



## **Directlink Joint Venture**

Transmission Network Service Provider

### **2019/20 Annual Performance Report for:**

- **Safety Management System** (1 July 2019 to 30 June 2020); and
- **Bushfire preparedness** (1 October 2019 to 30 September 2020)

**October 2020**

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## ANNUAL PERFORMANCE REPORTING

### 1. OVERVIEW

#### 1.1 NETWORK SAFETY AND RELIABILITY

Directlink activities to comply with AS5577-2013 Electricity Network Safety Management System (ENSMS), and other relevant regulation is documented in the Directlink Safety Management System Plan (SMSP).

Directlink continues to implement and run programs designed to improve its safety and reliability. Directlink undertakes regular assurance activities and risk assessments to review the effectiveness of its activities and programs in relation to managing safety, performance and reliability of the interconnector. This provides a structured approach to identifying opportunities for improvement.

Directlink staff are encouraged to continually innovate the way they carry out their work and to strive for improved safety outcomes through the ongoing annual safety awards. Staff are nominated for their achievements and innovative methods for improving the overall safety of Directlink for staff, contractors, the environment, property and the public.

No non-compliances were identified during the period 1 July 2019 to 30 June 2020.

**Table 1: Non-compliances relating to the safety and reliability of the electricity network**

Identified non-compliances	Actions against non-compliances	Progress of actions
No identified non-compliances	N/A	N/A

#### 1.2 PUBLIC AWARENESS

Directlink maintains an ongoing involvement with the Dial Before You Dig (DBYD) service in NSW. This service provides an external interface for the public to access information about Directlink (in particular its route) and informs Directlink of any possible or actual threats. This facilitates the effective management of third party works that have the potential to impact Directlink.

Directlink has continued to undertake a number of activities throughout the year in relation to improving public awareness and safety, including an enhanced landowner communication process and more detailed vegetation management reporting. Signage along the cable route has also been maintained to ensure the safety of the public.

Directlink engages with the NSW Fire and Rescue to ensure familiarisation with the Directlink assets. The aim of this is for the local NSW Fire and Rescue to be aware of the risks at the Directlink converter stations and the Directlink cable route in advance of any emergency.

### 1.3 BUSHFIRE MANAGEMENT

Management of bushfire risk is supported by the long-term engagement of a vegetation management contractor. Engagement of the specialist vegetation contractor ensures continual maintenance of vegetation along the Directlink route, and escalation of any identified issues requiring rectification.

Additionally Directlink's operating and maintenance procedures include safety protocols relating to issues such as hot works, and any other activities that could cause ignition. All hot work is managed in accordance with APA's risk assessment and permit issuing processes, including consideration of any total fire bans in place.

APA is also in the process of rolling out an enhanced national bushfire prevention and management strategy designed to further mitigate the risk and impacts of bushfire. The strategy covers both the planning and actions required for bushfire prevention, response and recovery.

There have been no events or incidents associated with bushfire risk management at Directlink. In addition, Directlink has not identified any non-compliances with its ENSMS, the Directlink SMSP, in relation to the Bushfire Management process.

No complaints were received during the reporting period regarding Directlink's bushfire management activities.

**Table 2: Non-compliances relating to the management of bushfire risk**

Identified non-compliances	Actions against non-compliances	Progress of actions
No identified non-compliances	N/A	N/A

### 1.4 CONTEXTUAL INFORMATION

#### 1.4.1 DEVIATION FROM STANDARDS

Directlink is a single asset rather than a network that evolved over time (i.e. Directlink is not an expanding network), consequently Directlink does not deviate from the standards specified in the ENSMS for Directlink.

#### 1.4.2 SIGNIFICANT COMMUNITY INFRASTRUCTURE

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

### 1.5 FORMAL SAFETY ASSESSMENT

#### 1.5.1 CLASSIFICATION OF RISK LEVELS

Directlink endeavours to implement both direct and indirect controls to mitigate residual risk levels to intermediate or lower. Directlink also operates under a permit to

work system to ensure intermediate and / or high-risk work is only undertaken by appropriately trained and qualified personnel.

Directlink utilises the following classification levels:

- Negligible and low risks are those manageable by routine plans and procedures (Job Hazard Assessments and Safe Work Method Statements). Proper diligence and care must be exercised and reasonable steps / precautions taken to ensure the risk level is controlled and monitored for changes which could affect the risk classification.
- Intermediate (moderate) risks are those risks that require special controls to be identified and implemented. Work can proceed once a supervisor has confirmed the risk controls have been identified and implemented. Proper diligence and care shall be exercised and reasonable steps / precautions are taken to ensure the risk level is controlled to as low as reasonably practicable. Regular monitoring of the effectiveness of controls is required.
- High risks occur when effective controls are difficult to implement or not available.
  - Where a high risk is encountered work must not proceed and immediate action is required to eliminate or minimise health, safety &/or environmental risks so far as is reasonably practicable.
  - If not reasonably practicable to do so, all appropriate control measures must be applied and the risks escalated to the appropriate management level for approval before work can commence. The relevant business General Manager must approve high risk work. Monitoring of changes, which could affect the risk classification, must be carried out.
- Extreme risks will not be allowed to proceed and must have controls implemented to reduce the residual risk to High.

### **1.5.2 RISKS WITHIN THE SCOPE OF THE ENSMS**

The risks incorporated into the Directlink ENSMS include:

- Operational and maintenance non-conformance;
- Operational and maintenance staff and contractor safety;
- Substandard reliability;
- Public safety and asset awareness;
- Protection of property;
- Bushfire causation and impact;
- Emergency management and abnormal operating conditions;
- Technical change management;

Currently the risk of substandard reliability is not ALARP. A number of substandard reliability risks remain at an intermediate level and Directlink has a program of capital expenditure to implement systemic changes that will reduce these risks.

### 1.5.3 FORMAL SAFETY ASSESSMENT REVIEWS

Directlink reviews risks within its Formal Safety Assessments (FSA) Register on both a formal and informal basis. Specific risks are reviewed at the monthly management meetings to assess the effectiveness of controls and ensure no further actions are required to manage the risk. Additionally risk controls are reviewed as part of the day-to-day preparation of safe work method statements and job hazard assessments.

### 1.6 SAFETY RISK MANAGEMENT ACTIONS

Directlink utilises the APA safety management system for ENSMS safety risk management actions. The APA safety management system incorporates a work flow process for incident reporting, investigation, and corrective action. Each step of the work flow process is automatically monitored with alerts to trigger managerial action when a due date is approaching.

**Table 3: Risk Management Actions – Open, Completed and Raised**

Criteria	Number
Number of risk management actions within the ENSMS scope that were raised in the reporting period	9
Number of open safety risk management actions within the ENSMS scope from any reporting year	0
Percentage of safety risk management actions within the ENSMS scope completed by the due date within the reporting year	100%

### 1.7 COMPLIANCE WITH DIRECTIONS

Directlink has not received any directions from IPART during the current reporting year. Directlink currently has no outstanding compliance actions associated with directions from IPART.

**Table 4: Directions Issued By IPART**

Total number of directions issued by IPART	Total number of directions issued by IPART	Total number of directions issued by IPART
N/A	N/A	N/A



## 2. STATISTICAL REPORTING

### SECTION A: ANNUAL PERFORMANCE REPORTING FRAMEWORK

The annual performance and statistical reporting detailed in the following tables is based on a financial year calendar. All reporting relating to the current period is for 1 July 2019 to 30 June 2020.

#### A.1 TIER 1 – MAJOR INCIDENTS

There were no major incidents for Directlink during the period.

**Table A.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 network		Nil
Protection of property	Third party property	Nil
	Network property <sup>1</sup>	Nil
Safety risks arising from loss of electricity supply		Nil

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<sup>1</sup> Events where losses exceed \$500,000 in relation to damage caused to electricity works



## A.2 TIER 2 – INCIDENTS

There were no incidents for Directlink during the period.

**Table A.2: Incidents**

<b>ESSNM Objective</b>	<b>Description of each incident reported under the incident reporting requirements</b>
Safety of members of the public	Nil
Safety of persons working on network	Nil
Protection of third party property	Nil
Safety risks arising from loss of electricity supply	Nil





### A.3 TIER 3 – CONTROL FAILURE NEAR MISS

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

**Table A.3: Network assets failure**

Performance measure	Asset population or length	5 year average annual functional failures	Annual Functional failures (19/20)					
			Unassisted			Assisted		
			No fire	Fire		No fire	Fire	
				Contained	Escaped		Contained	Escape
Towers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Poles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pole top structures / components	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conductor – Transmission OH	0.2 km	0	0	0	0	0	0	0
Conductor – Transmission UG	366 KM	7	6	0	0	0	0	0
Conductor – High Voltage OH	< 1 km	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conductor – High Voltage UG	< 1 km	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conductor – Low voltage OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conductor – Low voltage 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	0
Distribution transformers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Reactive plant	642	1	0	1	0	0	0	0



Performance measure	Asset population or length	5 year average annual functional failures	Annual Functional failures (19/20)					
			Unassisted			Assisted		
			No fire	Fire		No fire	Fire	
				Contained	Escaped		Contained	Escape
Switchgear – zone / subtransmission / transmission substation	113	3	3	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	111	19	13	0	0	5	0	0
SCADA – zone / subtransmission / transmission substation	11	2	1	0	0	0	0	0
Batteries – zone / subtransmission / transmission substation	42	2	2	0	0	0	0	0



**Table A.4: Vegetation contact with conductors**

Performance measure	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comment
Fire starts - grow in	0	0	0	0	0	
Fire start - fall in and blow in	0	0	0	0	0	
Interruption - grow in	0	0	0	0	0	
Interruption - fall in and blow in	0	0	0	0	0	

**Table A.5: Unintended contact, unauthorised access and electric shocks**

Performance measure	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comment
<b>Electric shock and arc flash incidents originating from network assets including those received in customer premises</b>						
Public	0	0	0	0	0	
Public worker	0	0	0	0	0	
Network employee / contractor	0	0	0	0	0	
Accredited Service Provider	0	0	0	0	0	
Livestock or Domestic pet	0	0	0	0	0	
<b>Contact with energised overhead network asset (e.g. conductor strike)</b>						
Public road vehicle	0	0	0	0	0	



Performance measure	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comment
Plant and equipment	0	0	0	0	0	
Agriculture and other	0	0	0	0	0	
Network Vehicle	0	0	0	0	0	
<b>Contact with energised underground network asset (e.g. conductor strike)</b>						
Plant & equipment	0	0	0	0	0	
Person with hand held tool	0	1	0	0	0	
<b>Unauthorised network assets (intentional)</b>						
Zone / BSP / Transmission substation / switching station	0	0	0	0	0	
Distribution substation	0	0	0	0	0	
Tower / poles	0	0	0	0	0	
Other (e.g. communication sites)	0	0	0	0	0	
<b>Safe Approach Distances (SAD)</b>						
Network employee / contractor	0	0	0	0	0	
Accredited Service Provider	0	0	0	0	0	
Public	0	0	0	0	0	
Public Worker	0	0	0	0	0	



**Table A.6: Reliability and Quality of Supply**

Performance measure	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	
Sustained voltage excursions outside emergency range	0	0	0	0	0	
Reverse polarity	0	0	0	0	0	
Neutral integrity due to poor workmanship or incorrect procedure	0	0	0	0	0	
Neutral integrity due to asset defect or failure	0	0	0	0	0	

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

Directlink provides inter regional 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 (e.g. Hospital, tunnel)	Minutes of supply lost	Cause	Consequential safety impacts associated with supply issue)
N/A	N/A	N/A	N/A



**Table A.8: Network initiated Property damage events**

Performance measure	Event Count (Current period)	Event Count (Prior period)	Event Count (Two periods ago)	Event Count (Three periods ago)	Event Count (Four periods ago)	Comment
<b>Third Party property (assets including vehicles, buildings, crops, livestock)</b>						
Damage ((e.g. Fire, Physical impact or Electrical)	0	0	0	0	0	
<b>Network property (including non-electrical assets including vehicles, buildings)</b>						
Damage ((e.g. Fire, Physical impact or Electrical)	1	0	0	0	0	Reactor partial discharge damage



**A.4 TIER 4 – CONTROL IMPLEMENTATION**

**Table A.9: Amendments and improvements to Formal Safety Assessments (FSA) or associated risk treatments**

<b>FSA – Risk Item</b>	<b>Amendments / Improvements</b>
Multiple	General Review of risk assessment completeness
Insulation resistance meter measuring or Multimeter Capacitance testing	Risk added including risk consequence, likelihood, controls and residual risk rating
Bushfire Risk	Review and update of risk consequence, likelihood, controls and residual risk rating
Traffic Management on Site	Review and update of risk consequence, likelihood, controls and residual risk rating
Prevention of falls	Review and update of risk consequence, likelihood, controls and residual risk rating
Cable Strike	Review and update of risk consequence, likelihood, controls and residual risk rating
Confined Space	Review and update of risk consequence, likelihood, controls and residual risk rating
Mobile Plant	Review and update of risk consequence, likelihood, controls and residual risk rating
Dropped Objects	Review and update of risk consequence, likelihood, controls and residual risk rating
External Interference on cable route	Review and update of risk consequence, likelihood, controls and residual risk rating
Pandemic	Risk added including risk consequence, likelihood, controls and residual risk rating
Undertaking work near waterways	Risk added including risk consequence, likelihood, controls and residual risk rating



**Table A.10: Design, construction and commissioning**

<b>Performance measure</b>	<b>Event Count (Current period)</b>	<b>Event Count (Prior period)</b>	<b>Event Count (Two periods ago)</b>	<b>Event Count (Three periods ago)</b>	<b>Event Count (Four periods ago)</b>	<b>Comment</b>
Designs for which Safety in Design (SiD) Reports have been completed	0	2	0	0	0	
Designs for which Safety in Design (SiD) Reports have been audited	0	2	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	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	





**Table A.11: Inspections (assets)**

Performance measure	Inspection tasks		Tasks identified (all categories)	Corrective action tasks		Comment
	Annual Target	Achieved		Open	Outstanding	
Transmission substations	197	196	76	39	0	
Zone substations	N/A	N/A	N/A	N/A	N/A	
Distribution Substations	N/A	N/A	N/A	N/A	N/A	
Transmission OH	N/A	N/A	N/A	N/A	N/A	
Transmission UG	24	18	11	0	0	
Distribution OH	N/A	N/A	N/A	N/A	N/A	
Distribution UG	N/A	N/A	N/A	N/A	N/A	

**Table A.12: Inspections (vegetation) Aerial / Ground based**

Bushfire risk category	Population (spans / poles)	Target	Achieved	Outstanding	Comments
<b>Aerial</b>					
N/A	0	0	0	0	
<b>Ground based</b>					
Cable Route	60 km	60 km	60 km	0	Vegetation along the cable route is managed over the year and includes Terranora.



**Table A.13: Public electrical safety plans and activities**

<b>Network operator public safety programs / campaigns</b>	<b>Details</b>
DBYD	The Dial Before You Dig (DBYD) 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
Vegetation	Directlink undertakes continual vegetation management along the route to mitigate any potential bushfire risks
NSW Fire & Rescue Engagement	Directlink liaises with the 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 A.14: Internal audits performed on any aspects of the ENSMS (as per AS5577 clause 4.5.4)**

<b>Audit scope</b>	<b>Identified non-compliances</b>	<b>Actions</b>
Safety Management System Plan Assurance Audit	Nil	Nil
Environmental Management Plan	One	Education and improved safe work method statements for working near waterways
Quarterly Compliance Reviews	Nil	Nil



**Table A.15 External audits performed on any aspects of the ENSMS (as per AS5577 clause 4.5.4)**

<b>Audit scope</b>	<b>Identified non-compliances</b>	<b>Actions</b>
N/A	N/A	N/A