Jemena Electricity Networks (Vic) Ltd

Fire start report under F-factor Scheme Order 2016 for the 2018-19 reporting period

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bringing energy to life

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Glossary

AB	Asset Burnt
AC	Asset Charred
AER	Australian Energy Regulator
BOM	Bureau of Meteorology
CFA	Country Fire Authority
CMOS	Customer Minutes Off Supply
DNSP	Distribution Network Service Providers
EM-COP	Emergency Management Common Operating Picture
ESV	Energy Safe Victoria
GIS	Geospatial Information System
HBRA	Hazardous Bushfire Risk Areas
JEN	Jemena Electricity Networks (Vic) Ltd
LBRA	Low Bushfire Risk Areas
MFB	Metropolitan Fire Brigade
OMS	Outage Management System
Order	F-factor Scheme Order 2016, gazetted 22 December 2016
Reporting period	1 July 2018 to 30 June 2019
SCADA	Supervisory Control and Data Acquisition

Introduction

On 23 June 2017, the Australian Energy Regulator (**AER**) issued a notice (**notice**) to Jemena Electricity Networks (Vic) Ltd (**JEN**) requiring the provision of information under the F-factor Scheme Order 2016 (**the Order**)[1]. This information is to be used by the AER to determine a revenue adjustment amount for JEN in accordance with the Order.

JEN must provide the information for the 2018/19 financial year (**reporting period**) requested by the AER by 30 September 2019. This submission provides JEN's response.

JEN has structured this submission as follows:

- Section 1 – Information provided in response to section 3 of the AER's notice
- Section 2 – Audit report
- Section 3 – Statutory declaration
- Section 4 – Attachments.

[1] Email from AER Director David Chan on 23 June 2017, and on 28 August 2018 (providing updated reporting template).

1. Information provided

1.1 Regulatory templates

Section 3.1 of the notice requires JEN to provide all information required in all regulatory templates, being the worksheets in the Microsoft Excel workbook attached at Appendix A of the notice, in accordance with the instructions provided in the templates.

JEN provides completed regulatory templates as **Attachment 1** to this submission.

1.2 Explanation of assumptions and methodologies

Section 3.2 of the notice requires JEN to provide an explanation of any assumptions and methodologies used to generate the information provided in the regulatory templates, including any assumptions and methodologies used to determine that the information provided is complete and accurate.

No assumptions were made in the preparation of this fire start report. Below, JEN explains the methodology it employed to gather information from all sources available (network outage and asset databases) for inclusion in the fire start report, and to ensure this information is complete and accurate.

The process includes monthly reporting with an annual verification process. The annual verification process relies on an independent interrogation of the three key network outage and asset databases—OSIRIS, Customer Minutes Off Supply (**CMOS**) and SAP—which contain the base data for all network outages and asset fault notifications.

The processes, procedures and systems applied by JEN in producing the required information are described in section 1.4.

1.3 Reasons for information not provided

Section 3.3 of the notice requires JEN, for each instance where the information required in the regulatory templates cannot be provided or is incomplete, to provide reasons explaining why the information cannot be provided or provided in full.

JEN advises that it has provided in full all information required in the regulatory templates. JEN therefore has nothing to report in response to this section.

1.4 Description of the processes, procedures and systems applied in providing the required information

Section 3.4 of the notice requires JEN to identify and provide a description of the processes, procedures, measurement systems, information systems and quality control systems applied in providing the information required in the regulatory templates.

JEN identifies the fires related to its network in one of three ways:

1. The call centre receives a call (from the public and/or a JEN employee) identifying that there is a fire related to JEN's distribution network. The call centre operator will use the Geospatial Information System (**GIS**) interface to locate the network asset associated with the fire, and raise a trouble order in the Outage Management System (**OMS**) with basic details. This is sent to the network coordinator in the network operations team.
2. The Country Fire Authority (**CFA**) or the Metropolitan Fire Brigade (**MFB**) receives a call regarding a fire in JEN's distribution area. They will respond to the fire and also notify JEN by calling the JEN network operations team. The network coordinator will then raise a trouble order in OMS.

3. If a fault is detected by the Supervisory Control and Data Acquisition (**SCADA**) system, it is automatically entered into OMS and the JEN network operations team raises a trouble order. Once the trouble order has been raised, the network coordinator will send a field crew out to the location of the network fault or fire to inspect any damage, determine the reason for the fault and complete repairs, if needed.

As part of the fault rectification, JEN has implemented a standard practice whereby field crews patrol the affected line. During the patrol, field crews are required to identify and report any fire starts.

If a fire is identified, the following reporting process is carried out:

a) The field crew will notify the network coordinator that a fire has started;

b) The network coordinator will update the trouble order with the details of the fire start;

c) The network coordinator will raise a SAP notification for the affected asset with the cause codes Asset Burnt (**AB**) or Asset Charred (**AC**);

d) Once a significant incident has been logged in OMS, an automated text message is sent to relevant staff to notify them of the incident;

e) A Fire Ignition Report may be completed for each fire start and sent to the Network Integrity and Performance team (via internal mail or emailed to the JEN asset performance email address);

f) If an outage event also caused a fire, the outage event including the fire start will be captured in the Daily Situation Report and HV Incident Summary Report;

g) Upon confirmation of a fire start, a new incident report must be created in OSIRIS and submitted to Energy Safe Victoria (**ESV**). OSIRIS is an electronic fault reporting platform administered by ESV for all Victorian Distribution Network Service Providers (**DNSP**). OSIRIS is an online application which includes a reporting function useful for validation of fire start records at the conclusion of each reporting period.

h) An Asset Performance Engineer assesses all fire starts, excluding fires with known causes e.g. Pole top fires. The asset incident investigation report is completed as and when required then distributed internally.

Most of the data fields required by the RIN template are extracted from JEN's information systems. To capture all data required by the regulatory template, additional data sources used include:

- The classification of the bushfire risk area is mapped into GIS, based on data obtained from the CFA. These areas are designated by CFA (in consultation with local councils and Jemena) as Hazardous Bushfire Risk Areas (**HBRA**) and Low Bushfire Risk Areas (**LBRA**). The HBRA is predominantly rural and LBRA is predominantly urban, as a function of the amount of open space or infrastructure/buildings respectively; *and*
- The Bureau of Meteorology (**BOM**) fire danger rating is obtained from the Emergency Management Common Operating Picture (**EM-COP**) website for the day of the fire and recorded by CFA region. The CFA and BOM work together in calculating the daily fire danger rating which is then recorded in the EM-COP website. The ratings referred to here are these: Low-moderate, High, Very high, Severe, Extreme and Code red.

For the classification of fire starts into the categories specified under clause 5 of the Order (refer to the extract in italics below), JEN notes ESV's comments in its validation report for JEN's 2017-18 fire start report,[2] stating that it considered pole top structures igniting in conducive environmental conditions due to the accumulation of pollutants and dust to fall under category (a). JEN has adopted ESV's interpretation in populating its 2018-19 fire start report.

[2] Energy Safe Victoria, Validation Report – Jemena 2017-2018 Fire Start Report, p. 11.

5. What is a fire start?

(1) A fire start is any fire –

(a) that starts in or originates from a distribution system;

(b) started by any tree, or part of a tree, falling upon or coming into contact with a distribution system;

(c) started by any person, bird, reptile or other animal coming into contact with a distribution system;

(d) started by lightning striking a distribution system or a part of a distribution system;

(e) started by any other thing forming part of or coming into contact with a distribution system; or

(f) otherwise started by a distribution system.

(2) For the purposes of clause 5(1)(b), it is irrelevant whether the tree or part of the tree that fell upon or came into contact with the distribution system is or was, before the fire start, inside or outside a required clearance space.

JEN's quality control system includes a monthly process to review all information recorded for each fire start. Event information is collated by Jemena's control room and email notifications distributed for noteworthy events such as fires and fault related supply interruptions. These notifications are monitored daily and confirmed at the end of each month to ensure all "fire" events have been considered in preparing JEN's fire start report. This information is used to populate the Fire Start Register.

Additionally, JEN undertakes a process at the end of each year where all the data in the OSIRIS, CMOS and SAP databases is analysed for fire starts. CMOS is filtered to find any outage that resulted in a fire. A query is run on all SAP notifications to interrogate for any instances of key words including burn, fire, smoke and char; the checks are performed on the OSIRIS dataset. During the annual process, all results are compared to the monthly registers to ensure all fire starts have been correctly identified and recorded.

2. Audit report

Section 4 of the notice requires JEN to provide a Regulatory Audit Report in accordance with the requirements set out at Appendix C of the notice, and that JEN provides all reports from the Auditor to JEN's management regarding the audit review and/or auditors' opinions or assessment.

JEN provides an audit report as **Attachment 2**.

3. Statutory declaration

Clause 6(3)(c) of the Order requires that a fire start report must be signed by a director of the DNSP, or other officer of the DNSP as approved by the AER.

JEN provides a statutory declaration by JEN's Executive General Manager, Electricity Distribution as **Attachment 3**.

4. Attachments

No.	Title
1	Regulatory templates
2	Audit Report (confidential)
3	Statutory declaration (confidential)