APA

Australia's energy infrastructure partner

Directlink 2024-25 ENSMS annual performance report

In accordance with clause 10 of the Electricity Supply (Safety and Network Management) Regulation 2014

30 October 2025



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1. Introduction

This report provides information about the performance of Directlink's Electricity Network Safety Management System (ENSMS) as implemented in accordance with the *Electricity Supply (Safety and Network Management) Regulation 2014* (ESSNM Regulation) and *Australian Standard AS 5577 Electricity network safety management systems* (AS 5577). This report has been produced in accordance with IPART's *Electricity networks reporting manual - Safety management system performance measurement (October 2024)* (Reporting Manual), which provides a template for the report.

In summary:

- Section 1 of the report provides contextual information on Directlink.
- Section 2 of the report provides information on safety performance for the period 1 July 2024 to 30 June 2025 (in accordance with Appendix A of the Reporting Manual).

Directlink is not required to provide bushfire preparedness information in accordance with Appendix B of the Reporting Manual.

1.1. Asset overview

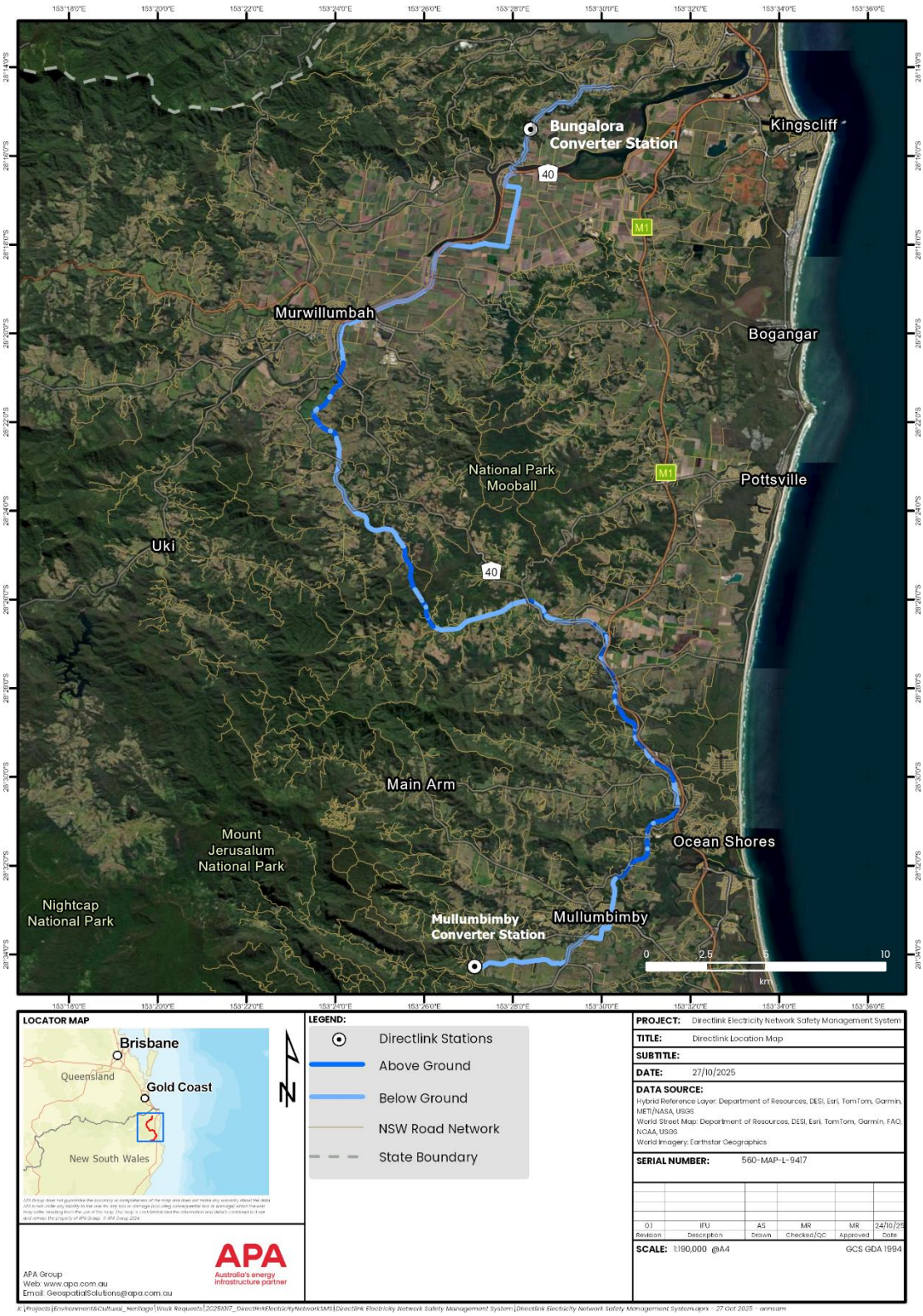
Directlink is a 63 km high-voltage direct current electricity interconnector linking New South Wales and Queensland. While geographically located in New South Wales, Directlink connects the New South Wales and Queensland electricity markets due to its position in the network. It runs from Bungalora and Mullumbimby in northeastern New South Wales, enabling power to be shared in both directions across state borders.

Directlink is made up of three parallel 63 km High-Voltage Direct Current (HVDC) transmission lines, running both overhead and below ground. It has capacity to deliver 180 MW into the AC network in either state. Directlink is owned by Energy Infrastructure Investments (EII) and operated by APA Group (APA), which is a shareholder in EII.

1.2. Directlink map

The location of Directlink is shown in Figure 1.1 below.

Figure 1.1 Directlink location



1.3. ENSMS overview

Directlink's ENSMS is a documented, risk-based framework for the systematic identification, assessment, and control of safety risks to comply with legislative obligations (including under the ESSNM Regulation and AS 5577) and protect people, property, and the environment. Directlink's ENSMS is supported by a Formal Safety Assessment (FSA), which is a structured, evidence-based process used to systematically identify hazards, assess risks, and evaluate safety controls to effectively manage risks.

Directlink is committed to delivering the following objectives through its ENSMS:

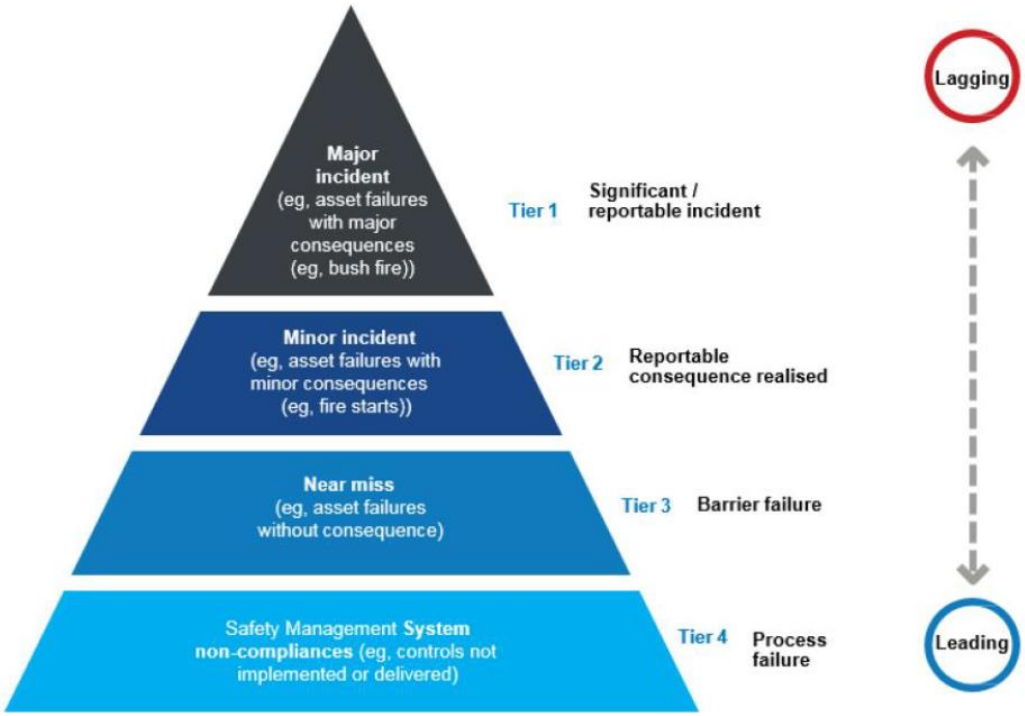
— the safety of members of the public
— the safety of person(s) working on the network
— the protection of property (whether or not belonging to Directlink)
— the management of safety risks arising from the protection of the environment (for example, preventing bushfires that may be ignited by network assets)
— the management of safety risks arising from the loss of electricity supply.

1.4. Leading and lagging safety performance indicators

Directlink's ENSMS incorporates a structured performance monitoring framework using both leading indicators (which indicate future performance) and lagging indicators (which indicate past performance). These indicators are designed to ensure that safety-critical controls identified in the FSA are implemented and remain effective during both routine operations and emergency situations.

Figure 1.2 below presents leading and lagging indicators, with tier 1 and tier 2 measures comprising lagging indicators and tier 3 and tier 4 indicators comprising leading indicators.

Figure 1.2 IPART safety performance monitoring framework



Source: Reporting Manual, p6.

2. Annual safety performance reporting for 2024-25

The annual safety performance information detailed in the following tables is based on a financial year calendar. All reporting relating to the current period is for 1 July 2024 to 30 June 2025.

The report is structured as follows (and reflects the four tiers of performance measures presented in Figure 1.2):

— Section 2.1 - Tier 1 indicators (Major incidents)
— Section 2.2 - Tier 2 indicators (Minor incidents)
— Section 2.3 - Tier 3 indicators (Control failure near misses)
— Section 2.4 - Tier 4 indicators (Control implementation)

2.1. Tier 1: Major incidents

There were no major incidents for Directlink during the reporting period.

Table 2.1 Major incidents

ESSNM Objective	Description of each major incident reported under the incident reporting requirements
Safety of members of the public	Nil
Safety of persons working on the network	Nil
Protection of property – 3rd Party property	Nil
Protection of property – Network Property[a]	Nil
Safety risks arising from the loss of electricity supply[b]	Nil

[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.

2.2. Tier 2: Incidents

There were no Tier 2 incidents for Directlink during the reporting period.

Table 2.2 Incidents

ESSNM Objective	Description of each incident reported under the incident reporting requirements
Safety of members of the public	Nil
Safety of persons working on the network	Nil
Protection of property – 3rd Party property	Nil
Protection of property – Network Property	Nil
Safety risks arising from the loss of electricity supply[a]	Nil

[a] As defined for reliability incidents in IPART's Reporting Manual – Incident Reporting.

2.3. Tier 3: Control failure near misses

Directlink network failures that occurred during the period are detailed in the tables below.

Table 2.3 Network asset failures

Performance measure	Asset population or length	5-year average annual functional failures	Annual functional failures (24-25)					
			Unassisted			Assisted		
			No fire	Fire		No fire	Fire	
				Contained	Escaped		Contained	Escaped
Towers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Poles (including street lighting columns/poles & stay poles)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pole-top structures	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conductor – Transmission OH	0.2 km[a]	0	0	0	0	0	0	0
Conductor – Transmission UG	378 km	3.8	0	0	0	0	0	0
Conductor – HV (including sub-transmission) OH	<1 km	0	0	0	0	0	0	0
Conductor – HV (including sub-transmission) UG[b]	3.96 km	0	0	0	0	0	0	0
Conductor – LV OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Conductor – LV UG	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service line OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Service line UG	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Power transformers	6	0		0	0	0	0	0
Distribution transformers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reactive plant	32	0.4	0	0	0	0	0	0
Switchgear – zone / subtransmission / transmission substation	30	3	0	0	0	0	0	0
Switchgear – distribution (Overhead)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Switchgear – distribution (Ground Based)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Protection relays or systems	4	5.4	0	0	0	0	0	0
SCADA – zone / subtransmission / transmission substation	1	3.6	8	0	0	0	0	0
Batteries – zone / subtransmission / transmission substation	14	2	2	0	0	0	0	0
Network SAPS[c]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[a] This line runs between Directlink's Mullumbimby Converter Station and Essential Energy's substation.
[b] AC connection between the Directlink's Bungalora Converter Station and Essential Energy's Terranora substation.
[c] There are no stand-alone power systems on Directlink's network.

Table 2.4 Vegetation contact with conductors

Performance measure[1]	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comments
Fire starts - grow in	0	0	0	0	0	No incidents
Fire start - fall in and blow in	0	0	0	0	0	No incidents
Interruption - grow in	0	0	0	0	0	No incidents
Interruption - fall in and blow in	0	0	0	0	0	No incidents

[1] Vegetation hazard definitions as per the Industry Safety Steering Committee *Guide for the Management of Vegetation in the Vicinity of Electricity Assets* (ISSC3).

Table 2.5 Unintended contact, unauthorised access and electric shocks

Performance measures	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comments
Electric shock and arc flash incidents originating from network assets including those received in customer premises						
Public	0	0	0	0	0	No incidents
Public Worker	0	0	0	0	0	No incidents
Network employee / contractor	0	0	0	0	0	No incidents
Accredited Service Provider	0	0	0	0	0	No incidents
Livestock or domestic pet	0	0	0	0	0	No incidents
Contact with energised overhead network asset (e.g. conductor strike)						
Public road vehicle	0	0	0	0	0	No incidents
Plant and equipment	0	0	0	0	0	No incidents
Agricultural and other	0	0	0	0	0	No incidents
Network vehicle	0	0	0	0	0	No incidents
Contact with energised underground network asset (e.g. conductor strike)						
Plant and equipment	0	0	0	0	0	No incidents
Person with handheld tool	0	0	0	0	0	No incidents
Unauthorised network assets (intentional)						

Zone / BSP / transmission substation / switching station	0	0	0	0	0	No incidents
Distribution substation	0	0	0	0	0	No incidents
Towers / poles	0	0	0	0	0	No incidents
Other (e.g. communication sites)	0	0	0	0	0	No incidents
Safe Approach Distance (SAD)						
Network employee / contractor	0	0	0	0	0	No incidents
Accredited Service Provider	0	0	0	0	0	No incidents
Public	0	0	0	0	0	No incidents
Public Worker	0	0	0	0	0	No incidents

Table 2.6 Reliability and quality of supply

Performance Measures	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comment
High voltage into low voltage	N/A	N/A	N/A	N/A	N/A	No incidents
Sustained voltage excursions outside emergency range	0	0	0	0	0	No incidents
Reverse polarity	0	0	0	0	0	No incidents
Neutral integrity due to poor workmanship or incorrect procedure	0	0	0	0	0	No incidents
Neutral integrity due to asset defect or failure	0	0	0	0	0	No incidents

Table 2.7 Reliability and quality of supply – Critical infrastructure incidents

Directlink provides interregional transmission services between Powerlink and Essential Energy networks and as such does not directly supply power to any significant community infrastructure.

Type of critical infrastructure[1] (e.g. hospital, tunnel)	Minutes of supply lost	Cause	Consequential safety impacts associated with supply issue
N/A	N/A	N/A	N/A

[1] Critical infrastructure as identified in the network operator's formal safety assessment in relation to the safety risks associated with loss of supply.

Table 2.8 Network-initiated property damage events

Performance Measures	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comment
Third party property (assets including vehicles, buildings, crops, livestock)						
Damage (e.g. fire, physical impact or electrical)	0	0	0	0	0	No incidents
Network property (including non-electrical assets including vehicles)						
Damage (e.g. fire, physical impact or electrical)	0	0	0	0	0	No incidents

2.4. Tier 4: Control implementation

Table 2.9 Amendments and improvements to Formal Safety Assessments (FSA) or associated risk treatments

FSA Risk Item	Amendments / improvements
Nil	Nil

Table 2.10 Design, construction and commissioning

Performance Measure[a]	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comment
Designs for which Safety in Design (SiD) Reports have been completed	0	0	0	0	0	
Designs for which Safety in Design (SiD) Reports have been audited	0	0	0	0	0	
Contestable designs certified	N/A	N/A	N/A	N/A	N/A	
Contestable level 1 project safety reviews performed	N/A	N/A	N/A	N/A	N/A	
Contestable level 2 project safety reviews performed	N/A	N/A	N/A	N/A	N/A	
Non-contestable project safety reviews performed[c]	N/A	N/A	N/A	N/A	N/A	
Project closeout reports completed for contestable projects	N/A	N/A	N/A	N/A	N/A	
Project closeout reports completed for non-contestable projects	N/A	N/A	N/A	N/A	N/A	
Project closeout reports audited for contestable projects	N/A	N/A	N/A	N/A	N/A	

Project closeout reports audited for non-contestable projects	N/A	N/A	N/A	N/A	N/A

[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.

Table 2.11 Inspections (assets)

Performance Measures	Inspection tasks		Tasks identified (all categories)	Corrective action tasks				Comments
	Annual Planned	Achieved		Identified	Achieved	Open	Outstanding	
Transmission substations[a]	121	121	N/A	24	24	0	0	All preventive maintenance inspections were completed 2024-25
Zone substations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Distribution substations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Transmission OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Transmission UG	12	12	12	4	4	0	0	All preventive maintenance inspections were

							completed 2024-25
Distribution OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distribution UG	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Network SAPS[b]	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[a] Directlink has converter stations in Bungalora and Mullumbimby. This row includes inspection and corrective action tasks relating to the converter stations' electrical infrastructure.
[b] There are no stand-alone power systems on Directlink's network.

Table 2.12 Inspections (vegetation) Aerial / Ground based

Bushfire Risk Category	Population (spans/poles)	Target	Achieved	Outstanding	Comments
Aerial					
N/A	N/A	N/A	N/A	N/A	
Ground Based					
Cable route	63km	63 km	63 km	0	Vegetation along the cable route is inspected and maintained over the year and includes BLA to Terranora.

Table 2.13 Public electrical safety plans and activities

Network operator public safety programs / campaigns	Details
BYDA	The Before You Dig Australia (BYDA) service provides an external interface for the public to inform Directlink of threats or to seek information on the location of Directlink assets, allowing the effective management of third party works that have the potential to affect APA assets.
Signage	Directlink continues to undertake replacement and maintenance of warning and proximity signage along the transmission line route.
Vegetation	Directlink undertakes continual vegetation management along the route to mitigate any potential bushfire risks.
NSW Fire & Rescue engagement	Directlink liaises with NSW Fire & Rescue to ensure familiarisation with the Directlink assets.
Landholder engagement	Directlink engages with relevant landholders along the Directlink route to address any issues in relation to Directlink operations.

Table 2.14 Internal audits performed on any aspects of the ENSMS (per AS 5577 clause 4.5.4)

Audit Scope	Identified non-compliance	Actions
Nil	Nil	Nil

No ENSMS internal audits were completed during the 2024-25 period. The below audit actions from the May 2024 ENSMS internal audit were completed by the due dates:

1) Update organisation structure in section 3 of Directlink SMSP by 30 November 2024.

2) Implement formal process to review Directlink policies and procedures listed in appendix B of the SMSP by 31 December 2024.

3) Implement process to follow up on overdue training by 30 September 2024.

Table 2.15 External audits performed on any aspects of the ENSMS (per AS 5577 clause 4.5.4)

Audit Scope	Identified non-compliance	Actions
Nil	Nil	Nil