by AEMO to notify market participants of events that have an impact on the market. Market Notices are also published on AEMO's website at <https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Market-notice-and-events>.

3 AEMO's role

In general terms, the *power system* is operated such that it will remain in a *satisfactory operating state*³ following the loss of a single major *transmission* or *generation* element. These events are defined as *credible contingency events*⁴ and include:

- Unexpected loss of a single transmission line, transformer, or reactive plant.
- Unexpected loss of a single generating unit.

AEMO considers the occurrence of these events to be reasonably possible.

A *non-credible contingency event* is a *contingency event* other than a *credible contingency event*. Examples include:

- Three phase electrical faults.
- The trip of any busbar in the transmission network.
- The trip of more than one transmission element.
- The trip of transmission plant in a manner not considered likely (for example, a transmission line that trips at one end only).
- The trip of multiple generating units.

AEMO is not required to operate the *power system* with the capability to remain in a *satisfactory operating state* following *non-credible contingency events* (other than any *protected events*), as the likelihood of their occurrence is low.

AEMO must reclassify a *non-credible contingency event* as a *credible contingency event* if the likelihood of this event impacting the *power system* has become reasonably possible due to *abnormal conditions*. *Abnormal conditions* may include severe weather conditions, lightning, and bushfires⁵.

³ Refer to clause 4.2.2 of the NER.

⁴ Refer to clause 4.2.3 of the NER.

⁵ Refer to clause 4.2.3A (a) of the NER.

4 Reclassification criteria

AEMO has developed criteria for determining whether a *non-credible contingency event* should be reclassified as a *credible contingency event* (reclassification criteria). The reclassification criteria are specified in AEMO's Power System Security Guidelines SO_OP_3715⁶. The reclassification criteria apply to:

- Bushfires.
- Lightning.
- Severe weather (the majority of 'severe weather' reclassifications were due to weather warnings from the Bureau of Meteorology [BoM]. These warnings covered weather events like high winds or cyclone).
- Occurrence of a *non-credible contingency event*.
- Other events (this includes events that do not fall into the other categories; examples include events with the potential to impact multiple generating units, vulnerable transmission elements due to a planned outage nearby, or pollution impacting transmission line insulators).

The following section analyses how AEMO reclassified *non-credible contingency events* using the reclassification criteria for the reporting period.

⁶ AEMO published a new version of Power System Security Guidelines SO_OP_3715 on 23 September 2019, which introduced two new reclassification criteria, *severe weather conditions* and *non-credible contingency event*.

5 Reclassification events, 1 May 2022 to 31 October 2022

AEMO reclassified 217 events during the reporting period, a decrease of 156 events from the same period in 2021. Table 1 summarises these events. Refer to Appendix A1 for a complete list of events.

Table 1 Reclassification events for period 1 May 2022 to 31 October 2022

Criteria	Number of reclassification events	Incidence of contingency occurring during reclassification
Bushfires	0	0
Lightning	182	0
Severe weather	19	0
Other ^A	16	0
Total for period	217	0

A. This includes any reclassifications due to occurrence of *non-credible contingency events* or other reasons.

AEMO reclassified all lightning events in accordance with the reclassification criteria specified in Section 8.4 of SO_OP_3715.

There were 35 events reclassified under ‘severe weather’ and ‘other’ criteria according to Sections 8.5, 8.6, and 8.7 of SO_OP_3715. Most of these were reclassified due to either:

- Forecast abnormal weather conditions (such as severe weather warnings due to high wind or cyclones), or
- Occurrence of a *non-credible contingency event* following which AEMO considered there was a reasonable possibility of re-occurrence.

There were no incidents of contingency event occurring during reclassifications.

Figure 1 shows the number of reclassification events per region for the reporting period, and Figure 2 shows the historical trend of reclassification events by event criteria.

Appendix A3 lists all the reclassified elements and the number of times they were reclassified during the period 1 May 2022 to 31 October 2022.

The total number of reclassification events in this reporting period was similar to the historical winter period average (average of 228 reclassification events since 2013).

The number of reclassified transmission elements decreased in this reporting period compared to the previous reporting period (1 November 2021 to 30 April 2022), from 36 to 28, and compared to last winter period (1 May 2021 to 31 October 2021), from 33 to 28.

The majority of regions experienced significant decrease in reclassifications compared to last winter period; only New South Wales recorded a marginal increase. The number of reclassifications decreased by 42% overall, from 373 in the previous winter to 217 this reporting period. Compared to the previous winter, the largest decrease was observed for reclassifications due to lightning, which decreased from 338 to 182.



Queensland region recorded a significant reduction in reclassifications due to lightning. The Tarong – Chinchilla 7183 and 7168 132 kilovolt (kV) lines were reclassified 14 times due to lightning during the current reporting period, compared to 37 during the last winter period. Condabri North – Condabri Central 7400 and 7401 132kV lines were reclassified 15 times due to lightning during the current reporting period, compared to 34 during the last winter period.

In New South Wales, Bayswater – Mt Piper 5A3 and Bayswater – Wollar 5A4 500 kV lines (25 times) and Armidale – Dumaresq 8C 330 kV line and Armidale – Sapphire Wind Farm 8E 330 kV line (13 times) registered most reclassifications.

The Eildon – Mt Beauty No. 1 and No. 2 220 kV lines were the only reclassified elements in Victoria. These lines were reclassified 27 times compared to 28 times during the last winter period.

In Tasmania, Farrell – John Butters 220 kV line and Farrell – Rosebery Tee Queenstown – Newton 110 kV lines and Farrell – Reece No. 1 and No. 2 220 kV lines were reclassified 30 times each during the previous winter period. The frequency of reclassification reduced to 12 and 10 times, respectively, for the current reporting period.

Reclassifications due to severe weather reduced compared to previous winter period, 24 instances down to 19 instances. South Australia recorded more reclassifications in the severe weather category than any other region. Brinkworth – Davenport, Brinkworth – Templers West and Para – Templers West 275 kV lines and Para – Templers West and Magill – Torrens Island A 275 kV lines recorded 16 reclassifications.

Reclassifications due to other events increased by five (from 11 to 16) compared to the previous winter period.

Figure 1 **Reclassifications per region, 1 May 2022 to 31 October 2022**

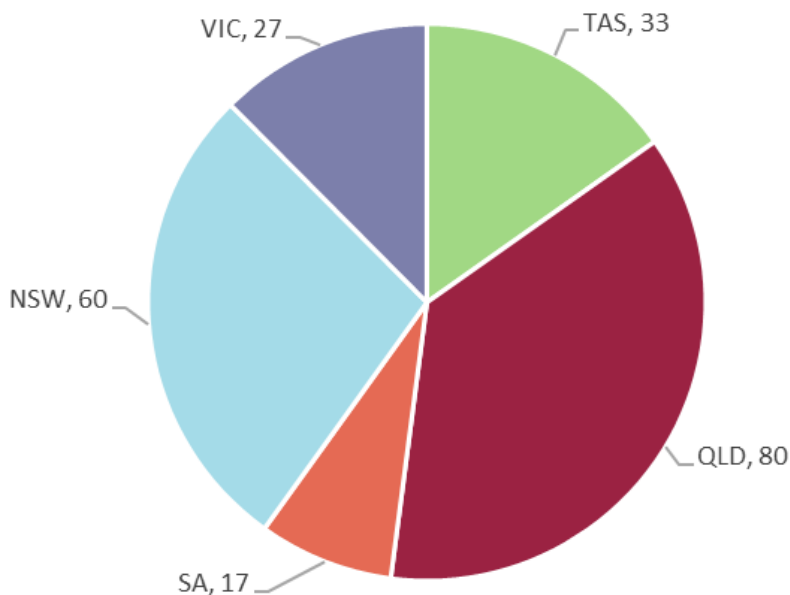
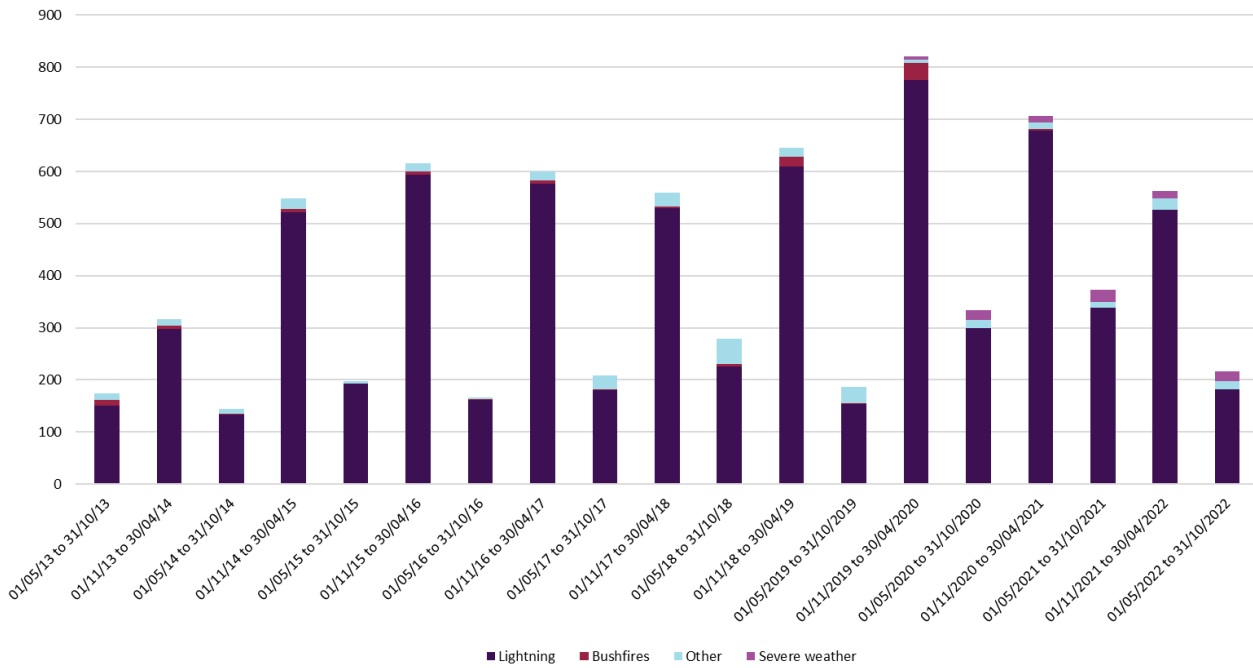




Figure 2 Historical reclassification events, 2013 to 2022



Note: Figure 2 does not include 'severe weather' for the reclassification periods prior to 1 November 2019 as it was previously included in the 'other' category. 'Severe weather' became a new category and was only included from the report covering 1 November 2019 to 30 April 2020.

6 Non-credible contingency events, 1 May 2022 to 31 October 2022

During the reporting period, 18 *non-credible contingency events* occurred. By the end of this reporting period, AEMO had reclassified five of these events as *credible contingency events*, after assessing there was a risk of the event reoccurring.

Appendix A1 lists all reclassification events during the reporting period. Note that the following reclassification events cancelled within this reporting period were initially reclassified before the period and are therefore not listed in Appendix A1:

- Trip of Tungatinah – New Norfolk No. 3 110 kV line and Meadowbank generator on 2 December 2021.
- Trip of Heywood – Alcoa Portland (APD) No. 2 500 kV line at APD end only on 21 December 2021.
- Trip of Rowville – Yallourn No. 8 220 kV line at Rowville end on 21 February 2022.
- Trip of Murray – Tee Geehi - Guthega 132 kV transmission line on 3 March 2022.

Appendix A4 lists all *non-credible contingency events* that occurred during the reporting period and AEMO's assessment of whether to reclassify each event as credible. The rows highlighted in teal in Appendix A4 explain the *contingency events* corresponding to the reclassifications highlighted in teal in Appendix A1.

Reclassifications of *non-credible contingency events* that occurred in this reporting period and remain reclassified at the time of publishing this report are:

- Trip of Liddell – Muswellbrook 330 kV line at Liddell end only reclassified on 14 July 2022.
- Trip of New England Solar Farm No. 1 and No. 2 330/33 kV transformers on 18 October 2022.
- Trip of Edmonton – Woree 7284 132 kV line, Barron Gorge – Kamerunga 7143 132 kV line and Barron Gorge – Kamerunga 7184 132 kV line, reclassified on 21 October 2022.

The transmission elements that were reclassified prior to the reporting period and remained reclassified at the end of this reporting period are not included in the report.

The following *non-credible contingency event* was considered a reviewable operating incident which was also reclassified as credible after occurrence.

6.1 Trip of Liddell – Muswellbrook 330 kV line at Liddell end only in New South Wales

At 1215 hrs on 14 July 2022, Liddell Circuit Breaker (CB) 832 unexpectedly tripped. This CB trip caused the Liddell – Muswellbrook 330 kV 83 line to be off-loaded at the Liddell 330 kV substation end. Approximately one minute later, Liddell CB 832 was manually closed by the Transgrid control room. This returned the Liddell – Muswellbrook 330 kV 83 line to service.

AEMO issued MN 100247 at 1340 hrs on 14 July 2022 advising of the non-credible contingency event. AEMO then issued MN 100248 at 1346 hrs on 14 July 2022 advising that this incident had been reclassified from 1345 hrs until further notice as the cause of the incident was unknown at that stage and AEMO was not satisfied that the non-credible contingency event was unlikely to re-occur.

The cause of this incident has not yet been determined. However, the following information has been provided by Transgrid and AGL⁷:

- Post-incident investigation by Transgrid confirmed that the trip of Liddell CB 832 was not due to the operation of any protection systems and there were no Transgrid staff performing any work at the time of the incident.
- AGL reviewed the work and actions of its staff and contractors on the day of the incident and AGL does not believe there is any connection between their works and the trip of the Liddell – Muswellbrook 330 kV 83 line.

Following the incident on 14 July 2022, Transgrid has taken the following actions:

- As Liddell CB 832 operation was not caused by a protection operation and the Liddell – Muswellbrook 330 kV 83 line remained energised, Transgrid returned Liddell CB 832 to service immediately.
- Transgrid has updated its operational procedures to include a physical isolation between Liddell Power Station and the Liddell substation when AGL notifies Transgrid that it is working on Liddell Power Station slave circuits.

The power system remained in a secure operating state throughout this incident and the Frequency Operating Standard (FOS) was met for this incident. The reclassification remains in place as the root cause of the incident has not yet been identified.

The published incident report⁸ provides more details related to this event.

⁷ Transgrid is the transmission network service provider (TNSP) for the Liddell and Muswellbrook 330 kV substations, and AGL is the owner of the Liddell Power Station.

⁸ At https://aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/power_system_incident_reports/2022/trip-of-liddell---muswellbrook-83-330-kv-line.pdf?la=en.



7 Reclassification constraints

When AEMO reclassifies an event, it seeks to operate the power system so it stays in a satisfactory operating state should the (now) credible contingency event occur. AEMO typically invokes constraint equations to manage the power system accordingly while an event is reclassified.

Appendix A5 lists the binding constraint equations during reclassification events over the reporting period.

There were 11 reclassified events that resulted in binding constraint equations. This means that in the 206 other instances, the reclassification constraints did not affect dispatch outcomes.

8 Abnormal conditions and protected events

This section includes analysis of abnormal conditions in the NEM during the reporting period for which AEMO took action to maintain power system security to manage increased risks of a *non-credible contingency event* occurring, but where there was no reclassification because the widespread nature of the conditions made it impractical to identify specific transmission or generation elements at risk. Such widespread abnormal conditions typically arise during extreme weather events, such as severe weather causing damaging or destructive winds, tropical cyclones and widespread bushfires. Following a change to the NER in 2022⁹, AEMO is currently consulting via the Power System Security Working Group on incorporating the management of these types of abnormal conditions into the reclassification criteria.

This section also provides information on *protected event* occurrences. Since June 2019 there has been a *protected event* in South Australia, defined as: “the loss of multiple transmission elements causing generation disconnection in the South Australia region during forecast destructive wind conditions”.

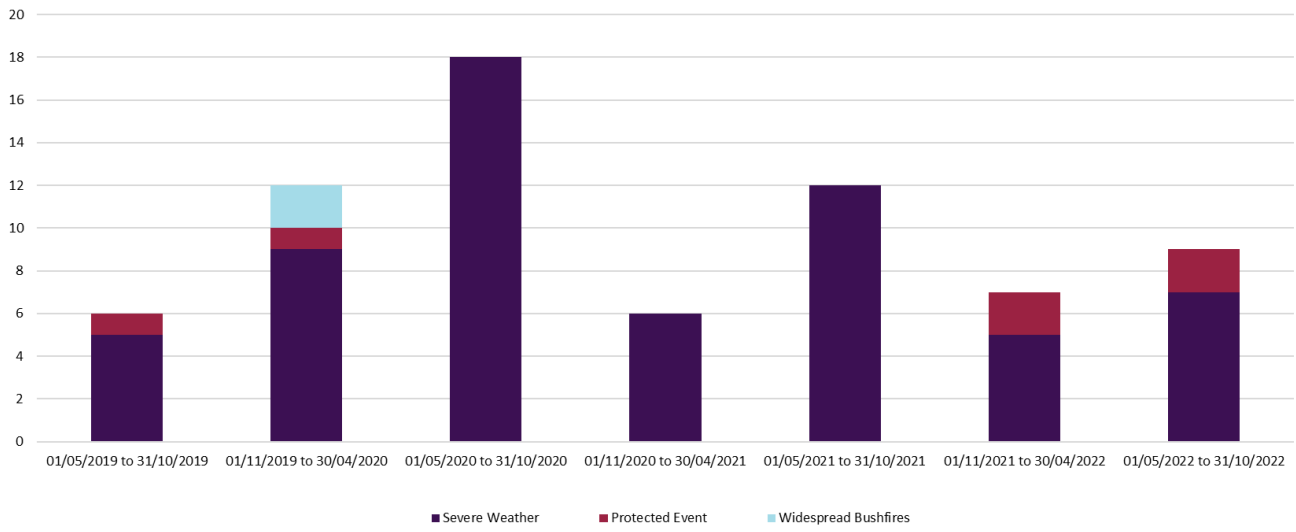
In the reporting period, AEMO took action to maintain power system security during nine abnormal conditions, including two *protected events* as shown in Appendix A2. Of these, one was in Victoria and eight were in South Australia, including the *protected events*. Since June 2019, AEMO has taken action to manage a *protected event* on six occasions.

Figure 3 shows the historical trend of abnormal conditions and *protected events* where AEMO took actions to maintain *power system security* since June 2019.

Appendix A6 lists the binding constraint equations during abnormal conditions and *protected events* over the reporting period.

⁹ *National Electricity Amendment (Enhancing operational resilience in relation to indistinct events) Rule 2022 No. 1*. Available on the AEMC website at: <https://www.aemc.gov.au/rule-changes/enhancing-operational-resilience-relation-indistinct-events>

Figure 3 Abnormal conditions / protected events where AEMO took action, six monthly trend, 2019 to 2022



9 Conclusion

AEMO concludes that, during the reporting period 1 May 2022 to 31 October 2022:

1. AEMO's reclassification decisions were appropriate and consistent with the reclassification criteria.
2. AEMO notified Market Participants of the reasons for reclassifying *non-credible contingency events*.
3. The total number of reclassification events in the NEM was significantly lower compared to the last winter period and similar to the historical winter period average.

A1. Reclassification events, 1 May 2022 to 31 October 2022

- **INDJI** – Indji Watch (INDJI) is a system that monitors live information feeds on hazards such as bushfires and displays their positions relative to the locations of transmission assets and is used to provide detection and location of cloud to ground lightning strikes across the National Electricity Market (NEM) transmission system.
- **BOM** – AEMO receives advice from the Bureau of Meteorology (BOM) when severe weather is forecast in regions that may impact the NEM transmission system.

The reclassification events highlighted in teal in Table 2 below were reclassified after a *non-credible contingency event* occurred. Further details on the reclassifications highlighted in teal can be found in Appendix A4.

Table 2 Reclassification events 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
96097	05/05/2022 1825 hrs	05/05/2022 2135 hrs	96102	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
96101	05/05/2022 2105 hrs	05/05/2022 2135 hrs	96103	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
96105	06/05/2022 0355 hrs	06/05/2022 1035 hrs	96117	Lindisfarne - Mornington Tee - Rokeby No. 1 110 kV line and Lindisfarne - Mornington Tee - Rokeby No. 2 110 kV line	TAS	Lightning	INDJI
96108	06/05/2022 0500 hrs	06/05/2022 0600 hrs	96109	Lindisfarne - Sorell 110 kV line and Lindisfarne - Sorel Triabunna Tee 110 kV line	TAS	Lightning	INDJI
96111	06/05/2022 0605 hrs	06/05/2022 0810 hrs	96113	Lindisfarne - Sorell 110 kV line and Lindisfarne - Sorel Triabunna Tee 110 kV line	TAS	Lightning	INDJI
96115	06/05/2022 0900 hrs	06/05/2022 1100 hrs	96119	Lindisfarne - Sorell 110 kV line and Lindisfarne - Sorel Triabunna Tee 110 kV line	TAS	Lightning	INDJI

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
96118	06/05/2022 1035 hrs	06/05/2022 1235 hrs	96122	Lindisfarne - Mornington Tee - Rokeby No. 1 110 kV line and Lindisfarne - Mornington Tee - Rokeby No. 2 110 kV line	TAS	Lightning	INDJI
96137	07/05/2022 1305 hrs	07/05/2022 1405 hrs	96139	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
96141	07/05/2022 1625 hrs	07/05/2022 1735 hrs	96143	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
96145	07/05/2022 1755 hrs	07/05/2022 1900 hrs	96147	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
96146	07/05/2022 1830 hrs	07/05/2022 2130 hrs	96149	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
96151	07/05/2022 2250 hrs	08/05/2022 0250 hrs	96154	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
96178	09/05/2022 1030 hrs	09/05/2022 1255 hrs	96184	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
96274	12/05/2022 0720 hrs	12/05/2022 0820 hrs	96276	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
96277	12/05/2022 0850 hrs	12/05/2022 1020 hrs	96278	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
96279	12/05/2022 1055 hrs	12/05/2022 1255 hrs	96281	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
96383	15/05/2022 2250 hrs	15/05/2022 2350 hrs	96384	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
96388	16/05/2022 0300 hrs	16/05/2022 0400 hrs	96389	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
96404	16/05/2022 1200 hrs	16/05/2022 1400 hrs	96408	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
96417	16/05/2022 1925 hrs	16/05/2022 2025 hrs	96419	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
96447	17/05/2022 1525 hrs	17/05/2022 1825 hrs	96452	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
96453	17/05/2022 1900 hrs	17/05/2022 2000 hrs	96454	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
96456	18/05/2022 0200 hrs	18/05/2022 0300 hrs	96457	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
96589	29/05/2022 0535 hrs	31/05/2022 1750 hrs	96691	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather	BOM
96590	29/05/2022 0535 hrs	31/05/2022 1750 hrs	96690	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather	BOM
96626	30/05/2022 1530 hrs	30/05/2022 1730 hrs	96635	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
96683	31/05/2022 1510 hrs	31/05/2022 1615 hrs	96685	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
96764	04/06/2022 1115 hrs	06/06/2022 0450 hrs	96830	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather	BOM
96763	04/06/2022 1120 hrs	06/06/2022 0450 hrs	96829	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather	BOM
96782	05/06/2022 1225 hrs	05/06/2022 1450 hrs	96804	Farrell - Sheffield No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
96789	05/06/2022 1325 hrs	05/06/2022 2000 hrs	96822	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
96802	05/06/2022 1410 hrs	05/06/2022 1810 hrs	96812	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
96811	05/06/2022 1740 hrs	05/06/2022 2245 hrs	96825	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
96823	05/06/2022 2135 hrs	05/06/2022 2235 hrs	96824	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
96827	06/06/2022 0415 hrs	06/06/2022 0615 hrs	96831	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
96856	07/06/2022 1520 hrs	07/06/2022 1620 hrs	96857	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
96967	12/06/2022 0905 hrs	15/07/2022 1230 hrs	100263	Palmerston - St Marys Tee Avoca 110 kV line	TAS	Severe Weather	TNSP
96977	12/06/2022 1535 hrs	01/07/2022 1245 hrs	99787	Burnie - Hampshire 110 kV line, Burnie - Sheffield No. 2 110 kV line at Burnie end, and Studland Bay Wind Farm	TAS	Severe Weather	TNSP

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
99484	25/06/2022 2020 hrs	26/06/2022 0020 hrs	99501	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
99499	25/06/2022 2215 hrs	25/06/2022 2350 hrs	99500	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
99773	30/06/2022 1110 hrs	27/06/2022 1444 hrs	99773	Braemar - Braemar Power Station 8838 275 kV line and Braemar Power Station Unit 1	QLD	Other	Generator
99774	30/06/2022 1220 hrs	30/06/2022 1525 hrs	99781	Eraring Power Station Unit 1 and Unit 2	NSW	Other	Generator
99797	02/07/2022 0925 hrs	02/07/2022 1110 hrs	99800	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
99802	02/07/2022 1215 hrs	02/07/2022 1240 hrs	99803	Eraring Power Station Unit 1 and Unit 2	NSW	Other	Generator
99826	03/07/2022 1455 hrs	03/07/2022 1655 hrs	99831	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
99827	03/07/2022 1455 hrs	03/07/2022 1555 hrs	99830	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
99832	04/07/2022 0400 hrs	04/07/2022 0535 hrs	99861	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
99909	04/07/2022 1730 hrs	09/07/2022 0925 hrs	100116	Woree No.1 275/132 kV transformer or Chalumbin - Woree 275 kV line and Woree No. 3 SVC	NSW	Other	TNSP
100196	12/07/2022 1605 hrs	12/07/2022 1705 hrs	100200	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
100199	12/07/2022 1700 hrs	12/07/2022 1900 hrs	100210	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
100232	13/07/2022 1535 hrs	13/07/2022 1640 hrs	100236	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
100248	14/07/2022 1350 hrs	N/A	N/A	Liddell - Muswellbrook 83 330 kV line at Liddell end only	NSW	Other	TNSP
100328	17/07/2022 1600 hrs	17/07/2022 2000 hrs	100333	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
100442	22/07/2022 1820 hrs	25/07/2022 1655 hrs	100494	Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	Other	Generator

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
100500	26/07/2022 0615 hrs	26/07/2022 0815 hrs	100501	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
100516	26/07/2022 1340 hrs	26/07/2022 1340 hrs	100516	Buronga - Balranald X3 220 kV Line	NSW	Other	TNSP
100648	01/08/2022 1355 hrs	01/08/2022 1655 hrs	100664	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
100658	01/08/2022 1550 hrs	01/08/2022 1650 hrs	100663	Farrell - Sheffield No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
100659	01/08/2022 1550 hrs	01/08/2022 1645 hrs	100662	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
100665	01/08/2022 1705 hrs	01/08/2022 1805 hrs	100668	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
100669	01/08/2022 2150 hrs	01/08/2022 2250 hrs	100673	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
100671	01/08/2022 2205 hrs	01/08/2022 2305 hrs	100675	Farrell - Sheffield No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
100670	01/08/2022 2205 hrs	01/08/2022 2300 hrs	100674	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
100676	02/08/2022 0705 hrs	03/08/2022 0940 hrs	100724	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather Warning	BOM
100677	02/08/2022 0705 hrs	03/08/2022 0940 hrs	100725	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather Warning	BOM
100649	02/08/2022 0810 hrs	03/08/2022 1700 hrs	100731	Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	Other	Generator
100735	03/08/2022 1815 hrs	05/08/2022 1300 hrs	100761	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather Warning	BOM
100734	03/08/2022 1815 hrs	05/08/2022 1255 hrs	100760	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather Warning	BOM

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Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
100737	03/08/2022 2020 hrs	03/08/2022 2120 hrs	100738	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
100739	03/08/2022 2300 hrs	04/08/2022 0300 hrs	100740	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
100741	04/08/2022 0305 hrs	04/08/2022 0405 hrs	100742	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
100743	04/08/2022 0630 hrs	04/08/2022 0730 hrs	100744	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
100745	04/08/2022 0825 hrs	04/08/2022 0925 hrs	100746	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
100754	04/08/2022 2245 hrs	05/08/2022 0245 hrs	100755	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
100770	05/08/2022 1635 hrs	05/08/2022 2135 hrs	100774	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
100773	05/08/2022 2135 hrs	05/08/2022 2235 hrs	100775	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
100776	05/08/2022 2330 hrs	06/08/2022 0030 hrs	100778	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
100780	06/08/2022 0050 hrs	06/08/2022 0255 hrs	100781	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
100799	08/08/2022 1530 hrs	08/08/2022 1630 hrs	100800	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
100895	11/08/2022 2315 hrs	12/08/2022 0015 hrs	100896	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
100949	13/08/2022 1645 hrs	13/08/2022 1850 hrs	100951	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101050	16/08/2022 1735 hrs	16/08/2022 1835 hrs	101053	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
101151	18/08/2022 1205 hrs	18/08/2022 1310 hrs	101153	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
101166	18/08/2022 1925 hrs	18/08/2022 2030 hrs	101168	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
101308	22/08/2022 1615 hrs	22/08/2022 1715 hrs	101312	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
101347	24/08/2022 2020 hrs	25/08/2022 0055 hrs	101348	Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	Other	Generator
101362	25/08/2022 2040 hrs	25/08/2022 2300 hrs	101363	Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	Other	Generator
101405	29/08/2022 1505 hrs	29/08/2022 1805 hrs	101425	Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	Lightning	INDJI
101406	29/08/2022 1505 hrs	29/08/2022 1805 hrs	101426	Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
101404	29/08/2022 1505 hrs	29/08/2022 1705 hrs	101421	Farrell - Sheffield No. 1 and No. 2 220 kV lines	TAS	Lightning	INDJI
101428	29/08/2022 2300 hrs	30/08/2022 0100 hrs	101429	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101430	30/08/2022 0125 hrs	30/08/2022 0425 hrs	101431	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101432	30/08/2022 0555 hrs	30/08/2022 0755 hrs	101433	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
101489	06/09/2022 0855 hrs	06/09/2022 1305 hrs	101505	Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	Other	Generator
101528	07/09/2022 0900 hrs	07/09/2022 1440 hrs	101536	Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	Other	Generator
101544	07/09/2022 1650 hrs	07/09/2022 2215 hrs	101551	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather Warning	BOM
101549	07/09/2022 1940 hrs	07/09/2022 2215 hrs	101550	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather Warning	BOM
101566	09/09/2022 0055 hrs	09/09/2022 0725 hrs	101570	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
101567	09/09/2022 0125 hrs	09/09/2022 0325 hrs	101569	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
101568	09/09/2022 0325 hrs	09/09/2022 0730 hrs	101571	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
101587	09/09/2022 1740 hrs	09/09/2022 1840 hrs	101588	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI

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Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
101615	12/09/2022 0135 hrs	12/09/2022 0235 hrs	101616	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
101648	13/09/2022 1440 hrs	13/09/2022 1800 hrs	101667	Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	Other	Generator
101726	15/09/2022 1345 hrs	15/09/2022 1450 hrs	101730	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
101740	16/09/2022 0020 hrs	16/09/2022 0220 hrs	101742	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101741	16/09/2022 0210 hrs	16/09/2022 0310 hrs	101744	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
101743	16/09/2022 0255 hrs	16/09/2022 0355 hrs	101745	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
101746	16/09/2022 0540 hrs	16/09/2022 0840 hrs	101748	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
101758	16/09/2022 1700 hrs	16/09/2022 2100 hrs	101761	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101762	17/09/2022 0545 hrs	17/09/2022 1720 hrs	101769	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather Warning	BOM
101763	17/09/2022 0550 hrs	17/09/2022 1720 hrs	101771	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather Warning	BOM
101770	17/09/2022 1720 hrs	17/09/2022 1920 hrs	101774	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
101772	17/09/2022 1820 hrs	17/09/2022 1920 hrs	101773	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
101805	18/09/2022 1625 hrs	18/09/2022 1730 hrs	101806	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101809	18/09/2022 2005 hrs	18/09/2022 2105 hrs	101811	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101850	21/09/2022 1850 hrs	21/09/2022 1950 hrs	101852	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
101851	21/09/2022 1920 hrs	21/09/2022 2120 hrs	101854	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI

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Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
101859	22/09/2022 1855 hrs	22/09/2022 1955 hrs	101860	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
101868	23/09/2022 1630 hrs	23/09/2022 1930 hrs	101869	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101874	23/09/2022 1955 hrs	23/09/2022 2055 hrs	101883	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
101898	24/09/2022 1235 hrs	24/09/2022 1435 hrs	101900	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
101948	27/09/2022 1115 hrs	27/09/2022 1215 hrs	101949	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
101951	27/09/2022 1420 hrs	27/09/2022 1950 hrs	101961	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
101952	27/09/2022 1500 hrs	27/09/2022 2000 hrs	101962	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
101953	27/09/2022 1500 hrs	27/09/2022 2000 hrs	101963	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
101954	27/09/2022 1515 hrs	27/09/2022 1915 hrs	101960	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
101964	27/09/2022 2020 hrs	28/09/2022 0325 hrs	101969	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
101965	27/09/2022 2205 hrs	27/09/2022 2305 hrs	101966	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
101967	27/09/2022 2335 hrs	28/09/2022 0215 hrs	101968	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
101970	28/09/2022 0500 hrs	28/09/2022 0600 hrs	101972	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
101971	28/09/2022 0500 hrs	28/09/2022 0600 hrs	101973	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
101980	29/09/2022 0145 hrs	29/09/2022 0245 hrs	101981	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102002	01/10/2022 1120 hrs	01/10/2022 1420 hrs	102016	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI

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Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
102030	02/10/2022 1135 hrs	02/10/2022 1235 hrs	102031	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102058	04/10/2022 1440 hrs	04/10/2022 2030 hrs	102064	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather Warning	BOM
102059	04/10/2022 1445 hrs	04/10/2022 2030 hrs	102065	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather Warning	BOM
102139	08/10/2022 1125 hrs	08/10/2022 1430 hrs	102144	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102147	08/10/2022 1440 hrs	08/10/2022 1545 hrs	102149	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102150	08/10/2022 1600 hrs	08/10/2022 1900 hrs	102151	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102334	17/10/2022 1415 hrs	17/10/2022 1715 hrs	102350	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102349	17/10/2022 1635 hrs	17/10/2022 2035 hrs	102351	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
102365	18/10/2022 1730 hrs	N/A		Trip of New England Solar Farm No. 1 and No. 2 330/33 kV transformers	NSW	Other	TNSP
102402	19/10/2022 2200 hrs	19/10/2022 2335 hrs	102403	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102406	20/10/2022 0350 hrs	20/10/2022 0550 hrs	102409	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102407	20/10/2022 0500 hrs	20/10/2022 0600 hrs	102410	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102413	20/10/2022 0950 hrs	20/10/2022 1250 hrs	102421	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102414	20/10/2022 1010 hrs	20/10/2022 1415 hrs	102425	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102415	20/10/2022 1045 hrs	20/10/2022 1450 hrs	102426	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI

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Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
102417	20/10/2022 1110 hrs	20/10/2022 1210 hrs	102420	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
102418	20/10/2022 1130 hrs	21/10/2022 0140 hrs	102433	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102424	20/10/2022 1325 hrs	20/10/2022 1530 hrs	102427	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
102428	20/10/2022 1535 hrs	20/10/2022 1835 hrs	102430	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102429	20/10/2022 1645 hrs	20/10/2022 1950 hrs	102431	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
102436	21/10/2022 0250 hrs	21/10/2022 0355 hrs	102438	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102437	21/10/2022 0335 hrs	21/10/2022 0535 hrs	102442	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102440	21/10/2022 0405 hrs	21/10/2022 0505 hrs	102441	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102439	21/10/2022 0410 hrs	N/A	N/A	Edmonton - Woree 7284 132 kV line, Barron Gorge - Kamerunga 7143 132 kV line and the Barron Gorge - Kamerunga 7184 132 kV line	QLD	Other	TNSP
102443	21/10/2022 0735 hrs	21/10/2022 1335 hrs	102448	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102444	21/10/2022 0915 hrs	21/10/2022 1925 hrs	102463	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102445	21/10/2022 1035 hrs	21/10/2022 1440 hrs	102450	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102446	21/10/2022 1035 hrs	21/10/2022 1435 hrs	102449	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102451	21/10/2022 1505 hrs	21/10/2022 1805 hrs	102460	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102452	21/10/2022 1515 hrs	21/10/2022 1815 hrs	102461	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
102462	21/10/2022 1845 hrs	22/10/2022 0245 hrs	102470	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI

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Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
102464	21/10/2022 1930 hrs	21/10/2022 2130 hrs	102467	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102465	21/10/2022 1930 hrs	21/10/2022 2130 hrs	102468	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102466	21/10/2022 2025 hrs	21/10/2022 2325 hrs	102469	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
102475	22/10/2022 1410 hrs	22/10/2022 1510 hrs	102478	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
102483	22/10/2022 1715 hrs	22/10/2022 2315 hrs	102485	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102503	23/10/2022 1525 hrs	23/10/2022 1625 hrs	102507	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
102516	24/10/2022 1440 hrs	24/10/2022 1640 hrs	102519	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102517	24/10/2022 1610 hrs	24/10/2022 1815 hrs	102523	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102520	24/10/2022 1655 hrs	24/10/2022 1855 hrs	102525	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
102524	24/10/2022 1840 hrs	24/10/2022 2045 hrs	102531	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102526	24/10/2022 1930 hrs	24/10/2022 2330 hrs	102537	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102528	24/10/2022 2005 hrs	24/10/2022 2310 hrs	102536	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102529	24/10/2022 2020 hrs	24/10/2022 2220 hrs	102533	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
102530	24/10/2022 2045 hrs	24/10/2022 2245 hrs	102534	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
102532	24/10/2022 2205 hrs	24/10/2022 2305 hrs	102535	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102539	25/10/2022 0015 hrs	25/10/2022 0220 hrs	102541	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
102540	25/10/2022 0135 hrs	25/10/2022 0335 hrs	102545	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102542	25/10/2022 0245 hrs	25/10/2022 0450 hrs	102546	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
102543	25/10/2022 0310 hrs	25/10/2022 0510 hrs	102548	Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	Lightning	INDJI
102544	25/10/2022 0330 hrs	25/10/2022 0530 hrs	102549	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102552	25/10/2022 1210 hrs	25/10/2022 1415 hrs	102555	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102553	25/10/2022 1235 hrs	25/10/2022 1635 hrs	102561	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
102558	25/10/2022 1600 hrs	25/10/2022 1700 hrs	102563	Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	Lightning	INDJI
102559	25/10/2022 1610 hrs	25/10/2022 1915 hrs	102565	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102560	25/10/2022 1615 hrs	25/10/2022 1915 hrs	102566	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102567	25/10/2022 2010 hrs	25/10/2022 2155 hrs	102569	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102570	25/10/2022 2145 hrs	25/10/2022 2245 hrs	102572	Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	Lightning	INDJI
102579	26/10/2022 1050 hrs	26/10/2022 1920 hrs	102593	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102581	26/10/2022 1225 hrs	26/10/2022 2235 hrs	102596	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102580	26/10/2022 1225 hrs	26/10/2022 1925 hrs	102594	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102589	26/10/2022 1855 hrs	05/11/2022 1500 hrs	102913	Darling Downs Power Station	QLD	Other	Generator
102614	27/10/2022 1320 hrs	27/10/2022 1420 hrs	102620	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
102617	27/10/2022 1350 hrs	27/10/2022 1750 hrs	102646	Ross to Chalumbin 857 & 858 275 kV Transmission Lines	QLD	Lightning	INDJI
102619	27/10/2022 1410 hrs	27/10/2022 1910 hrs	102650	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
102621	27/10/2022 1435 hrs	27/10/2022 1535 hrs	102640	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
102627	27/10/2022 1500 hrs	27/10/2022 2000 hrs	102651	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102630	27/10/2022 1505 hrs	27/10/2022 1710 hrs	102644	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102648	27/10/2022 1805 hrs	27/10/2022 2105 hrs	102653	Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	Lightning	INDJI
102652	27/10/2022 2040 hrs	27/10/2022 2240 hrs	102656	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102654	27/10/2022 2155 hrs	28/10/2022 0100 hrs	102660	Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	Lightning	INDJI
102655	27/10/2022 2205 hrs	28/10/2022 0105 hrs	102661	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102657	27/10/2022 2315 hrs	28/10/2022 0020 hrs	102658	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI
102662	28/10/2022 1350 hrs	28/10/2022 2150 hrs	102684	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102663	28/10/2022 1445 hrs	28/10/2022 1945 hrs	102683	Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	Lightning	INDJI
102695	29/10/2022 2050 hrs	29/10/2022 2150 hrs	102696	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102697	30/10/2022 0515 hrs	01/11/2022 1630 hrs	102788	Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	Severe Weather Warning	BOM
102698	30/10/2022 0520 hrs	31/10/2022 0435 hrs	102742	Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	Severe Weather Warning	BOM

Appendix A1. Reclassification events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Equipment	Region	Reason	Source
102702	30/10/2022 1500 hrs	30/10/2022 1805 hrs	102738	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102724	30/10/2022 1700 hrs	30/10/2022 2120 hrs	102741	Brinkworth - Davenport, Davenport - Mt Lock and Davenport - Belalie 275 kV lines	SA	Severe Weather Warning	BOM
102759	31/10/2022 1350 hrs	31/10/2022 2050 hrs	102764	Ross - Chalumbin 857 and 858 275 kV lines	QLD	Lightning	INDJI
102765	31/10/2022 2130 hrs	01/11/2022 0545 hrs	102771	Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	Lightning	INDJI
102766	31/10/2022 2150 hrs	01/11/2022 0545 hrs	102772	Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	Lightning	INDJI

A2. Abnormal conditions and protected events, 1 May 2022 to 31 October 2022

Table 3 Abnormal conditions and protected events 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Event	Region	Reason	Source
96611	30/05/2022 05:15 hrs	30/05/2022 19:00 hrs	96640	AEMO has identified that a <i>non-credible contingency event</i> is more likely to occur because of the existence of abnormal conditions namely severe weather and damaging winds in the SA region.	SA	Severe Weather	BOM
96648	30/05/2022 22:25 hrs	31/05/2022 04:05 hrs	96652	AEMO has identified that a <i>non-credible contingency event</i> is more likely to occur because of the existence of abnormal conditions namely severe weather and damaging winds in the SA region.	SA	Severe Weather	BOM
96657	31/05/2022 05:00 hrs	31/05/2022 17:50 hrs	96692	AEMO has identified that a <i>non-credible contingency event</i> is more likely to occur because of the existence of abnormal conditions namely severe weather and damaging winds in the SA region.	SA	Severe Weather	BOM
96776	04/06/2022 19:15 hrs	05/06/2022 05:30 hrs	96779	AEMO has identified that the conditions of the following protected event will be met from the time specified in this notice. Protected event: 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.	SA	Destructive Winds	BOM
100681	02/08/2022 14:10 hrs	02/08/2022 17:10 hrs	100687	AEMO has identified that a <i>non-credible contingency event</i> is more likely to occur because of the existence of abnormal conditions namely severe weather and damaging winds in the SA region.	SA	Severe Weather	BOM
100689	02/08/2022 18:15 hrs	02/08/2022 23:50 hrs	100722	AEMO has identified that a <i>non-credible contingency event</i> is more likely to occur because of the existence of abnormal conditions namely severe weather and damaging winds in the SA region.	SA	Severe Weather	BOM
101833	20/09/2022 09:20 hrs	20/09/2022 17:35 hrs	101839	AEMO has identified that a <i>non-credible contingency event</i> is more likely to occur because of the existence of abnormal conditions namely severe weather and damaging winds in the SA region.	SA	Severe Weather	BOM

Appendix A2. Abnormal conditions and protected events, 1 May 2022 to 31 October 2022

Start MN	Start of event	End of event	End MN	Event	Region	Reason	Source
102207	13/10/2022 17:40	13/10/2022 18:35	102208	AEMO has identified that a non-credible contingency event is more likely to occur because of the existence of abnormal conditions namely severe weather in the VIC region.	VIC	Severe Weather	BOM
102723	30/10/2022 16:55	30/10/2022 21:00	102740	AEMO has identified that the conditions of the following protected event will be met from the time specified in this notice. Protected event: 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.	SA	Destructive Winds	BOM

A3. Number of reclassification events on each element, 1 May 2022 to 31 October 2022

Table 4 Number of times reclassification events occurred on each element, 1 May 2022 to 31 October 2022

Element	Region	Number of times reclassified				Total
		Bushfires	Lightning	Severe weather	Other	
Lismore - Dunoon 9U6 132 kV line and Lismore - Dunoon 9U7 132 kV line	NSW	0	10	0	0	10
Bayswater - Mt Piper 5A3 and Bayswater - Wollar 5A4 500 kV lines	NSW	0	25	0	0	25
Eraring Power Station Unit 1 and Unit 2	NSW	0	0	0	2	2
Liddell - Muswellbrook 83 330 kV line at Liddell end only	NSW	0	0	0	1	1
Armidale No. 1 330 kV SVC and Sapphire Wind Farm	NSW	0	0	0	7	7
Buronga - Balranald X3 220 kV Line	NSW	0	0	0	1	1
Armidale - Dumaresq 8C 330 kV line and Armidale-Sapphire Wind Farm 8E 330 kV line	NSW	0	13	0	0	13
New England Solar Farm No. 1 and No. 2 330/33 kV transformers	NSW	0	0	0	1	1
Condabri North - Condabri Central 7400 and 7401 132kV lines	QLD	0	15	0	0	15
Tarong - Chinchilla 7183 and 7168 132 kV lines	QLD	0	14	0	0	14
Collinsville - Stoney Creek 7306 132 kV line and Collinsville - Newlands 7121 132 kV line	QLD	0	14	0	0	14
Collinsville - Mackay Tee Proserpine 7125 and 7126 132 kV lines	QLD	0	18	0	0	18
Ross - Chalumbin 857 and 858 275 kV lines	QLD	0	15	0	0	15
Braemar - Braemar Power Station 8838 275 kV line and Braemar Power Station Unit 1	QLD	0	0	0	1	1

Appendix A3. Number of reclassification events on each element, 1 May 2022 to 31 October 2022

Element	Region	Number of times reclassified				
		Bushfires	Lightning	Severe weather	Other	Total
Woree No.1 275/132 kV transformer or Chalumbin - Woree 275 kV line and Woree No. 3 SVC	QLD	0	0	0	1	1
Edmonton - Woree 7284 132 kV line, Barron Gorge - Kamerunga 7143 132 kV line and the Barron Gorge - Kamerunga 7184 132 kV line	QLD	0	0	0	1	1
Darling Downs Power Station	QLD	0	0	0	1	1
Para - Templers West and Magill - Torrens Island A 275 kV lines	SA	0	0	8	0	8
Brinkworth - Davenport, Brinkworth - Templers West and Para - Templers West 275 kV lines	SA	0	0	8	0	8
Brinkworth - Davenport, Davenport - Mt Lock and Davenport - Belalie 275 kV lines	SA	0	0	1	0	1
Lindisfarne - Mornington Tee - Rokeby No. 1 110 kV line and Lindisfarne - Mornington Tee - Rokeby No. 2 110 kV line	TAS	0	2	0	0	2
Lindisfarne - Sorell 110 kV line and Lindisfarne - Sorel Triabunna Tee 110 kV line	TAS	0	3	0	0	3
Farrell - Reece No. 1 and No. 2 220 kV lines	TAS	0	10	0	0	10
Farrell - John Butters 220kV line & Farrell - Rosebery Tee Queenstown - Newton 110 kV line	TAS	0	12	0	0	12
Farrell - Sheffield No. 1 and No. 2 220 kV lines	TAS	0	4	0	0	4
Palmerston - St Marys Tee Avoca 110 kV line	TAS	0	0	1	0	1
Burnie - Hampshire 110 kV line and Burnie - Sheffield No. 2 110 kV line at Burnie end only	TAS	0	0	1	0	1
Eildon - Mt Beauty No. 1 and No. 2 220kV lines	VIC	0	27	0	0	27

A4. Non-credible contingency events, 1 May 2022 to 31 October 2022

Table 5 lists all *non-credible contingency events* that occurred during the reporting period, and AEMO’s assessment of whether to reclassify each event as credible. The rows highlighted in teal in Table 5 explain the *non-credible contingency events* corresponding to the reclassifications highlighted in teal in Appendix A1.

Table 5 Non-credible contingency events, 1 May 2022 to 31 October 2022

Date of contingency	Description	Region	Primary cause	Was the contingency then reclassified?	Comments
01/05/2022 0453 hrs	Trip of Molong No.1 and No.2 132 kV buses	NSW	Protection and Control	No	TransGrid advised that the cause was identified as mal-operation of the No. 2 protection system associated with 94T Molong to Orange North 132 kV line, at Molong 132 kV substation. Mal-operation of the No. 2 protection caused an intertrip to be sent to trip the bus CBs, where there was no bus section CB, only a bus isolator. TransGrid advised that the No. 1 and No. 2 protection systems on 94T line were replaced and a similar reoccurrence was unlikely. AEMO was satisfied that another occurrence of this event was unlikely under the circumstances. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and rectified.
06/05/2022 0751 hrs	Trip of Chapel St - Electrona - Tee Kingston 110 kV line and Chapel St - Knights Road - Tee Kingston 110 kV lines	TAS	Other - Debris	No	TasNetworks advised that the cause was identified as debris transiting through Chapel St - Knights Rd - Kingston 110 kV line. The line tripped and reclosed onto a fault causing damage to a conductor on Chapel St – Electrona – tee Kingston 110 kV line. TasNetworks advised that repairs had been made to the conductor on Chapel St – Electrona - tee Kingston 110 kV line and Chapel St - Electrona- tee Kingston 110 kV Line and that reoccurrence was unlikely. The line was returned to service. AEMO was satisfied that another occurrence of this event was unlikely under the circumstances. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and rectified.

Appendix A4. Non-credible contingency events, 1 May 2022 to 31 October 2022

Date of contingency	Description	Region	Primary cause	Was the contingency then reclassified?	Comments
10/05//2022 0000 hrs	Trip of Terang No.2 220 kV bus	VIC	Human Error	No	AusNet advised that the root cause of the incident was identified as human error – the testing team did not isolate the “CB closed” status output from the CBM relay to avoid it sending a simulated “CB closed” status signal to the line protection relay. The Mortlake South Wind Farm circuit breaker failure trip signal to the No. 2 220 kV bus protection was isolated to prevent further inadvertent trips before the Mortlake South Wind Farm line is fully commissioned. AEMO was satisfied that another occurrence of this event was unlikely under the circumstances. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and rectified.
12/05/2022 0000 hrs	Opening of Roseworthy Templers 132 kV line at Templers end only	SA	Human Error	No	The cause of this non-credible contingency event was identified as an inadvertent trip by staff. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and AEMO was satisfied that another occurrence of this event was unlikely under the circumstances.
12/05/2022 0000 hrs	Trip of Gordon power station generators No.1, No.2 and No.3	TAS	Protection and Control	No	Hydro Tasmania advised that the cause was identified as an overly sensitive protection setting that was introduced in a recent control systems upgrade, which tripped the station in a normal "rough running" zone (low lake level). Hydro Tasmania advised that the protection setting was changed back to the settings prior to the control system upgrade (i.e. reinstated old settings). AEMO was satisfied that another occurrence of this event was unlikely under the circumstances. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and rectified.
25/05/2022 1250 hrs	Trip of Waratah West B 330 kV bus	NSW	Other - Database Error	No	TransGrid advised that the cause was identified as incorrect information in the database used to identify the isolations required for secondary system work on Waratah West No. 3 330/132 kV transformer. TransGrid has confirmed that its protection link database information had been updated with the correct link numbers. AEMO was satisfied that another occurrence of this event was unlikely under the circumstances. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and rectified.
05/06/2022 0000 hrs	Trip of Gordon - Chapel Street No.2 line and Tas industrial load	TAS	Lightning	No	TasNetworks advised that there was a lightning strike on the ground near the substation, which damaged some transducers, fire panels and auxiliary panels etc that also impacted protection schemes on the line. Gordon – Chapel Street No.2 220 kV line was returned to service and TasNetworks advised that this event was not likely to reoccur. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and AEMO was satisfied that another occurrence of this event was unlikely under the circumstances.

Appendix A4. Non-credible contingency events, 1 May 2022 to 31 October 2022

Date of contingency	Description	Region	Primary cause	Was the contingency then reclassified?	Comments
11/06/2022 2230 hrs	Trip of Palmerston - St Marys 110 kV line (and Mussleroe WF runback)	TAS	Severe weather	Yes	The cause was initially unknown and AEMO reclassified the event as a credible contingency event until further notice. TasNetworks later advised that the cause was identified as high winds resulting in conductor to tower clash (Phase to Earth fault). The reclassification was cancelled at 1228 hrs on 15/07/2022 as the cause had been identified and AEMO no longer considered the simultaneous trip of Palmerston – St Marys tee Avoca 110 kV line (and runback of Musselroe Wind Farm) as reasonably possible based on advice received from the TNSP and participant.
12/06/2022 0455 hrs	Trip of Burnie-Hampshire 110 kV line, Burnie-Sheffield No.2 110 kV line at Burnie end only, and Studland Bay Wind Farm	TAS	Severe weather	Yes	The cause of this non-credible contingency event (i.e. trip of two transmission lines and Studland Bay WF) was initially unknown and AEMO reclassified the event as a credible contingency event until further notice. TasNetworks later advised that the fault was due to line contact with tree debris during high winds and the Burnie – Sheffield No.2 110 kV line tripped at the Burnie end only because the line was operating as a radial from Burnie at the time. All debris had been cleared and new protection settings had been applied. The reclassification was cancelled at 1243 hrs on 01/07/2022 as the cause had been identified and AEMO no longer considered the simultaneous trip of Burnie - Hampshire 110 kV Line, Burnie - Sheffield No. 2 110 kV Line at the Burnie end only, and Studland Bay WF as reasonably possible based on advice received from the TNSP and participant.
14/07/2022 1215 hrs	Trip of Liddell – Muswellbrook 330 kV line at Liddell end only	NSW	Unknown	Yes	The cause of this incident could not be identified and AEMO reclassified this event as a credible contingency event until further notice. The reclassification remains in place as the root cause of the incident has not yet been identified. However, Transgrid has advised that the trip of Liddell CB 832 was not due to the operation of any protection systems and there were no Transgrid staff performing any work at the time of the incident. AGL has also reviewed its work on the day of the incident and believed that there was no connection between their works and the trip of the Liddell – Muswellbrook 330 kV 83 line.
25/07/2022 0115 hrs	Trip of Buronga 220 kV substation	NSW	Faulty Equipment	No	TransGrid advised that the cause of the initial trip at Buronga 220 kV substation was identified as the failure of a disconnecter on Buronga - Balranald (X3) 220 kV line. TransGrid advised that the trip of multiple transmission elements following the initial trip was the result of correct operation of bus protection and control scheme as per their designs. The faulty disconnecter was successfully bypassed and confirmed no mal-operation of any equipment as a result of this non-credible busbar trip. AEMO was satisfied that another occurrence of this event was unlikely under the circumstances. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and AEMO was satisfied that another occurrence of this event was unlikely under the circumstances.

Appendix A4. Non-credible contingency events, 1 May 2022 to 31 October 2022

Date of contingency	Description	Region	Primary cause	Was the contingency then reclassified?	Comments
26/08/2022 0825 hrs	Trip of Collector WF 330 kV A bus	NSW	Human Error	No	TransGrid advised that the cause was identified as a human error of inadvertently injecting current into the Collector WF No.2 transformer REF CTs, which caused the restricted earth fault protection to operate and trip the Collector WF 330 kV A busbar, the 33 kV bus section CB (CB 2102) and the 33 kV No. 2 busbar. Transgrid has updated its procedure for CT isolation/restoration, amending the sequence for the restoration and demagnetisation of CTs to reduce the likelihood of human error. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and AEMO was satisfied that another occurrence of this event was unlikely under the circumstances.
29/08/2022 1255 hrs	Trip of Armidale - Dumaresq 330 kV Line at Armidale end only	NSW	Protection and Control	No	TransGrid advised that the cause was identified as mal-operation of protection relay at Dumaresq 330 kV substation, which sent an intertrip signal causing CB 8C2 at Armidale substation to trip during the restoration of protection isolations on the 8C 330 kV line and therefore offloading the 8C 330 kV line at Armidale end only. As the protection isolations at the Dumaresq 330 kV substation had not yet been restored at the time, the CBs at the Dumaresq end of the 8C 330 kV line did not trip. Transgrid have updated isolation procedures to ensure that the protection system will be isolated such that a relay mal-operation under similar conditions will not cause in service equipment to trip. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and rectified.
04/09/2022 1455 hrs	Trip of Uralla 330 kV B Bus and 330 kV CB 5012	NSW	Human Error	No	Transgrid advised that staff working on New England SF (future connection at Uralla) inadvertently sent a protection signal that tripped the busbar and CB 5012. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and AEMO was satisfied that another occurrence of this event was unlikely under the circumstances.
05/10/2022 1548 hrs	Trip of New England Solar Farm No. 1 and No. 2 330/33 kV transformers	NSW	Unknown	Yes	The cause of this incident could not be identified and AEMO reclassified this event as a credible contingency event until further notice. The reclassification made on 18/10/2022 17:30 hrs remains in place as the root cause of the incident has not yet been identified, still being investigated by TNSP.
14/10/2022 0920 hrs	Trip of Liapoota - Palmerston 220kV lines	TAS	Other - Landslide	Yes	TasNetworks advised that the cause was identified as a landslide impacting the footings of a double circuit strain tower between Palmerston and Waddamana. No reclassifications were made during this incident on 14 October, as the Liapootah – Waddamana – Palmerston 220 kV lines were not returned to service. Subsequently, AEMO updated an existing reclassification via MN 102360 at 1535 hrs 18/10/2023 to cover the loss of any 220 kV or 110 kV line in Southern Tasmania in conjunction with a quantity of load as a credible contingency event until further notice. This reclassification was put in place as AEMO considered a simultaneous trip of any

Appendix A4. Non-credible contingency events, 1 May 2022 to 31 October 2022

Date of contingency	Description	Region	Primary cause	Was the contingency then reclassified?	Comments
					Southern Tasmanian 220 kV or 110 kV circuit and the respective load to be reasonably possible.
15/10/2022 0645 hrs	Trip of Manildra - Molong 132kV line at Molong end only	NSW	Faulty Equipment	No	Transgrid advised that the cause was identified as a faulty protection relay at the Molong end. The relay had been replaced and Transgrid had advised that this event was unlikely to reoccur. AEMO did not reclassify this event as a credible contingency event as the cause had been identified and AEMO was satisfied that another occurrence of this event was unlikely under the circumstances.
21/10/2022 0040 hrs	Trip of Edmonton - Woree 7284 132 kV line, Barron Gorge - Kamerunga 7143 132 kV line and the Barron Gorge - Kamerunga 7184 132 kV line	QLD	Unknown	Yes	The cause of this incident could not be identified and AEMO reclassified this event as a credible contingency event until further notice. Powerlink confirmed protection system intertrips received from Barron Gorge initiating the feeder trips. A previous non-credible event has occurred on these feeders due to a system voltage disturbance on 29/01/2016. The reclassification remains in place as the root cause of the incident has not yet been identified and is still being investigated by the TNSP.

A5. Binding reclassification constraints, 1 May 2022 to 31 October 2022

Table 6 Reclassification constraints that bound, 1 May 2022 to 31 October 2022

Reclassification start time	Reclassification end time	Reclassified equipment	Constraint	Number of Dispatch Intervals binding
05/06/2022 12:25 hrs	05/06/2022 14:50 hrs	Farrell - Sheffield No. 1 and No. 2 220 kV lines	F_T+FASH_N-2_RREG	34
			F_T+FASH_N-2_TG_R5	2
			F_T+FASH_N-2_TG_R6_2	2
			T_FASH_MAXGEN_1	7
			T>T_FASH_1_N-2	4
			T>T_FASH_2_N-2	14
05/06/2022 13:25 hrs	05/06/2022 20:00 hrs	Farrell - Reece No. 1 and No. 2 220 kV lines	F_T+FARE_N-2_RREG	50
			F_T++FARE_N-2_TG_R6	1
01/08/2022 15:50 hrs	01/08/2022 16:50 hrs	Farrell - Sheffield No. 1 and No. 2 220 kV lines	F_T+FASH_N-2_RREG	2
			F_T+FASH_N-2_TG_R5	3
			F_T+FASH_N-2_TG_R6_2	3
			T_FASH_MAXGEN_1	2
01/08/2022 15:50 hrs	01/08/2022 16:45 hrs	Farrell - Reece No. 1 and No. 2 220 kV lines	F_T+FARE_N-2_RREG	1
			F_T+FARE_N-2_TG_R5	9
			F_T+FARE_N-2_TG_R6_2	9

Appendix A5. Binding reclassification constraints, 1 May 2022 to 31 October 2022

Reclassification start time	Reclassification end time	Reclassified equipment	Constraint	Number of Dispatch Intervals binding
01/08/2022 17:05 hrs	01/08/2022 18:05 hrs	Farrell - Reece No. 1 and No. 2 220 kV lines	F_T+FARE_N-2_RREG	1
			F_T+FARE_N-2_TG_R5	12
			F_T+FARE_N-2_TG_R6_2	12
01/08/2022 22:05 hrs	01/08/2022 23:05 hrs	Farrell - Sheffield No. 1 and No. 2 220 kV lines	F_T++FASH_N-2_TG_R5	2
			F_T++FASH_N-2_TG_R60	2
			F_T+FASH_N-2_RREG	4
			F_T+FASH_N-2_TG_R5	1
01/08/2022 22:05 hrs	01/08/2022 23:00 hrs	Farrell - Reece No. 1 and No. 2 220 kV lines	F_T++FARE_N-2_TG_R6	2
			F_T+FARE_N-2_RREG	1
			F_T+FARE_N-2_TG_R5	9
			F_T+FARE_N-2_TG_R6_2	10
04/08/2022 08:25 hrs	04/08/2022 09:25 hrs	Farrell - Reece No. 1 and No. 2 220 kV lines	F_T+FARE_N-2_TG_R6_1	10
			F_T+FARE_N-2_TG_R60	5
			F_T+FARE_N-2_TG_R5	10
18/08/2022 12:05 hrs	18/08/2022 13:10 hrs	Farrell - Reece No. 1 and No. 2 220 kV lines	F_T+FARE_N-2_TG_R5	12
			F_T+FARE_N-2_RREG	8
			F_T+FARE_N-2_TG_R6_2	12
29/08/2022 15:05 hrs	29/08/2022 18:05 hrs	Farrell - Reece No. 1 and No. 2 220 kV lines	F_T+FARE_N-2_TG_R5	36
			F_T+FARE_N-2_RREG	23
			F_T+FARE_N-2_TG_R6_1	30
			F_T+FARE_N-2_TG_R6_2	7
			F_T+FARE_N-2_TG_R60	36
29/08/2022 15:05 hrs	29/08/2022 17:05 hrs	Farrell - Sheffield No. 1 and No. 2 220 kV lines	F_T+FASH_N-2_RREG	20

Appendix A5. Binding reclassification constraints, 1 May 2022 to 31 October 2022

Reclassification start time	Reclassification end time	Reclassified equipment	Constraint	Number of Dispatch Intervals binding
			T_FASH_MAXGEN_1	5
			T>T_FASH_1_N-2	8

A6. Binding constraints during abnormal conditions/protected events, 1 May 2022 to 31 October 2022

Table 7 Network constraints that bound during abnormal conditions / protected events, 1 May 2022 to 31 October 2022

Event start time	Event end time	Equipment at risk	Constraint	Number of Dispatch Intervals binding
02/08/2022 18:15 hrs	02/08/2022 23:50 hrs	Multiple transmission elements in SA region.	VS_250	2
20/09/2022 09:20 hrs	20/09/2022 17:35 hrs	Multiple transmission elements in SA region	VS_250	4
			VS_250_DYN	1