



31 March 2014

Mr Chris Pattas  
General Manager Network Operations & Development  
Australian Energy Regulator  
GPO Box 520  
**MELBOURNE VIC 3001**

By email: [Chris.Pattas@aer.gov.au](mailto:Chris.Pattas@aer.gov.au)  
Cc: [David.Chan@aer.gov.au](mailto:David.Chan@aer.gov.au)

Dear Mr Pattas,

**Request for Fire start reports under clause 5 of the F-Factor Scheme Order 2011**

CitiPower Pty and Powercor Australia Ltd (**Businesses**) refer to the Australian Energy Regulators' (**AER**) letter dated 27 August 2012, requesting the Businesses to submit fire start reports to the AER by 31 March for each year relating to the outcomes of the previous regulatory year.

The fire start reports for CitiPower and Powercor Australia for 2013 are set out in Attachment 1 and Attachment 2 respectively.

It should be noted that the information contained in these reports is currently under external audit as per the Fire Factor Regulatory Notice (**RIN**), due to the AER on 30 April 2014.

Should you have any queries in relation to this matter, please do not hesitate to contact Wendy Cotton on 9683 4288, or by email to [wcotton@powercor.com.au](mailto:wcotton@powercor.com.au).

Yours sincerely

**Hannah Williams**  
**PROJECT DIRECTOR REGULATION & PRICING**

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## Attachment 1 – CitiPower 2013 Fire Start Report

### 1. An explanation of the definition of a fire start

The definition of a fire start used by CitiPower is in accordance with the ESV reporting guidelines. Please refer to the “ESV Distribution Electricity Safety Performance Guideline, April 2011”.

### 2. Summary (aggregate) tables showing the percentage and actual number of the fire starts in the following categories:

- a. Fire Hazard Rating assigned by the Country Fire Authority or Melbourne Fire Brigade under section 80 of the Electricity Safety Act 1998 (Vic);
- b. Element of the network that caused the fire, such as equipment type, feeder classification, voltage level

Note: A description/explanation of the equipment type, feeder classification etc should be also provided

CitiPower has summarised the data into tables showing the percentage and actual number of fire starts in the following categories:

- Table 1: CFA Fire Hazard Rating
- Table 2: Bushfire Risk Area<sup>1</sup>
- Table 3: Feeder Classification<sup>2</sup>
- Table 4: Fire Start by ESV Category
- Table 5: Fire Start by Asset
- Table 6: Kind of Fire Start

<b>Table 1: Number of fire starts by CFA Fire Hazard Rating (i.e. the weather condition on the day)</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Extreme	2	6.1
Severe	3	9.1
Very high	6	18.2
High	8	24.2
Low Moderate	4	12.1
Not available	10	30.3
<b>Total</b>	<b>33</b>	<b>100%</b>

<b>Table 2: Number of fire starts by Bushfire Risk Area</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Low Bushfire Risk Area (LBRA)	33	100
<b>Total</b>	<b>33</b>	<b>100%</b>

<sup>1</sup> CitiPower has defined this to be the “Hazardous Bushfire Risk Area” as per the definition in the Electricity Safety Act 1998

<sup>2</sup> Feeders classifications that were defined in the service target performance incentive scheme (STPIS) have been used by CitiPower and are as follows:

*CBD:* A feeder supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy when compared to urban areas

*Urban:* A feeder, which is not a CBD feeder, with actual maximum demand over the reporting period per total feeder route length greater than 0.3MVA/km

<b>Table 3: Number of fire starts by Feeder Classification</b>	<b>No. of Fires</b>	<b>% of Fires</b>
CBD	1	3
Urban	32	97
<b>Total</b>	<b>33</b>	<b>100%</b>

<b>Table 4: Number of fire starts by ESV Category</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Asset failures resulting in grass/vegetation fire	6	18.2
Grass/vegetation fires from assets (non-asset failures)	3	9.1
Asset failures resulting in asset fire (no grass/vegetation fire)	24	72.7
Any other Fire Start	0	0
<b>Total</b>	<b>33</b>	<b>100%</b>

<b>Table 5: Number of fire starts by Asset</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Pole and cross arm fire	5	15.2
Oil-filled plant	1	3
HV Fuse	1	3
Any fire triggered by any asset failure caused by lightning	1	3
Fire starts in grass/vegetation resulting from animal contact with network assets	0	0
Fire starts in grass/vegetation resulting from trees contacting network assets	3	9.1
Fire starts in grass/vegetation resulting from other causes (vehicle strikes, vandalism etc)	0	0
Other Assets	22	66.7
Any additional fires, caused by any asset failure, not reported to the ESV and required to be reported by the f-factor Order	0	0
<b>Total</b>	<b>33</b>	<b>100%</b>

<b>Table 6: Number of fire starts by Kind of Fire Start</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Started by any tree, or part of a tree, falling upon or coming into contact with a distribution system	3	9.1
Started by any person, bird, reptile or other animal coming into contact with a distribution system	0	0
Started by lightning striking a distribution system or a part of a distribution system	1	3
Started by any other thing forming part of or coming into contact with a distribution system	0	0
Otherwise started by a distribution system	29	87.9
<b>Total</b>	<b>33</b>	<b>100%</b>

3. *A table of all fire starts – showing, in each case, the kind of fire start (as per the AER’s f-factor scheme determination), date, time, geographic location of the fire, and whether the fire was reported to the relevant authority.*

Please find attached Appendix 1 showing all CitiPower fire starts in 2013. The table shows the kind of fire start (as per the AER’s f-factor scheme determination), date, time, geographic location of the fire, and whether the fire was reported to the relevant authority.

## Attachment 2 – Powercor Australia 2013 Fire Start Report

### 1. An explanation of the definition of a fire start

The definition of a fire start used by Powercor Australia is in accordance with the ESV reporting guidelines. Please refer to the “ESV Distribution Electricity Safety Performance Guideline, April 2011”.

### 2. Summary (aggregate) tables showing the percentage and actual number of the fire starts in the following categories:

- a. Fire Hazard Rating assigned by the Country Fire Authority or Melbourne Fire Brigade under section 80 of the Electricity Safety Act 1998 (Vic);
- b. Element of the network that caused the fire, such as equipment type, feeder classification, voltage level

Note: A description/explanation of the equipment type, feeder classification etc should be also provided

Powercor Australia has summarised the data into tables showing the percentage and actual number of fire starts in the following categories:

- Table 1: CFA Fire Hazard Rating
- Table 2: Bushfire Risk Area<sup>3</sup>
- Table 3: Feeder Classification<sup>4</sup>
- Table 4: Fire Start by ESV Category
- Table 5: Fire Start by Asset
- Table 6: Kind of Fire Start

<b>Table 1: Number of fire starts by CFA Fire Hazard Rating (i.e. the weather condition on the day)</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Extreme	5	1.0
Severe	28	5.6
Very high	68	13.7
High	186	37.3
Low Moderate	73	14.7
Not available	138	27.7
<b>Total</b>	<b>498</b>	<b>100%</b>

<sup>3</sup> Powercor Australia has defined this to be the “Hazardous Bushfire Risk Area” as per the definition in the Electricity Safety Act 1998

<sup>4</sup> Feeders classifications that were defined in the service target performance incentive scheme (STPIS) have been used by Powercor Australia and are as follows:

*Urban:* A feeder, which is not a CBD feeder, with actual maximum demand over the reporting period per total feeder route length greater than 0.3MVA/km

*Rural short:* A feeder which is not a CBD feeder or urban feeder with a total feeder route length less than 200km

*Rural long:* a feeder which is not a CBD or urban feeder with a total feeder route length greater than 200km

<b>Table 2: Number of fire starts by Bushfire Risk Area</b>	<b>No. of Fires</b>	<b>% of Fires</b>
High Bushfire Risk Area (HBRA)	269	54
Low Bushfire Risk Area (LBRA)	229	46
<b>Total</b>	<b>498</b>	<b>100%</b>

<b>Table 3: Number of fire starts by Feeder Classification</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Urban	79	15.9
Rural short	127	25.5
Rural long	283	56.8
Sub transmission	9	1.8
<b>Total</b>	<b>498</b>	<b>100%</b>

<b>Table 4: Number of fire starts by ESV Category</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Asset failures resulting in grass/vegetation fire	96	19.3
Grass/vegetation fires from assets (non-asset failures)	69	13.8
Asset failures resulting in asset fire (no grass/vegetation fire)	333	66.9
Any other Fire Start	0	0
<b>Total</b>	<b>498</b>	<b>100%</b>

<b>Table 5: Number of fire starts by Asset</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Pole and cross arm fire	303	60.9
Oil-filled plant	1	0.2
HV Fuse	43	8.6
Any fire triggered by any asset failure caused by lightning	7	1.4
Fire starts in grass/vegetation resulting from animal contact with network assets	23	4.6
Fire starts in grass/vegetation resulting from trees contacting network assets	27	5.4
Fire starts in grass/vegetation resulting from other causes (vehicle strikes, vandalism etc)	19	3.8
Other Assets	75	15.1
<b>Total</b>	<b>498</b>	<b>100%</b>

<b>Table 6: Number of fire starts by Kind of Fire Start</b>	<b>No. of Fires</b>	<b>% of Fires</b>
Started by any tree, or part of a tree, falling upon or coming into contact with a distribution system	28	5.6
Started by any person, bird, reptile or other animal coming into contact with a distribution system	24	4.8
Started by lightning striking a distribution system or a part of a distribution system	7	1.4
Started by any other thing forming part of or coming into contact with a distribution system	17	3.4
Otherwise started by a distribution system	422	84.8
<b>Total</b>	<b>498</b>	<b>100%</b>

3. *A table of all fire starts – showing, in each case, the kind of fire start (as per the AER’s f-factor scheme determination), date, time, geographic location of the fire, and whether the fire was reported to the relevant authority.*

Please find attached Appendix 2 showing all Powercor Australia fire starts in 2013. The table shows the kind of fire start (as per the AER’s f-factor scheme determination), date, time, geographic location of the fire, and whether the fire was reported to the relevant authority.

The total number of fire starts being reported by Powercor Australia under the f-factor scheme for 2013 is significantly above the benchmark or average number of fire starts identified during the formulation of the scheme. The major contributor to the increase for this particular year was pole/cross arm fires which occurred during January and February 2013. In those months, the environmental conditions provided ideal conditions for the ignition of pole/cross arm fires, with temperatures well above the long term average coupled with well below average rainfall creating considerable accumulation of dust and other pollutants. Light rain and mist interspersed through this period without any steady rain events to wash the dust and pollutants away, caused electrical leakage as a result of the addition of moisture to the contaminants on a small number of days resulting in the ignition of pole/cross arm fires.

Of the 498 fire starts reported for the year, 303 were categorised as pole/cross arm fires with 161 of these occurring during specific weather conditions experienced over a small number of days during January and February 2013.

The Business has conducted significant analysis into pole/cross arm fires over a number of years and has, in place, a number of mitigation strategies. In general, assets are susceptible to pole/cross arm fires under specific environmental conditions which occur from time to time. These conditions include the presence of moisture which reduces the direct consequences of a fire started in this way. Pole/cross arm fires are not usually associated with extreme fire danger days and in fact most do not burn material on the ground. Irrespective of the reduced consequences, the Business takes the ongoing reduction of these events very seriously.

The replacement of high voltage (**HV**) wooden cross arms with steel equivalents has proven to be the most effective long term strategy for the Business to mitigate pole/cross arm fires. Steel cross arms are used to replace HV wooden cross arms when the asset requires replacement as a result of a condition assessment undertaken during the cyclic inspection program. Steel HV cross arms currently make up approximately 77% of the total population of HV cross arms on the Powercor Australia network.

Given the safety and ground fire issues associated with pole/cross arm fires, an accelerated program to replace all remaining HV wooden cross arms with steel equivalents is being discussed with Energy Safe Victoria (**ESV**). This may result in a significant program of work to be undertaken during the 2016 to 2020 regulatory period.