

## Network Safety Performance Objectives (2016)

## Context & Purpose

The Horizon Power Network Safety Objectives (2016) (Objective Statement) has been prepared for each of network safety performance incidents detailed in Regulation 30 and in accordance with the requirements set out in Regulation 31 of the Electricity (Network Safety) Regulations 2015. Regulation 31 requires Horizon Power to prepare a statement that sets out the objectives in relation to the maximum number of incidents that will occur for the current financial year and the next three financial years.

This Objective Statement covers 3 financial years from 2016/17 to 2018/2019.

## Objective Establishment

Horizon Power has applied a trend based methodology for this Objective Statement. The methodology relies on the historical performance of the network. In setting objectives, Horizon Power considers performance forecasts alongside a range of additional factors such as: external benchmarking, input from Regulators, market conditions and customer expectations.

## Objective Statement

This Objective Statement provides the objectives that Horizon Power will strive to achieve in the maintenance and operation of its network.

Network Objectives <sup>1</sup>	Historical Works	Planned Works	Incidents <sup>3</sup>		
			2016/17	2017/18	2018/19
30(1)(a) Total Electric Shock	<ul style="list-style-type: none"> <li>• Twisty Replacement</li> <li>• Streetlight Copper Wire Replacement</li> <li>• WireAlert (Esperance only)</li> <li>• Double Insulated Streetlight Earth</li> </ul>	<ul style="list-style-type: none"> <li>• Streetlight Program</li> <li>• System Hardening</li> <li>• Earthing Works</li> <li>• Copper Conductor Replacement</li> <li>• Circuit Breaker Replacement</li> </ul>	8	8	8
<i>Person – No Injury</i>			8	8	8
<i>Person – Injury</i>			0	0	0
<i>Person – Death</i>			0	0	0
<i>Livestock – Death</i>			0	0	0
30(1)(b) Total Property Damage (Not Fire) <sup>7</sup>			0	0	0
30(1)(c) Total Property Damage (Fire) <sup>7</sup>			0	0	0

Distribution Network Objectives <sup>1</sup>	Historical Works	Planned Works	Incidents <sup>3</sup>		
			2016/17	2017/18	2018/19
30(1)(d) Total Pole Fire	<ul style="list-style-type: none"> <li>• Insulator Washing &amp; Coating</li> <li>• Pole   Insulator Replacement</li> </ul>	<ul style="list-style-type: none"> <li>• Insulator Washing &amp; Coating</li> <li>• Pole   Insulator Replacement</li> </ul>	9	9	9
30(1)(e) Total Conductor Clashing <sup>5</sup>	<ul style="list-style-type: none"> <li>• Cross Arm Replacement</li> <li>• Esperance Network Rural Upgrade</li> </ul>	<ul style="list-style-type: none"> <li>• Cross Arm Replacement</li> <li>• Network Hardening (Kimberley)</li> </ul>	6	6	6
30(1)(f) Total Unassisted Pole Failure	<ul style="list-style-type: none"> <li>• Pole Replacement &amp; Reinforcement</li> <li>• Pole Inspection</li> </ul>	<ul style="list-style-type: none"> <li>• Pole Replacement &amp; Reinforcement</li> <li>• Enhanced Pole Inspection</li> </ul>	9	9	9
<i>Wood</i>			4	4	4
<i>Steel<sup>4</sup></i>			5	5	5
<i>Other</i>			0	0	0
30(1)(g) Total Unassisted Conductor Failure	<ul style="list-style-type: none"> <li>• Conductor Replacement</li> <li>• Conductor Sample Testing</li> </ul>	<ul style="list-style-type: none"> <li>• Conductor Replacement</li> <li>• Conductor Sample Testing</li> </ul>	7	7	7
30(1)(h) Total Unassisted Stay Failure <sup>6</sup>	<ul style="list-style-type: none"> <li>• Managed with Poles</li> </ul>	<ul style="list-style-type: none"> <li>• Pole Inspection</li> <li>• Stay Rod Replacement</li> </ul>	2	2	2
30(1)(i) Total Unassisted Cable Failure	<ul style="list-style-type: none"> <li>• Cable Replacement</li> </ul>	<ul style="list-style-type: none"> <li>• Cable Replacement</li> </ul>	4	4	4
31(3) Total Unassisted Pole Failure Rate	<ul style="list-style-type: none"> <li>• Pole Replacement &amp; Reinforcement</li> <li>• Pole Inspection</li> </ul>	<ul style="list-style-type: none"> <li>• Pole Replacement &amp; Reinforcement</li> <li>• Pole Inspection</li> </ul>	1.6	1.6	1.6
<i>Wood x 10,000 p.a.</i>			2.2	2.2	2.2
<i>Steel<sup>4</sup> x 10,000 p.a.</i>			1.3	1.3	1.3

Transmission Network Objectives <sup>2</sup>		Historical Works	Planned Works	Incidents <sup>3</sup>		
				2016/17	2017/18	2018/19
30(1)(d)	Total Pole Fire	• Pole Replacement	• Pole Replacement	0	0	0
30(1)(e)	Total Conductor Clashing <sup>5</sup>		• EPIL Reliability Study	0	0	0
30(1)(f)	Total Unassisted Pole Failure	• Pole Replacement & Reinforcement	• Pole Replacement & Reinforcement	0	0	0
	<i>Wood</i>			<i>0</i>	<i>0</i>	<i>0</i>
	<i>Steel</i>	• Pole Inspection	• Pole Inspection	<i>0</i>	<i>0</i>	<i>0</i>
	<i>Other</i>		• Tripod Review	<i>0</i>	<i>0</i>	<i>0</i>
30(1)(g)	Total Unassisted Conductor Failure	• EPIL Reliability Study	• EPIL Reliability Study	0	0	0
30(1)(h)	Total Unassisted Stay Failure <sup>6</sup>	• EPIL Reliability Study	• EPIL Reliability Study	0	0	0
30(1)(i)	Total Unassisted Cable Failure	• EPIL Reliability Study	• EPIL Reliability Study	0	0	0
31(3)	Total Unassisted Pole Failure Rate	• Pole Replacement & Reinforcement	• Pole Replacement & Reinforcement	0	0	0
	<i>Wood x 10,000 p.a.</i>			<i>0</i>	<i>0</i>	<i>0</i>
	<i>Steel x 10,000 p.a.</i>	• Pole Inspection	• Pole Inspection	<i>0</i>	<i>0</i>	<i>0</i>

**Notes**

1. The Underground Power Project is in progress – this will impact all Network and Distribution Network Objectives
2. The Transmission Unserviceable Asset Replacement program is in progress – this will impact all Transmission Objectives
3. A 3 year rolling average in conjunction with consideration of weather events, historical works and planned works has been used to determine the objective for each measure
4. Unassisted steel pole failures and failure rates include all steel poles
5. Unassisted conductor clashing objectives are based on reported incidents – this does not capture all clashing incidents occurring on the network
6. Unassisted stay failure objectives are based on reported incidents – this does not capture all stay failure incidents occurring on the network
7. Objectives for property damage due to fire, supply, impact and arcing are set at zero based on previous history of insurance claims above \$5,000

**Network Safety Performance Incident Definitions**

30(1)(a)	Electric Shock	A discharge of electricity from the network that causes the electric shock, injury or death of a person or the death of livestock. Includes pets within the definition of livestock.
30(1)(b)	Property Damage (Not Fire)	An incident caused by the network, other than a fire, that causes damage to property other than to the network. Includes supply, impact and arcing damage. Value of damage must exceed \$5,000.
30(1)(c)	Property Damage (Fire)	A fire caused by the network that causes damage to property other than to the network. Includes smoke and heat damage. Value of damage must exceed \$5,000.
30(1)(d)	Pole Fire	A fire, on a wood pole that is a part of the network, that originated on the pole. Includes burnt cross arms.
30(1)(e)	Conductor Clashing	The contacting of 2 or more conductors of the network, of different phases, caused by temperature variations or wind. Includes clashing due to pole lean and phase to earth clashing. Excludes assisted failures [see 28(c)].
30(1)(f)	Unassisted Pole Failure	An unassisted failure of a pole that is a part of the network. Includes suspended failures and foundation failure [i.e. excessive pole lean].
30(1)(g)	Unassisted Conductor Failure	An unassisted failure of an overhead conductor that is a part of the network. Includes service wires, joints and terminations and excludes taps and conductor accessory failures [e.g. ties, clamps].
30(1)(h)	Unassisted Stay Failure	An unassisted failure of a stay wire that is a part of the network. Includes slack stays and failure of anchors and attachment points that compromise line design integrity in a way that impacts public safety.
30(1)(i)	Unassisted Cable Failure	An unassisted failure of an underground cable that is a part of the network. Includes failure of joints, terminations and lugs in a way that impacts public safety.
31(3)	Unassisted Pole Failure Rate	The failure rate per 10,000 poles per annum based on the 30(1)(f) and pole volumes.
28(c)	Unassisted Failure	Unassisted failure, of a pole, overhead conductor, stay wire or underground cable, means the pole breaking or collapsing, the conductor or wire breaking or the cable failing, otherwise than because of — (a) a force exceeding the failure limit or design wind load specified in the applicable standard; or (b) a lightning strike, earthquake, fire or flood; or (c) malicious damage; or (d) excavation other than by a person for whom the network operator is responsible; or (e) any other similar occurrence beyond the control of the network operator. A failure is unassisted if it is due incorrect network design   construction or vegetation growth into the vegetation clearance zone.