

## **AUSGRID PAST OUTAGE DATA**

### **CLASSIFICATION OF UNPLANNED POWER OUTAGES**

**Ausgrid's Past Outage Data set reports interruptions affecting 50 or more customers which last for longer than five minutes. It includes the average duration of the outage and its potential cause and is segmented by Local Government Area.**

**Exclusions:** The data set does not include planned maintenance work; emergency work that may require power to be disconnected to allow crews to work safely; or outages on major event days when the network is affected by extreme weather events.

**Cause of outages :** Determining the cause of some outages can be a complex process and the causes provided here are general in nature, rather than technical. Over time, investigations may uncover a different cause to the one initially identified.

**Seasonal changes :** You may notice that the number or duration of outages tends to increase over certain quarters. This reflects the impact of seasonal events such as summer storms, known windy periods such as August or September or very cold or hot spells during winter and summer.

## OUTAGE CLASSIFICATIONS

Category	Trigger	Definition
<b>Cable dig</b>	<b>Excavation by Ausgrid</b>	Outage caused by cable excavation activities by Ausgrid.
	<b>Excavation Ausgrid Contractor</b>	Any damage caused to a part of the electrical network by an Ausgrid related contractor engaged in excavation or related activities e.g. Contract Cable Laying. Common example is damage to an underground cable by an excavator.
	<b>Excavation 3<sup>rd</sup> Party</b>	Any damage caused to a part of the electrical network by non person/s engaged in excavation or related activities excluding Ausgrid staff and/or contractors e.g. ASP 1 and 2, Telstra, Sydney Water. Common example is damage to an underground cable by an excavator.
<b>Customer installation</b>	<b>Customer Installation Fault</b>	Fault on the customers installation causing loss of supply to customer or other customers on the Ausgrid electricity network.
<b>Directed to interrupt</b>	<b>Load shed – Ausgrid or AEMO</b>	Interruption that is at the request directed by the Australian Energy Market Operator to rotate access to supply across the network due to a supply issue upstream of Ausgrid’s network. For an Ausgrid initiated load shedding event, this would come about as a result of a localised network issue that prevents supply to some downstream customers.
	<b>Load Shed – Other Auth. Request</b>	Interruption at the request of an Emergency Service Organisation such as Police, Fire Brigade, SES, and Ambulance as per Section 3 of the State Emergency and Rescue Management Act of 1989
<b>Environmental</b>	<b>Animal</b>	Any animal, (other than human), that has come into contact with a part of the electrical network resulting in a disruption to the electrical supply. Examples: Bird, Bat, Frog, Goanna Possum, Rat, Termites, Insect.
	<b>Adverse Weather</b>	Bushfire, fire (non-electrical), wind, clashing wires causing damage to Ausgrid equipment and resulted in a disruption to the electrical network.
	<b>Bushfire</b>	A bushfire which has caused damage to Ausgrid equipment and resulted in a disruption to the electrical network
	<b>Fire (Non-Electrical)</b>	A fire of non-electrical origin causing damage to Ausgrid equipment and resulted in a interruption to the electrical network such as a house fire

	<b>Self-Clearing Trigger</b>	Where the trigger is unable to be determined. This may be a trip and re-close event, where the network elements having successfully operated have restored supply. It may also be a sustained event supply and the device that operated is closed successfully restoring supply or a patrol finds no damaged equipment
	<b>Vegetation</b>	Vegetation causing loss of supply which includes trees, palms, vines, bark, shrubs and grasses, such as bamboo but excluding lawns.
	<b>Tree / tree branch on mains</b>	Any vegetation-initiated loss of supply event where a vegetation/tree branch has come into contact with the electrical conductors. This includes tree/tree branches resting, fallen and trees/branches that have blown onto network equipment during high winds and storms. This does not include trees deliberately cut down due to human activity refer <b>Tree-Cut down</b> .
	<b>Wires clashing</b>	A loss of supply triggered by overhead conductors coming into contact. Where the wires have come into contact because of another trigger listed here, that <b>Trigger</b> must be chosen.
<b>Equipment Fault</b>	<b>Arcing</b>	Electrical discharge or sparking of overhead conductors
	<b>Overload</b>	Where the equipment failed due to increased demand leading to loads above its normal design / operational limits. Sometimes related to extremes in weather (heat wave, cold), where the weather conditions will be a contributory factor.
	<b>Overload (Operational)</b>	Where the equipment failed due to changes in network configuration leading to loads above its normal design / operational limits. Commonly when a parallel supply has been lost (planned or unplanned outage) and the entire load is being supplied by the remaining assets, which then fail before the missing leg of the supply can be returned to service.
	<b>Equipment failed in service</b>	Failure of Ausgrid equipment for no apparent reason or Trigger.
<b>Lightning</b>	<b>Lightning strike</b>	Lighting strike to network infrastructure causing a loss of supply.
<b>Not determined</b>	<b>Unknown</b>	Cause unknown.
<b>Operating fault</b>	<b>Staff Operation</b>	A loss of supply triggered by an error by an Ausgrid network worker or contractor such as CCL during the process of operating the network e.g. switching error, load-shift miscalculation.
	<b>Staff other</b>	A loss of supply triggered by an Ausgrid technician or contractor working on the network but not while operating the network - e.g. vehicle incident, spanner in mains or cubicle.

<b>Planned</b>	<b>Planned outage</b>	Interruption for which advance notice has been provided or which has been requested by a customer.
<b>Third party</b>	<b>3<sup>rd</sup> Party Action</b>	An action not associated with Ausgrid staff, property, sub-contractors such as CCL or personnel authorised by Ausgrid to take action. An ASP is deemed as a 3 <sup>rd</sup> Party.  * <b>Note:</b> 3 <sup>rd</sup> Party Action is separate from Animal, Excavation, Vehicle, Tree and Vandalism (which is deemed as deliberate).
	<b>Tree cut down</b>	A loss of supply resulting from deliberate human activity to cut down vegetation growing in the vicinity of the electrical network that result in the falling vegetation impacting the electrical asset. On rare occasions, planned or deliberate interruptions occur because electricity generators or transmission and distribution networks cannot safely supply the demand for power.
	<b>Vehicle 3<sup>rd</sup> Party</b>	Any vehicle that is not owned by Ausgrid or an Ausgrid employed contractor which causes damage to the network and results in a loss of supply.
	<b>Other</b>	Other third party action resulting in a loss of supply.
<b>Third party upstream fault</b>	<b>Transmission or Bulk Supply fault</b>	Loss of supply to parts of the Ausgrid network due to failure of shared transmission lines or bulk supply points. These assets are not owned by Ausgrid
<b>Vandalism</b>	<b>Vandalism</b>	A deliberate act by an unknown third-party causing damage to the electrical network resulting in a loss of supply. This includes <b>Phantom Operator</b> , which, if known, should be recorded in the <b>Completion Comments</b>