ENSMS Performance Report

01 July 2022 to 30 June 2023

Endeavour Energy

POWER together

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Executive summary

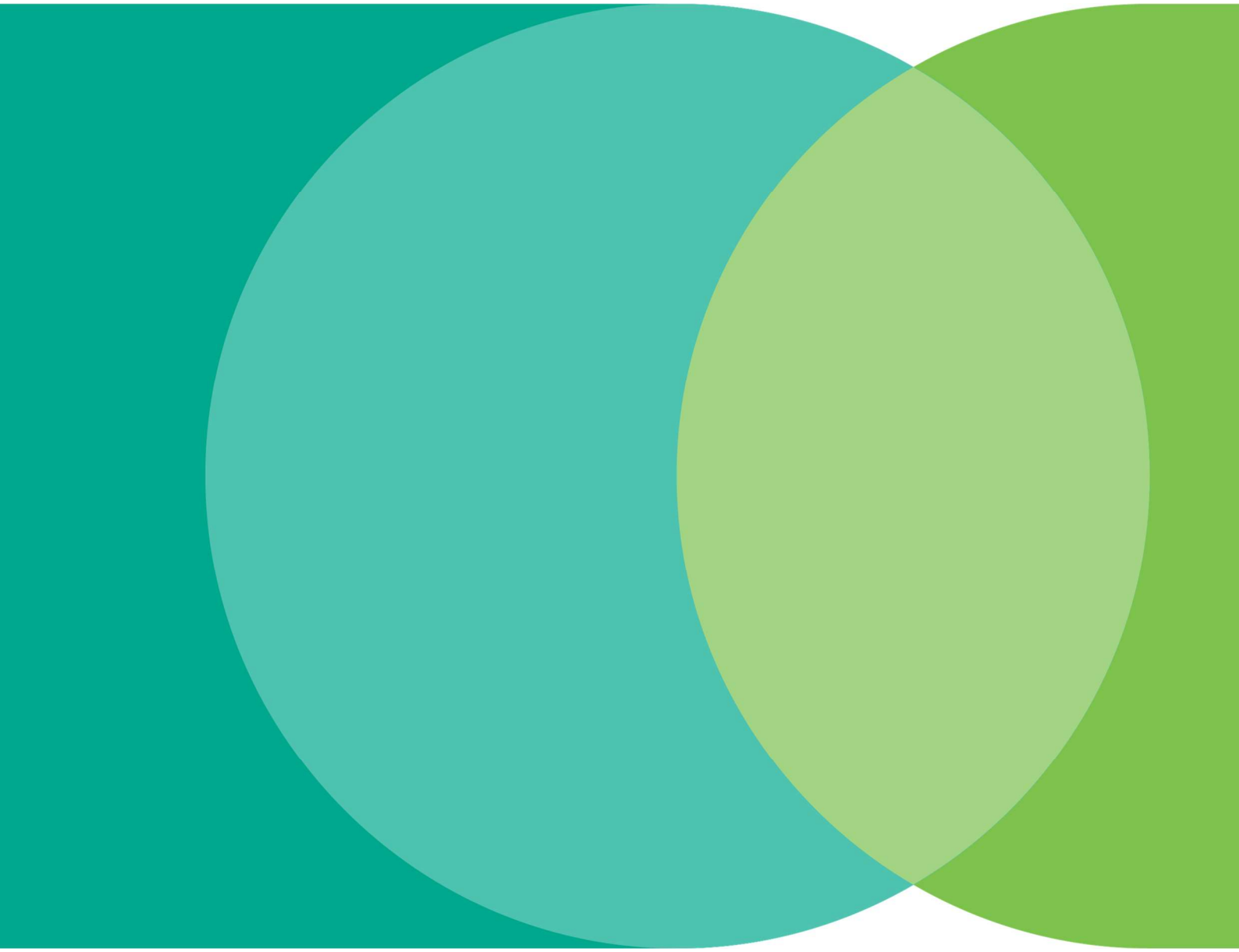
The Annual ENSMS Performance Report has been prepared in accordance with the Electricity networks reporting manual- Safety management system performance measurement – (September 2022) issued by IPART to fulfil this statutory obligation.

The report provides information regarding the performance of Endeavour Energy's Network Safety Management Systems (ENSMS) which has been prepared in accordance with the Electricity Supply (Safety and Network Management) Regulation 2014 (ESSNM).
Section A is the response to the reporting requirements and includes the previous financial year reporting performance measurement data for the period 1 July 2022 to 30 June 2023.
An alternate reporting period for metrics in the "B" section is 1 October 2022 to 30 September 2023 as stipulated by the reporting manual. Data has been provided for the previous periods where it has been possible to do so, and this will continue to be populated in future reports.

Where reported figures are shown as "-" this denotes no report data is available. Where "0" is shown this indicates a reported figure, for other scenarios an explanatory note or footnote has been added.

The data in this report is sourced as specified in the Basis of Preparation document. Endeavour Energy also maintains a Technical Basis of Preparation document containing code and technical details on the sourcing of information.

ENSMS Report



Tier 1 – Major incidents

A.1 Major incidents

ESSNM Objective		Description of each major incident reported under the Reporting Manual - Incident Reporting requirements
Safety of members of the public		Nil reported
Safety of persons working on the network		Nil reported
Protection of property	Third party property	Nil reported
	Network property[a]	Nil reported
Safety risks arising from loss of electricity supply[b]		13 Dec 2022; Loss of Kangaroo Valley ZS and Bomaderry ZS supply area due to tripping of feeders 7501 and 7505.
		18 Feb 2023; An unplanned outage occurred which involved NorthConnex Tunnel (Significant Community Infrastructure) losing supply for more than two hours. This incident is therefore classified as a category 1 Major Reliability and Power Quality Incident.

a. Network property losses are not reportable under IPART's Reporting Manual - Incident Reporting requirements. For the purpose of this Reporting Manual, a network operator is to report each event in which losses exceed $500,000 in relation to damage caused to electricity works as defined in the Electricity Supply Act 1995.
b. As defined for major reliability incidents in IPART's Reporting Manual – Incident Reporting.

Tier 2 - Incidents

A.2 Incidents

ESSNM Objective	Description of each major incident reported under the Reporting Manual - Incident Reporting requirements
Safety of members of the public	05 Dec 2022; Steel rebar being lifted on construction site inadvertently contacted 11kV mains resulting in electric shock Nil reported
Safety of persons working on the network	27 Jan 2023; Worker was using a spanner to connect a generator to the overhead network (live). The spanner then made contact with the Neutral conductor, causing an arc flash.
	23 Feb 2023; Whilst in the process of relocating test leads on a transformer the workers belt got caught on a transformer oil valve which caused them to lose balance and fall forward onto lid of transformer. The injured person landed on their left knee with the falls being on the same level
	09 June 2022; Worker was drilling through pole for kingbolt. Pole was hard so the worker grabbed the back of the pole to gain more leverage. As the drill bit got further through the pole, the drill hit a soft spot in the pole which then penetrated the pole and injured the worker's hand (This was reported to IPART in FY23).
Protection of third-party property	Nil reported
Safety risks arising from loss of electricity supply[a]	03 Jul 2022; Hawkesbury flooding event day
	04 Jul 2022; Hawkesbury flooding event day
	05 Jul 2022; Hawkesbury flooding event day

ESSNM Objective	Description of each major incident reported under the Reporting Manual - Incident Reporting requirements
	18 Feb 2023; Storms across the network leading to a Major Event Day

a. As defined for reliability incidents in IPART's Reporting Manual – Incident Reporting.
b. Note incidents that occurred in the previous financial year are not included even if they were reported in FY23.

Tier 3 Control failure near miss

A.3 Network assets failures

Performance measure	Population	5-year average annual functional failures	Annual functional failures (for reporting period)					
			Unassisted			Assisted		
			No fire	Fire		No fire	Fire	
				Contained	Escaped		Contained	Escaped
Towers	823	0.2	0	0	0	0	0	0
Poles (including street lighting columns/poles & stay poles)	567,607	149.4	0	0	0	0	0	0
Pole-top structures[b]	433,208	283	0	5	2	0	1	0
Conductor – Transmission OH[c]	3,177	17.4	0	0	0	0	0	0

Conductor – Transmission UG[c]	424	4.2	0	0	0	0	0	0
Conductor – HV[d] (including sub-transmission) OH	11,051	557.4	17	8	5	7	9	17
Conductor – HV (including sub-transmission) UG	5,904	88	0	2	0	1	1	0
Conductor – LV[d] OH	13,635	372	4	7	1	133	1	2
Conductor – LV UG	14,760	161.8	17	4	0	29	1	0
Service line[e] OH	8,303	1090.6	10	0	0	277	0	0
Service line[e] UG	5,064	74.6	10	0	0	212	0	0
Power transformers[f]	450	2	0	0	0	0	0	0
Distribution transformers	34,146	174.8	0	4	0	0	0	1
Reactive plant[g]	187	0.6	0	0	0	0	0	0
Switchgear – zone / subtranmission/transmission substation	4,582	15.2	0	0	0	0	0	0

Switchgear – distribution (OH)	45,969	1499.2	437	9	4	3271	0	2
Switchgear – distribution (ground based)	33,912	138.2	16	12	0	150	1	0
Protection relays or systems	20,330	12.6	0	0	0	0	0	0
Zone / subtransmission/ transmission substation SCADA system	2093	6.2	0	0	0	0	0	0
Zone / subtransmission/transmission substation Protection Batteries	283	0.2	0	0	0	0	0	0
Network SAPS[h]	0	0	0	0	0	0	0	0

Endeavour Energy is in the process of transitioning from local/manual to corporate/automated data processes and systems, which has revealed some inconsistencies in the way in which data has been collected and reported. This will present (for some key statistics) as a step change in result when compared to previous years. For example current automated failure reporting systems identify all abnormal incidents with assets including when a protection system operates correctly to a significant failure. This results in a high reported failure rate especially for switchgear which operate as designed under outage conditions. Further work is currently underway to improve / reassign network outages to the individual asset that caused the outage and separate functional failures

a. See Glossary for definitions of unassisted failures and assisted failures.

b. Pole-top structures/components are any structure that is attached to a pole to support electricity mains and apparatus.
c. OH means ‘overhead’; and UG means ’underground’. Transmission and sub-transmission voltages are generally 33kV AC nominal and above. Transmission conductors form part of a transmission network. Sub-transmission conductors form part of a distribution network.
d. HV means ‘high voltage’, and LV means ‘low voltage’. High voltage are voltages 1kV AC nominal and above. Low voltage are voltages below 1kV AC nominal.
e. Overhead service and underground service as defined in the NSW Service and Installation Rules.
f. Power Transformers are transformers where the secondary/output voltage is 5kV nominal or above.
g. Reactive plants are reactors and capacitors.
h. This may include temporary, emergency or permanent SAPS. See Glossary for definition of Network SAPS.

A.4 Vegetation contact with conductors

Performance measure[a]	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Fire starts – grow-in	1	0	0	1	0	
Fire start – fall-in and blow-in	17	14	15	47	24	
Interruption[b] – grow-in	0	0	0	0	0	
Interruption – fall-in and blow-in	857	1451	3583	4985	4972	Interruption event cause data does not separate 'grow-in' events from 'fall-in and blow-in'. Events have been recorded against 'fall-in and blow-in' as this is the dominant cause of vegetation interruptions. Event counts for the current and last reporting period have been sourced from network interruption data in the company's ADMS system. Event count for the last reporting period has been updated following data re-validation.

a. Vegetation hazard definitions as per the Industry Safety Steering Committee Guide for the Management of Vegetation in the Vicinity of Electricity Assets (ISSC3).
b. Includes momentary interruptions.

A.5 Unintended contact, unauthorised access and electric shocks

Detail	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Electric shock[a] and arc flash incidents[b] originating from network assets including those received in customer premises						
Public	62	85	107	100	125	Significant improvements in proactive identification of faulty neutral connections through a range of asset management programs, comprehensive routine testing processes and leverage of technology through smart meter data analytics.
Public worker	6	9	1	1	2	
Network employee / network contractor[d]	1	2	4	1	1	Review scoping criteria to include isolation points and accessibility. Audit the effectiveness of the implemented scoping process. Release directive if the job cannot be isolated as intended, the job is to be cancelled.
Accredited Service Provider	0	1	2	1	0	
Livestock or domestic pet	1	1	0	0	0	
Contact with energised overhead network asset (eg conductor strike)						

Detail	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Public road vehicle[f] (total)	194	268	248	224	295	Includes Agricultural, Network Vehicles & Other this reporting period.
Plant & equipment (subset of Total)	23	206	112	26	0	Improvements in data quality is a key driver for improvement
Agricultural and other[h]	N/A	N/A	57	14	0	Due to an ongoing implementation of SAP & ADMS Upgrades, we cannot differentiate Agricultural & Network Vehicles this reporting period. These have been included in the total (Public Road Vehicle).
Network vehicle	N/A	N/A	0	1	0	
Contact with energised underground network asset[e] (e.g. conductor strike)						
Plant & equipment	40	57	71	52	0	
Person with handheld tool	0	0	0	1	2	
Unauthorised network access (intentional)						
Zone / BSP /	3	3	2	3	7	

Detail	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Transmission substation / switching station						Upgrade to ADMS (Advanced Distribution Management System) has enabled enhanced capture, hence the spike in Reported instances for Distribution Substations and Towers / poles. Abnormal spike in vandalism activity in FY22 during COVID lockdowns. Vandalism incidents were in localised geographic area. See basis of preparation for more detail.
Distribution substation	19	30	8	2	3	
Towers / poles	51	82	0	1	1	
Other (e.g. communications sites)	2	0	0	0	-	
Safe Approach Distance[i]						
Network employee / network contractor	1	0	0	1	0	Include the requirement to review Traffic Management Plans prior to traversing near the network.
Accredited Service Provider	0	0	0	0	1	
Public	0	0	0	0	0	

Detail	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Public worker	12	0	2	3	6	Increased awareness of Safe Approach Distance requirements and focus on improving quality and volume of near miss reporting related to public workers – each occasion is reported to Safe Work NSW for further triage/investigation.

a. All electric shocks are to be reported except those resulting from static discharge, defibrillators, where the system is nominally extra low voltage or involving the DC rail traction system.
b. Incidents that result in a burn or other injury requiring medical treatment and result from exposure to an arc.
c. Events caused by network assets, network asset defects or network activities, including shocks received inside customer installations, are to be reported. Customer installation events not associated with network assets are not to be reported.
d. Includes all classes of authorised persons (network employee and network contractor). Accredited Service Provider employees are not included.
e. Would not normally include contact with a pole, pillar, distribution substation etc, unless the contact results in subsequent contact with an energised asset.
f. Including plant and equipment packed up for travel (i.e. plant and equipment travelling on a public road to or from worksite).
g. Cranes, elevated work platforms, cherry pickers, excavators, handheld tools, etc.
h. Examples include agricultural equipment, aircraft and watercraft.
i. Encroachment into the applicable Safe Approach Distance for the type of individual involved.

A.6 Reliability and Quality of Supply[a]

Performance measure	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
High voltage into Low voltage[b]	81	51	55	62	13	Numbers are higher due to logic change to derive the numbers for this section
Sustained voltage excursions outside emergency range[c]	305,907	80,758	1936	1	3	The continued increase in this category is the result of enhanced smart meter access now reaching over 50k customers, which has led to an increase in visibility of incidents. These 305,907 events were detected over 5123 meters.
Reverse polarity	0	0	1	1	1	
Neutral integrity due to poor workmanship or incorrect procedure	0	0	0	0	0	Neutral integrity issues are ordinarily identified when a voltage is present within a customer's premises causing a shock. Consequently, these are already captured in Table A5, specifically “Electric shock and arc flash incidents originating from network assets including those received in customer premises”.

Performance measure	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Neutral integrity due to asset defect or failure	0	0	0	0	0	As above.

a. Reporting is required by distribution network operators only.
b. May also be referred to as HV LV intermix or HV injection.
c. As defined by network operator with reference to the measurement methodologies used in Australian Standard AS61000.3.100.

A.7 Reliability and Quality of Supply – Critical infrastructure incidents

Sustained (3+ minutes outage)

Type of critical infrastructure[a] (e.g. hospital)	Minutes of supply lost[b]	Cause	Consequential safety impacts associated with supply issue
Hospital - Private A1	81	Defective equipment	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private A1	73	Foreign interference	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private A1	145	Tree contact	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private A1	45	Unknown	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private A1	21	Foreign interference	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private A1	8	Defective equipment	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private B	106	Defective equipment	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private B	17	Defective equipment	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private B2	128	Tree contact	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private C	17	Adverse weather	No safety impacts resulted from the outage as alternate methods of supply was available

Type of critical infrastructure[a] (e.g. hospital)	Minutes of supply lost[b]	Cause	Consequential safety impacts associated with supply issue
Hospital - Private C	56	Tree contact	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private C	58	Tree contact	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private C2	124	Defective equipment	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Private D1a	61	Defective equipment	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public A1	297	Foreign interference	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public A1	51	Adverse weather	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public A1	63	Tree contact	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public A1	18	Adverse weather	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public A1	47	Adverse weather	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public A1	20	Foreign interference	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public B	73	Foreign interference	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public B	81	Foreign interference	No safety impacts resulted from the outage as alternate methods of supply was available

Type of critical infrastructure[a] (e.g. hospital)	Minutes of supply lost[b]	Cause	Consequential safety impacts associated with supply issue
Hospital - Public B	183	Tree contact	No safety impacts resulted from the outage as alternate methods of supply was available
Hospital - Public B	23	Tree contact	No safety impacts resulted from the outage as alternate methods of supply was available

a. Critical infrastructure as identified in the network operator's formal safety assessment in relation to the safety risks associated with loss of supply.
b. Number of minutes that the critical infrastructure was without a network supply.

Note: Incidents include outages and supply quality events that adversely impact critical infrastructure. Momentary outages (less than 180 seconds) have been excluded. In most circumstances there is redundancy in supply which minimises the safety impact of any outage

A.8 Network- initiated Property damage events

Performance measure	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Third party property (assets including vehicles, buildings, crops, livestock)						
Damage (e.g. Fire, Physical impact or Electrical)	**0**	1	0	1	0	
Network property (including non-electrical assets including vehicles, buildings)						
Damage (e.g. Fire, Physical impact or Electrical)	**0**	0	0	1	0	

Note: Event counts should include any event where there is a reasonable likelihood that damage was caused by electricity works.

Tier 4 Control implementation

A.9 Amendments and improvements to Formal Safety Assessments (FSA) or Associated Risk Treatments

Endeavour Energy's ENSMS consists of five Formal Safety Assessments that address the following risks:

- Worker injury – electrical. This includes the risk of injury through both electric shock and arc flash.
- Worker injury – non-electrical
- Bushfire
- Public safety. This FSA also addresses the risk of harm to third party property apart from damage due to network-initiated bushfires.
- Safety risks due to loss of supply

The risks of harm to the environment are managed through the implementation of Endeavour Energy's ISO14001-certified Environmental Management System.

During the reporting period the following amendments were made to these FSAs and the documented risk treatments.

FSA	Amendments / improvements
Public safety. This FSA also addresses the risk of harm to third party property apart from damage due to network-initiated bushfires.	FSA has not been amended however; the risk treatment actions are progressing as follows: - TAP 1.8.22 - Complete - TAP 1.8.23 - Complete - TAP 1.8.24 - Complete - TAP 1.10.3 - Actioned and in progress (no end date) - TAP 1.10.4 - Complete
Worker Injury - Electrical	The FSA was not amended during the reporting period. A list of future amendments captured include: - Increasing assurance activities for low voltage and high voltage switching - Increasing assurance activities related to the maintenance of Safe Approach Distances - Strengthening the requirements for Switching Plans and protocols - Strengthening the requirements for Switching Operations planned based on network records

FSA	Amendments / improvements
	- Strengthening procedures for assets isolated from all sources of electrical supply.
Worker injury – Non Electrical	The FSA was not amended during this reporting period. All associated risk treatments have been closed for FY23.
Bushfire	Commentary in the FSA document was amended with additional fire start analysis, and the risk register was revised with the addition of a quantitative risk assessment.
Safety risks due to loss of supply	The FSA was amended with documentation updates and the introduction of the loss of supply risk register. As part of this process, a range of internal stakeholders involved in the management of loss of supply control measures were engaged to review, identify and update control effectiveness ratings of controls outlined in the loss of supply risk register. The risk Treatment Actions Plan (TAP) are progressing as follows: - TAP 2.1.3 / 2.3.5 - Implemented and in progress - TAP 2.1.4 - Implemented and in progress - TAP 2.1.5 - Complete - TAP 2.1.6 / 6.4.12 - Implemented and in progress - TAP 2.1.7 - Implemented and in progress - TAP 4.2.12 - Complete - TAP 4.2.13 - Complete

A.10 Design, Construction and Commissioning

Performance measure[a]	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
Designs for which Safety in Design (SiD) Reports have been completed	541	843	1121	886	144	
Designs for which Safety in Design (SiD) Reports have been audited	10	0	5	0	0	
Contestable designs certified[b]	1319	1394	1490	1487	1618	
Contestable level 1 project safety reviews performed[c]	1042	865	1410	1559	1358	
Contestable level 2 project safety reviews performed[c]	197	210	303	409	422	
Non-contestable project safety reviews performed[c]	3996	2469	2769	2351	-	Focus on increasing the amount of safety reviews in this period
Project closeout reports completed for contestable	838	1204	1045	1119	1152	

Performance measure[a]	Event count – Current reporting period	Event count – Last reporting period	Event count – Two periods ago	Event count – Three periods ago	Event count – Four periods ago	Comments
projects						
Project closeout reports completed for non-contestable projects	268	217	23	98	63	
Project closeout reports audited for contestable projects	838	1204	1045	1119	1152	
Project closeout reports audited for non-contestable projects	268	217	0	98	60	

a. The unit of measure is the number of designs/projects.
b. The network operator is to advise where no contestable designs have been performed.
c. A safety review would include checking that work on or near the network is being performed safely.

A.11 Inspections (assets)

	Inspection tasks				Corrective action tasks				
Performance measure[a]	Planned inspection tasks[b]	Achieved[c]	Open[d]	Outstanding[d]	Tasks identified (all categories)[c]	Achieved	Open	Outstanding[e]	Comments
Transmission Substations	148	111	0	37	3,729	2,762	65	902	
Zone Substations	82,383	61,148	4,683	16,552	20,665	16,241	305	4,119	Increase in inspections for low risk ancillary equipment like fire blankets
Distribution Substations	2,084	1,789	266	29	2,733	2,333	193	207	
Transmission OH	22,269	16,838	0	5,431	1,734	1,178	35	521	
Transmission UG	5,837	5,675	23	139	25	22	1	2	
Distribution OH	143	69	0	74	21,358	15,603	172	5,583	Overhead and Ground line pole inspections are excluded from this list, therefore the count compared to last year differs
Distribution UG	6,204	6,204	0	0	1,370	1,152	6	212	
Network SAPS[f]	0	0	0	0	0	0	0	0	

The high number of outstanding corrective actions and inspection tasks is due to:

- Ongoing technical issues with the closure of inspection and corrective actions resulting in reporting showing as Outstanding even if the work is physically completed on time
- Prioritisation of both inspections and corrective actions have been targeted to the highest risk assets with larger volumes of outstanding tasks being lower risk assets
- To provide better service for our customers, during COVID-19 outbreak, we limited system outages. This decision resulted in an increase in outstanding medium to low priority corrective actions. With increased focus, we are now actively rectifying this backlog of corrective actions.
- Finalisation of robust reporting methods has hampered delivery as the corporate systems are still being stabalised.

Work that has been completed has continued to be prioritised based on risk even with these restrictions. The rectification of CAT1 and CAT2 (highest risk level) corrective actions is mostly achieved and no outstanding.

A.12 Inspections (vegetation) Aerial/Ground based

Bush fire risk category	Population (spans / poles)	Target	Achieved	Outstanding	Comments
Aerial	567,607	N/A	N/A	N/A	Covered in Table B.2
Ground-based	567,607	N/A	N/A	N/A	Covered in Table B.2

A.13 Public electrical safety plans and activities[a]

Network operator public safety programs / campaigns	Details
Public Safety Plan	Public Safety Plan developed with reporting at Executive level health, safety and environment committees for FY23 completed. Public Safety Plan for FY24 developed and strengthened with additional initiatives and more comprehensive coverage across a broader range of business activities relating to public safety (both directly and indirectly)
Public Safety Communications Plan	A communications plan was developed to inform internal and external communication and engagement activities including traditional media, social media and community outreach activities with various industry sectors, threat scenarios and key messaging

a. Network operator to provide details on the plans and other activities that the network operator undertook to provide safety information to the public. Examples may include a publication of a Public Electrical Safety Awareness Plan, advertisements associated with electrical safety and awareness, publication of a bush fire risk management plan, shocks and tingles awareness program, etc.

A.14 Internal audits performed on any aspect of the ENSMS (as per AS 5577 clause 4.5.4)

Audit scope	Identified non-compliances	Actions taken or proposed by network operator
Interaction Between Network Assets and Public - Internal Audit Report Audit File No: 22-10 Division: Assets & Operations; Business Services; Health, Safety & Environment December 2022	No non compliances observed.	1) A review of physical security measures currently in place at zone substations and switching stations be conducted, with consideration given to installing appropriate CCTV cameras at these facilities and/or conducting night security patrols, if the benefit of doing so outweighs the cost. The factors listed above that should be considered when conducting such a type of analysis should be addressed as part of this.
		2) The various locking devices currently fitted to padmount substations be assessed, with consideration given to replacing them with more reliable devices if the cost of doing so does not outweigh the benefit. This could include considering and installing the locking device designed and proposed by the Endeavour security locking team, once properly costed, and any other feasible alternatives. The weaknesses in analysis conducted to date as outlined above should be addressed when this analysis is conducted.
Internal quarterly audits for unintended discharge of electricity with targeted focus activities.	**Q1** No non compliances observed.	Increase infield presence to help coach workers in testing and applying earthing equipment.
	Q2 No non compliances observed.	Communicated the requirement to only wear approved personal protective equipment and provided a list of approved personal protective equipment to workers.

Audit scope	Identified non-compliances	Actions taken or proposed by network operator
Q1 LV Switching **Q2** Live Work LV **Q3** External RTO Electrical safety Rules delivery and compliance **Q4** First response	**Q3** No non compliances observed.	The audit revealed a pleasing result with only one partial compliance issue observed that was rectified immediately with the registered training organisation in question. The registered training organisation welcomed the engagement and opportunity for industry consultation with Endeavour Energy to discuss safety and training related matters.
	Q4 No non compliances observed.	Facilitate toolbox talks with response crew to promote the use of arc rated face shields for all arcing and 'cut away' activities. Raise awareness for accessing critical information related to Polarity testing, responding to shocks and HV/LV intermix faults.
Fatal Risk Audits/Control Verifications	Field based audits and control verification activities, yielded no major non-conformances, with some opportunities for improvement identified and raised as tasks within SAP EHS	FR1.1 Inadvertent contact with electricity; 3 audit activities and 3 verification activities. FR1.2 Hazardous Materials; KPMG audit planned for Q1 FY24 FR1.3 Working at Heights and below; 1 audit activity. 4 control verification activities. FR1.4 Vehicle and Plant Interaction. Specific focus on reversing activities. 37 verification activities completed. Some consistent findings relating to the absence of spotters (80). This has been included in Vehicle Reversing Strategy and will remain a focus point within operations and safety meetings. FR1.5 Lifting. 2 Control verifications. FR1.6 Excavation. 2 Control verifications
Health, Safety and Environment incident	Non-compliances were identified in the documentation of psychosocial incidents in corporate systems, the consistent completion of incident investigations for lower level incidents	The action plan undertaken is to update procedures, undertake training and periodic reporting reviews.

Audit scope	Identified non-compliances	Actions taken or proposed by network operator
management and investigation	and the lack of trend analysis of incidents for management review.	
Health Safety and Environment audit process	• Incomplete coverage of all health safety and environment risk within the audit plan. • The audits need to be risk rated and prioritised in line with company policy. • Auditors were not trained in accordance with company policy.	• The completion of the bi-annual review of incidents and assurance activities identifies weaknesses that enables the targeting of risks for audits. With this control in place not all risks need to be subject to the audit process • Review of company policy to be undertaken • Update to company policy to include clarity on training and implement appropriate training in corporate systems
Loss of upstream electricity supply	Inadequate monitoring of load shedding scheme including the impact of increase in rooftop solar systems	Periodic monitoring to be implemented at major substation for the adequacy of providing load reduction including a specific review of feeders that are experiencing reverse power flows due to rooftop solar
ENSMS – Compliance with AS5577	The ENSMS manual requires a revision, given that several documents cited within the manual have been eliminated or their associated links seem to be malfunctioning.	Upon completion of the ENSMS procedures review, set to be finished by December 2023, necessary updates will be made to the ENSMS Manual in January 2024.

Note: Network operators are only required to report internal audit non-compliances that are related to ENSMS or safety issues.

A.15 External audits performed on any aspect of the ENSMS (as per AS 5577 clause 4.5.4)

Audit scope	Identified non-compliances	Actions taken or proposed by network operator
ENSMS Bushfire Risk Audit March 2023	It is recommended that Endeavour Energy develop a revised plan to address previous non-material non-conformances and amend and implement changes to its ENSMS in accordance with the plan and its timetable.	Review FSA & risk register format and update where appropriate, and publish update by October 2023. Fire start risk review to be performed to asset group level & included in 2023 update of FSA & Risk Register.
	The FSA and risk register should be updated to clearly identify competence as a risk to the completion of vegetation maintenance activities in its Bushfire FSA. It is recommended that this should be considered against any control where competence is material to maintaining a control measure's effectiveness such as scoping of vegetation works related to fall-in trees, but also any other high-risk activities that present heightened risk if not undertaken competently.	Review risk register and update as required to clearly identify controls that rely on worker competence for effectiveness eg. Vegetation scoping, vegetation control, OLI/GLI inspection.
	Develop a systematic audit plan that addresses the requirements of clause 4.5.4 of AS5577 that will ensure systematic assurance that controls identified through the FSA and associated Risk Register are in place and effective. This plan should be in alignment with Endeavour's Corporate Risk Management guidelines around use of the three lines of defence model.	(a) Implement annual refresher & quality feedback debrief with vegetation scopers and TMOs. (b) Annual audit plan to be presented to the ENSMS committee each year, with ENSMS-related audit reports shared for information of the committee.
	Where trees are identified that can be considered at higher risk of fall-in events processes need to be updated to ensure that it is identified as a fall-in hazard and a VTA undertaken as per the WVM 0840 Vegetation Discretionary Works procedure or if not a fall-in hazard that an appropriate risk assessment is undertaken and recorded.	Consider amending WVM 0805 (defect management) or WVM 0840 (discretionary works / hazard tree management) to address assessment and record keeping for objects inside clearance.

Audit scope	Identified non-compliances	Actions taken or proposed by network operator
	It is recommended that Endeavour Energy take steps to provide improved detail and clarity of context in the Annual Performance Report by considering the network safety narrative that the data tells and implementing a review process that provides a customer perspective.	Annual performance report drafting process to include review by internal communications team to improve readability.
	It is recommended that Endeavour Energy's process for compilation of its Annual ENSMS Performance Report include steps to ensure that the source data for all figures reported can be verified.	Annual performance report preparation process to include formal section review and endorsement of content by SME / process owner.

Bushfire preparedness

B.1 Bushfire risk profile across network operator's supply area

Year in review

The 2022-23 financial year saw the last of three years of La Niña conditions along with the above average rainfall seen in the previous year. As a result, rainfall deciles recorded by the Bureau of Meteorology were above average across the Endeavour Energy network area and bushfire activity for the year was below average.

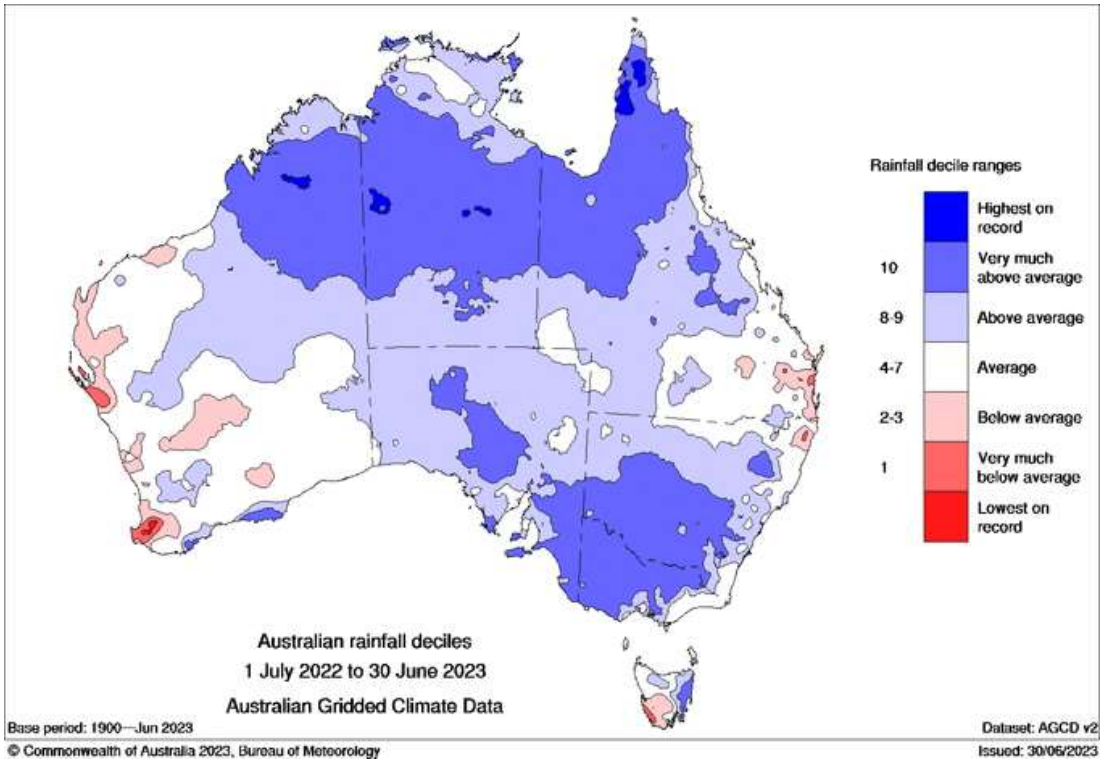


Figure 1 - Rainfall deciles for FY2023

Following several extreme multi-day rainfall events in the previous year, July started with an east coast low producing major flooding in catchments within the Endeavour Energy network area. La Niña conditions dissipated through the summer resulting in a dry autumn and early winter.

Forecast

The Bureau of Meteorology has declared an El Nino event in progress, coupled with a positive Indian Ocean Dipole. This normally results in above average temperatures and below average rainfall across the Endeavour Energy network area, resulting in deteriorating bushfire conditions for the bushfire danger period.

Figure 2 – Chance of above median rainfall – November 2023 to January 2024

The seasonal outlook for Spring 2023 issued by AFAC (the Australian and New Zealand Fire Authorities Council) indicates that due to the climate forecast described above the bushfire outlook for the period ahead is normal or above normal for the Endeavour Energy network area.

Normal fire potential is expected for areas burnt in the 2019-20 season due to recovering and curing fuel loads. This results in normal bushfire potential for 10,800 km^2 or 44% of the 24,800km^2 Endeavour Energy network area.

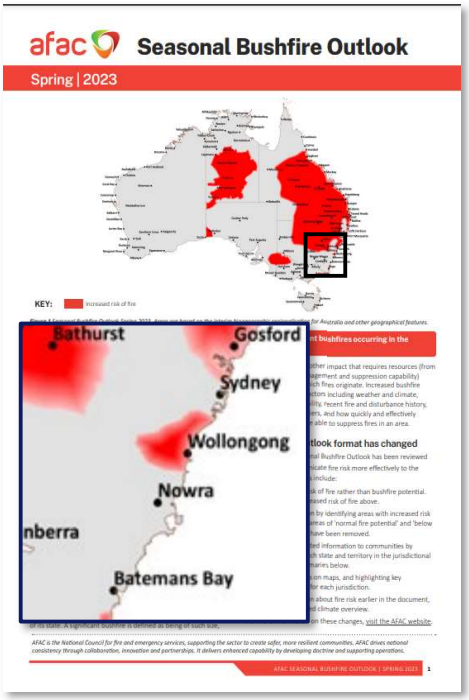


Figure 3 – Australian seasonal bushfire outlook August 2022

B.2 Permanent / temporary declaration of areas by RFS and network operator's actions

The NSW RFS has temporarily brought forward the commencement of the Bush Fire Danger Period in a number Local Government Areas in previous bushfire seasons, however no changes have been made within the Endeavour Energy network area this year. The table below details the LGAs within the Endeavour Energy operating area and their respective Bush Fire Danger Period commencement dates.

Region	LGA	Temporary	Permanent
Greater Sydney	Blacktown City	Nil	1 October
	Blue Mountains City	Nil	1 October
	Camden	Nil	1 October
	Campbelltown City	Nil	1 October
	Fairfield City	Nil	1 October
	Hawkesbury City	Nil	1 October
	Liverpool City	Nil	1 October
	Parramatta	Nil	1 October
	Penrith City	Nil	1 October
	The Hills Shire	Nil	1 October
Illawarra / Shoalhaven	Kiama	Nil	1 October
	Shellharbour City	Nil	1 October
	Shoalhaven City	Nil	1 September
	Wingecarribee Shire	Nil	1 October
	Wollondilly Shire	Nil	1 October
	Wollongong City	Nil	1 October
Central Ranges	Lithgow	Nil	1 October
	Mid-Western Regional	Nil	1 October

Electricity Network Safety Management System Performance Report

Endeavour Energy carries out a number of bushfire risk mitigation activities including both year-round and seasonal activities leading up to and within the bushfire season. During the reporting period Endeavour Energy undertook the following actions to mitigate bushfire risks.

Pre-bushfire danger period inspection and defect rectification
Each year Endeavour Energy undertakes patrols of network assets located in bushfire prone areas in the months prior to the Bushfire Danger Period. These patrols allow for the identification and rectification of defects that pose a genuine risk of initiating a bushfire. Rectification of significant defects found during this process is required prior to the start of the bushfire season.

Inspections of bushfire prone areas are typically a combination of aerial patrols where the area can be flown and ground patrols where it is not reasonably possible to conduct aerial patrols. These patrols include the use of LiDAR imagery for the determination of vegetation encroachments and high definition still photography for assessment of asset condition and defect identification.

Due to the permanent change to the Bushfire Danger Period in the Shoalhaven area to 1 September any defects identified during the Pre-Summer Bushfire Inspection (PSBI) program in the Shoalhaven area would be completed by 1 September. For all other bush fire prone areas defects were to be rectified no later than 1 October.

Refer to tables B.1, B.2, B.3 and B.4 for details of the status of the 2023 pre-summer bushfire inspection program.

Routine maintenance
In addition to the annual pre-summer bushfire inspections noted above, routine maintenance regimes and cyclic inspections also identify any faults or issues that need to be repaired. These are prioritised to ensure that the most significant issues are rectified ahead of the bushfire season.

Vegetation clearing
To help minimise safety and bushfire risks Endeavour Energy delivers annual vegetation programs to keep vegetation clear of power lines. Clearance requirements are based on the Industry Safety Steering Committee (ISSC) 3 - Guide for the Management of Vegetation in the Vicinity of Electricity Assets.
In heavily vegetated areas where clearing is problematic, alternatives such as line relocation, conversion to covered conductor or underground conversion may be considered where appropriate.

Covered Conductor Thick (CCT) project
Following a review of the 2019-20 bushfires Endeavour Energy fast-tracked a project to replace bare overhead conductor with Covered Conductor Thick (CCT) to further reduce the risk of bushfire ignition. Recent development in bushfire risk modelling has provided clearer identification of locations on the network where a higher bushfire ignition risk exists. The modelling identified several locations that represent the highest bushfire ignition risk of all HV distribution spans in Endeavour Energy's network and as a result investment in additional bushfire ignition risk mitigation works has been approved for coming years.

Fire Mesh
Also following the 2019-20 bushfires a final case for investment was approved for the application of a product known as Fire Mesh to high risk timber poles in order to protect the poles from catching fire during a bushfire. The case for investment recommended the application of Fire Mesh to selected timber poles in

a proactive manner based on risk assessment and for general application in a reactive manner when and overhead line is threatened by bushfire.

These mitigative measures are expected to provide significant enhancements in the networks resilience to bushfire as well as improving reliability of supply for customers.

Fault Anticipation
Endeavour Energy is undertaking a pilot to evaluate the efficacy of Fault Anticipation technology. Early Fault Detection (EFD) units have been installed on selected distribution feeders and are being monitored. Based on initial success the trial is being expanded in 2023 ahead of a final decision regarding broader implementation on the Endeavour Energy network to help reduce bushfire risk.

Emergency Preparedness and Response
Endeavour Energy is committed to being adequately prepared for incidents to provide an effective response. Effective operational responses minimise danger to workers and the public, limit disruption to customer service, protect assets, and minimise harm to the environment.

The normal year-round emergency response and incident management systems are in place to coordinate a response to any incidents that are declared during summer. During incidents, communications plans are coordinated with the incident management process, to ensure that stakeholders and responders are notified of response progress.

At an organisational level, the company will implement the Incident Management Plan (IMP) once it becomes clear that managing the impact of an incident or event requires a coordinated response and significant re-prioritisation of the operational needs and resources as outlined in the procedure.

The IMP has a broad scope and has been designed to respond to a wide range of major network incidents. It provides a framework which defines the actions to be taken upon declaration of a major disruptive event by providing:

- guiding principles for response;
- the company's structure for management of an incident;
- roles and responsibilities for management of an incident;
- escalation and notification schedules;
- checklists for initial considerations upon activation of an incident;
- checklists to monitor that planning addresses all the relevant issues; and
- the type of documentation required to be retained.

Following each incident, the same communications processes will continue, to provide updates on changes in network risk, and the actions taken to maintain network security. Where the Bureau of Meteorology announces a Fire Weather Warning Rating of Catastrophic for a designated area, no planned electricity supply interruptions will occur that affect customers in that designated area.

Liaison with NSW Rural Fire Service and with Local Councils
Endeavour Energy maintains strong relationships with the NSW Rural Fire Service (RFS) and Fire and Rescue NSW as well as with local councils, National Parks and Wildlife Service and other stakeholders. Endeavour Energy has identified staff to perform the Liaison Officer role for each local government area. These Liaison Officers attend Local Emergency Management Committees and local Bushfire Management

Committees in each local government area to keep in touch with events as they arise along with preparation for the upcoming season.

Additionally, Endeavour Energy field staff complete training in Bushfire Awareness delivered by the RFS which provides an outline of the safety requirements for working in and around bushfire areas.

Communications
Prior to the onset of the storm and bushfire season, Endeavour Energy pro-actively distributes safety media releases. Information is also available on the company's website and social media channels, including:

- Bushfire and storm safety tips;
- Dangers of trees near power lines; and
- Electrical safety for emergency services personnel.

This material has been revised and expanded in 2023.

Advertising campaigns are targeted to incorporate safety messages to align with seasonal issues. Where aerial patrols are conducted as part of pre-summer network inspections, radio and press notifications advising of the aerial patrols are also carried out.

Endeavour Energy's Contact Centre provides an important service of informing affected customers of supply restoration developments during incidents. Contact Centre team members are continually provided with updated information and key contacts in other nominated business sections to enable customer queries to be addressed promptly.

The contact centre also provides an important feedback function whereby new information received through calls is recorded in internal systems and relayed to Systems Operations where appropriate. This provides a greater level of situational awareness to System Operators and the Incident Management Team.

Information updates are also regularly communicated through Endeavour Energy's social media pages. The company also provides information via a range of conventional media outlets as appropriate during incidents.

Standards
In bushfire prone areas Endeavour Energy has adopted standards that require new power lines to be either underground cables or where overhead is permitted, to be predominantly of covered or insulated construction.

Endeavour Energy's vegetation management standard has recently been revised to incorporate consequence rating levels for cutting maps to better prioritise cutting activities before the bushfire season. This is based on outputs of the Phoenix RapidFire bushfire simulator and risk assessment decision support tool.

Total Fire Ban Days
Endeavour Energy has installed reclosing devices at most of its zone substations and many field locations. These devices are designed to isolate supply in the event of a fault, and then attempt to restore supply a brief period later. If the fault is persistent, supply is isolated until a repair is undertaken, and at this point

the recloser is re-set. This type of protection is considered appropriate during most conditions as many faults are only of a temporary nature, such as tree branches on mains etc.

In line with ISSC 33 - Guideline for network configuration during high bushfire risk days, Endeavour Energy adopts a risk-based approach to determining which feeders should have auto-reclosing disabled on total fire ban days. For the fire danger period of 2023-24, Endeavour Energy is trialling the use of enhanced protection settings on high bushfire risk circuits in bushfire prone areas on TOBAN days. This involves disabling auto-reclosing and activating fast tripping settings on these high voltage distribution circuits, along with any that have known defects that may result in the ignition of a fire. This trial will be evaluated following the bushfire season to evaluate the effectiveness of preventing fire events, along with the impact on the electricity network reliability for customers.

B.3 Aerial consumer mains on bushfire prone private land (HV and LV)

Aerial consumers mains are the overhead conductors and support structures between the main switchboard of an electrical installation and a support structure that is the connection point with the distribution system.

Low and high voltage overhead lines
Endeavour Energy's routine overhead line inspection program incorporates the inspection of aerial low voltage consumer mains including poles, conductors, and fittings. High voltage lines are inspected up to and including the high voltage metering point or the first point of protection (for example, dropout fuses, circuit breaker or switch fuse), whichever is first. If there is no high voltage metering point, all poles are inspected for the entire line length.

Where a defect is identified the customer is advised of the defect in writing and a copy of the written defect is to be forwarded to the OLI/GLI Manager. It is the customer's responsibility to have the defect repaired. Any defect that could result in a loose neutral connection, burning, or live metallic structures are regarded as an emergency hazardous situation and reported to the Endeavour Energy's Overhead Line / Ground Line Inspection (OLI/GLI) group for further action.

In addition to the routine overhead line inspection program, prior to the commencement of the Bushfire Danger Period, Endeavour Energy conducts a pre-summer bushfire inspection (PSBI) program which includes the identification and rectification of electricity asset defects and vegetation encroachments which have the potential to initiate a bushfire.

The pre-summer bushfire inspection program also includes inspection of overhead aerial consumer's mains located in bush fire prone areas. In a similar manner to the routine overhead line inspection program, the customer is advised in writing of any defects identified on overhead aerial consumers mains and are given a period of time that the defect must be rectified. Should the defect not be rectified within the specified timeframe Endeavour Energy will, under the powers provided by the Electricity Supply Act, either undertake the required works to rectify the defect and recover the reasonable costs for the work or disconnect the installation from the electricity network.

High Voltage Customers
The maintenance of electrical assets owned by High Voltage Customers is the responsibility of the owner. These requirements are detailed in Endeavour Energy's High Voltage Operating Protocols, however in addition, Endeavour Energy writes to High Voltage Customers, annually, advising them of the need to undertake inspections of their equipment and their responsibility for rectifying any defects capable of initiating a fire prior to the start of the bush fire danger period.

The High Voltage Customers are requested to formally advise Endeavour Energy that the inspection and rectification of defects have been completed. Where inspections are not completed or defects are outstanding Endeavour Energy identifies suitable actions to reduce the likelihood of a High Voltage Customer network fault causing a bushfire ignition during high risk conditions.

Table B.1 Aerial consumer mains on bush fire prone private land (HV and LV)

Performance measure	Current reporting period		Last reporting period		Two periods ago		Three periods ago		Four periods ago	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Private LV lines[b] checked by the network operator	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of directions for bushfire risk mitigation issued to LV customers by the network operator	N/A	42	N/A	73	N/A	52	N/A	411	N/A	30
Number of directions for bush fire risk mitigation issued to LV customers by the network operator that have exceeded the timeframe for rectification specified in the direction notice and remain unresolved	N/A	0	N/A	0	N/A	0	N/A	0	N/A	1
HV customers (metering point count) advised to undertake pre-season bushfire checks in accordance with ISSC 31[c]	84	84	84	84	90	90	89	89	84	84
HV customers (metering point count) providing statements of compliance in accordance with ISSC 31	75	73	84	47	90	79	89	83	-	78
HV customers (metering point count) requiring additional risk mitigation prior to start of the reporting year[d]	0	2	0	1	0	11	0	6	-	5
HV customers (metering point count) where additional risk mitigation has been completed prior to start of the reporting year	2	2	1	0	11	0	6	0	-	1

a. Table B.1 is not applicable to Sydney Trains.
b. Private lines means aerial consumers mains on bush fire prone private land. Network operators may report in terms of numbers of LV installations or the numbers or percentage of areas targeted and checked.
c. Industry Safety Steering Committee Guideline for the Management of Private Overhead Lines (ISSC 31).
d. Includes the number of high voltage customers who did not provide a statement of compliance or had identified defects requiring mitigation, where the network operator is ensuring appropriate risk mitigation (eg, inspection by the network operator).

Table B.2 Pre-Summer bushfire inspections

Pre-Summer bushfire inspections	Population (spans / poles)	Target	Achieved	Outstanding
Aerial Inspection	171,501	171,501	153,969	0
Ground-based Inspection	171,501	17,532	17,532	0

Table B.3 Vegetation task

Category	Status	Encroachment Classification A1a	Encroachment Classification A2b	Encroachment Classification A3c	Encroachment Classification A4d	Total
Bushfire Prone Network (31st August Target)	Identified	265	345	435	98	**1143**
	Completed	265	345	435	98	**1143**
	Open	0	0	0	0	**0**
	Outstanding	0	0	0	0	**0**
Bushfire Prone Network (30th September Target)	Identified	703	1932	2430	412	**5477**
	Completed	702	1927	2430	412	**5471**
	Open	0	0	0	0	**0**
	Outstanding	1	5	0	0	**6**
Bushfire Prone Network (31st October Target)	Identified	0	0	712	312	**1024**
	Completed	0	0	225	70	**295**
	Open	0	0	487	242	**729**
	Outstanding	0	0	0	0	**0**
Bushfire Prone Network (30th November Target)	Identified	0	1	855	637	**1493**
	Completed	0	0	283	183	**466**
	Open	0	1	572	454	**1027**
	Outstanding	0	0	0	0	**0**
Bushfire Prone Network (31st December Target)	Identified	0	2	2057	8341	**10400**
	Completed	0	0	462	2631	**3093**

Category	Status	Encroachment Classification A1a	Encroachment Classification A2b	Encroachment Classification A3c	Encroachment Classification A4d	Total
	Open	0	2	1595	5710	**7307**
	Outstanding	0	0	0	0	**0**
Totals	Identified	**968**	**2280**	**6489**	**9800**	**19537**
	Completed	**967**	**2272**	**3835**	**3394**	**10468**
	Open	**0**	**3**	**2654**	**6406**	**9063**
	Outstanding	**1**	**5**	**0**	**0**	**6**

Customer

Category	Status	Encroachment Classification A1a	Encroachment Classification A2b	Encroachment Classification A3c	Encroachment Classification A4d	Total
Bushfire Prone Network (30th September Target)	Identified	2454	3325	1926	136	**7841**
	Completed	2446	3323	1926	136	**7831**
	Open	0	0	0	0	**0**
	Outstanding	8	2	0	0	**10**
Bushfire Prone Network (31st Decemeber Target)	Identified	0	0	643	2365	**3008**
	Completed	0	0	259	882	**1141**
	Open	0	0	0	0	**0**
	Outstanding	0	0	384	1483	**1867**
Totals	**Identified**	**2454**	**3325**	**2569**	**2501**	**10849**

	Completed	**2446**	**3323**	**2185**	**1018**	**8972**
	Open	**0**	**0**	**0**	**0**	**0**
	Outstanding	**8**	**2**	**384**	**1483**	**1877**

Table B.4 Asset tasks

Bushfire risk category	Status	Category 1[a]	Category 2[a]	Category 3[a]	Category 4[a]	Totals
Network	Identified	125	120	87	13	345
	Completed	125	120	87	13	345
	Open	0	0	0	0	0
	Outstanding	0	0	0	0	0
Customer	Identified	4	5	5	0	14
	Completed	4	5	5	0	14
	Open	0	0	0	0	0
	Outstanding	0	0	0	0	0
Totals	**Identified**	**129**	**125**	**92**	**13**	**359**
	Completed	**129**	**125**	**92**	**13**	**359**
	Open	**0**	**0**	**0**	**0**	**0**
	Outstanding	**0**	**0**	**0**	**0**	**0**

1. Asset tasks identified is the quantity of defects requiring attention following Endeavour Energy's review of the defects received from the PSBI contractor's defect identification process. An experienced pole inspector/auditor undertook a detailed review of each defect identified by the PSBI contractor to assess for consistency with the Defect Handbook (MMI 0002). Findings from this review process will be used to refine the PSBI contractor's defect identification processes in future programs.
2. Defect Categorisation (source: SMI 124 - Maintenance data entry and defect prioritisation)

   Category 1: Defects that pose a direct and immediate risk to safety of the public/staff, and/or to the network availability, requiring diversion of resources to isolate supply if required and control/repair the defect.

   Category 2: Defects that pose risks to safety of the public/staff, and/or the network availability, where the asset condition is such that a response in a period materially less than the business as usual processes for arrangement of isolations, materials ordering, and resource allocation is required.

Category 3: Defects that pose a non-immediate risk to the safe and/or reliable operation of the network over the short term and would be prioritised for action during this period using the business as usual processes.
Category 4: These defects do not impose a level of risk that warrants an escalated priority response but do represent a risk which needs to be managed and resolved in the medium term.

A1 – vegetation has encroached as far as 75-100% into the minimum vegetation clearance.
A2 – vegetation has encroached as far as 50-75% into the minimum vegetation clearance.
A3 – vegetation has encroached as far as 25-50% into the minimum vegetation clearance.
A4 – vegetation has encroached as far as 0-25% into the minimum vegetation clearance.

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