

Statement of Network Safety Performance Objectives (2020)

Context & Purpose

The Horizon Power Network Safety Objectives (2020) (**Objective Statement**) has been prepared for each of the network safety performance incident types detailed in Regulation 30 and in accordance with the requirements set out in Regulation 31 of the Electricity (Network Safety) Regulations 2015.

This Objective Statement sets out the objectives in relation to the maximum number of incidents expected to occur, and covers financial years 2020/21 to 2023/2024.

Objective Establishment

Horizon Power has applied a causal forecasting – input-output methodology to the majority of the network safety performance incident types, with the exception of property damage (Regulations r. 30(1) (b) and r.30 (1) (c)). This method is well suited to Horizon Power as:

1. It can assess all historical Network Safety Performance Incidents
2. It allows the level of confidence in historical data quality to be factored into forecasts via a smoothing parameter which can assign greater weight to more recent network safety performance data
3. It is a best practice approach to forecasting, utilising an underlying mathematical model known as a “Multiplicative Damped Trend”

Where possible, Horizon Power incorporates industry statistics as a benchmark against which reasonable Objectives can be set. Network performance against these Objectives is then used in the Asset Management Planning process, which provides a risk-based framework for identifying and planning the capital and operational works.

Objective Statement

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

Network Safety Performance Incidents		Network Safety Performance Objectives			
		2020/21	2021/22	2022/23	2023/24
30(1)(a)	Total Electric Shock	0	0	0	0
	<i>Person – No Injury</i>	0	0	0	0
	<i>Person – Injury</i>	0	0	0	0
	<i>Person – Death</i>	0	0	0	0
	<i>Livestock – Death</i>	0	0	0	0
30(1)(b)	Total Property Damage (Not Fire)	0	0	0	0
30(1)(c)	Total Property Damage (Fire)	0	0	0	0
Distribution Network Safety Performance Incidents		Objectives			
30(1)(d)	Total Network Pole Fire	9	6	6	6
30(1)(e)	Total Conductor Clashing	4	4	4	4
30(1)(f)	Total Unassisted Pole Failure ¹	7	7	7	7
	<i>Wood (Population: 15,627)</i>	2	2	2	2
	<i>Steel (Population: 40,247)</i>	5	5	5	5
	<i>Concrete (Population: 338)</i>	0	0	0	0
	<i>Fibreglass (Population: 1)</i>	0	0	0	0
	<i>Other (Population: 133)</i>	0	0	0	0
30(1)(g)	Total Unassisted Conductor Failure	10	10	10	10
30(1)(h)	Total Unassisted Stay Wire Failure	8	8	8	8
30(1)(i)	Total Unassisted Cable Failure	20	20	20	20
31(3)	Total All Materials Unassisted Pole Failure Rate	1.25	1.25	1.25	1.25
	<i>Wood x 10,000 p.a.</i>	1.25	1.25	1.25	1.25
	<i>Steel x 10,000 p.a.</i>	1.3	1.3	1.3	1.3
Transmission Network Safety Performance Incidents		Objectives			
30(1)(d)	Total Pole Fire	0	0	0	0
30(1)(e)	Total Conductor Clashing ²	0	0	0	0
30(1)(f)	Total Unassisted Pole Failure	0	0	0	0
	<i>Wood</i>	0	0	0	0
	<i>Steel</i>	0	0	0	0
	<i>Other</i>	0	0	0	0
30(1)(g)	Total Unassisted Conductor Failure	0	0	0	0
30(1)(h)	Total Unassisted Stay Wire Failure ³	0	0	0	0
30(1)(i)	Total Unassisted Cable Failure	0	0	0	0
31(3)	Total Unassisted Pole Failure Rate	0	0	0	0
	<i>Wood x 10,000 p.a.</i>	0	0	0	0
	<i>Steel x 10,000 p.a.</i>	0	0	0	0

Notes

1. Unassisted steel pole failures and failure rates also include street light poles
2. Unassisted conductor clashing objectives are based on reported incidents – this may not capture all clashing incidents occurring on the network
3. Unassisted stay wire¹ failure objectives are based on reported incidents – this may not capture all stay wire failure incidents occurring on the network as these may not be identified until inspected.

¹ As opposed to the stay assembly which includes anchors and rods

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 (excluding pets).
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 or be likely to 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 or be likely to exceed \$5,000.
30(1)(d)	Pole Fire	A fire, on a 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. Excludes: terminations, taps, conductor accessory & line hardware failures [e.g. ties, clamps].
30(1)(h)	Unassisted Stay Wire Failure	An unassisted failure of a stay wire that is a part of the network. Excludes slack stays and failure of anchors and attachment points.
30(1)(i)	Unassisted Cable Failure	An unassisted failure of an underground cable that is a part of the network. Includes: joints. Excludes: terminations, lugs & cable accessories [e.g. clamps].
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.