

JEMENA ELECTRICITY NETWORKS

# REVIEW OF JEMENA'S OPERATING ENVIRONMENT FACTORS

FEBRUARY 2018



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## Review of Jemena's Operating Environment Factors


### Jemena Electricity Networks

#### WSP

Level 15, 28 Freshwater Place  
Southbank VIC 3006

Tel: +61 3 9861 1111  
Fax: +61 3 9861 1144  
wsp.com

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	NAME	DATE	SIGNATURE
Prepared by:	S. Feaver, M. van Doornik		
Reviewed by:	P. Walshe		
Approved by:	Michael van Doornik	8/2/2018	

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# ABBREVIATIONS

AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure
DNSP	Distribution Network Service Provider
ESV	Energy Safe Victoria
JEN	Jemena Electricity Networks
NEM	National Electricity Market
OEF	Operating Environment Factor
Opex	Operating and Maintenance Expenditure
NST	Neutral Supply Testing
RIN	Regulatory Information Notice
Sapere Merz	Sapere Research Group and Merz Consulting Engineers

# EXECUTIVE SUMMARY

The Australian Energy Regulator (AER) is consulting Jemena Electricity Networks (JEN) about the range of operating environment factors (OEFs) that should be considered in undertaking economic benchmarking of base operating expenditure (opex).

The AER engaged Sapere Research Group and Merz Consulting (henceforth “Sapere Merz”) to provide independent technical advice about OEFs driving material differences in estimated productivity and efficiency between distribution network service providers (DNSPs) in the National Electricity Market (NEM). To assist it in its response to the Sapere Merz draft report, JEN engaged WSP to provide advice on the report and to determine additional OEFs to propose to the AER.

The objectives of this report are to:

- describe the extent to which JEN’s preliminary OEFs have been incorporated in the Sapere Merz Report
- identify where OEFs proposed in the Sapere Merz Report have not been incorporated correctly, provide recommendations for correction and calculate the OEF adjustment for JEN where possible
- describe additional OEFs proposed by JEN that meet the OEF criteria and calculate the OEF adjustment for JEN where possible
- assist JEN’s customers to understand and engage on the matter.

The OEF criteria established by AER relate to exogeneity, materiality and duplication. A range of potential OEFs were examined against these criteria and the OEF adjustment was calculated where sufficient information was available for the reference group of DNSPs (United Energy Distribution, CitiPower, Powercor, AusNet Distribution and South Australia Power Networks).

We found that the additional opex incurred by JEN for the following OEF candidates meets the OEF criteria for exogeneity and duplication:

- Transmission Connection Point Planning – proposed to be included as an additional factor in the OEF for Sub-transmission and licence conditions. This is a licence obligation imposed on Victorian DNSPs.
- Imposed Inspection and Testing Obligations – proposed to be included as a new OEF. This relate to auditing requirements imposed on Victorian DNSPs through regulations made under the Electricity Safety Act.

With respect to materiality, we determined that the impact on JEN’s opex can be quantified and that the accumulative impact represents a material difference between JEN’s opex compared to other DNSPs. The estimated percentage impact on JEN’s opex is summarised in the following table.

Summary of the impact on JEN’s opex and the OEF adjustment calculated in this report

OEF CANDIDATE	% IMPACT ON JEN’S OPEX	% OEF ADJUSTMENT
Transmission Connection Point Planning	0.21%	0.05%
Imposed Inspection and Testing Obligations (Collective impact on opex)	0.81%	Not Available

For the Transmission Connection Point Planning OEF, there was sufficient information for the reference group DNSPs in the Economic Benchmarking RINs to calculate the OEF adjustment for JEN relative to the reference group. While the adjustment is small at 0.05%, its inclusion as an additional factor in the OEF for Sub-transmission and licence conditions is appropriate.

Based on our analysis, WSP recommends that:

- An adjustment for Transmission Connection Point Planning be added to the Sapere Merz proposed OEF for Sub-Transmission and Licence Conditions.
- A new OEF be included for Imposed Inspection and Testing Obligations.

# 1 INTRODUCTION

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## 1.1 PURPOSE

The Australian Energy Regulator (AER) engaged Sapere Research Group and Merz Consulting (henceforth “Sapere Merz”) to provide independent technical advice about material operating environment factors (OEFs) driving material differences in estimated productivity and efficiency between distribution network service providers (DNSPs) in the National Electricity Market (NEM). Sapere Merz prepared a draft report<sup>1</sup> explaining its preliminary OEF findings, with the purpose being to test these findings with stakeholders, and to seek input and further information from stakeholders. The AER published this report on 11th December 2017 and invited written submissions by 9th February 2018.

Jemena Electricity Networks (JEN) engaged WSP to provide advice to assist JEN in its response to the Sapere Merz draft report, and to determine additional OEFs applicable to JEN to propose to the AER.

The objectives of WSP’s report are to:

- describe the extent to which JEN’s preliminary OEFs have been incorporated in the Sapere Merz Report
- identify where OEFs proposed in the Sapere Merz Report have not been incorporated correctly, provide recommendations for correction and calculate the OEF adjustment for JEN where possible
- describe additional OEFs proposed by JEN that meet the OEF criteria and calculate the OEF adjustment for JEN where possible
- assist JEN’s customers to understand and engage on the matter.

This report is intended to form an input into JEN’s response to the Sapere Merz Report, by 9<sup>th</sup> February 2018.

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## 1.2 BACKGROUND

The AER uses econometric benchmarking, Economic Insights’ Cobb Douglas Stochastic Frontier Analysis benchmarking model<sup>2</sup>, to examine the relative efficiency of the DNSPs in the NEM to determine a target efficient level of opex (base opex). The results of the analysis are used to determine whether the base year opex for DNSPs is efficient or not and the adjustment required to get the DNSP to an efficient level. To ensure it is comparing ‘like-with-like’ to the greatest extent possible, the AER’s benchmarking modelling considers the differences in the characteristics of each network business, how their productivity compares at the aggregate level given the outputs they deliver to consumers, and excludes costs related to activities that differ across jurisdictions.

As a second step, the AER adjusts the target efficiency level for DNSPs determined through the econometric benchmarking for differences in exogenous operating conditions such as geography, climate, and jurisdictional obligations. The AER refers to these factors as operating environment factors, “OEFs”, and the adjustment to the base opex for each OEF, as the “OEF adjustment”.

The AER has previously consulted DNSPs in Queensland, NSW and the ACT on OEFs, during the DNSPs’ pricing reviews. The AER adopted 12 OEFs and these are listed in Table 1.1. It established a reference group of the five most efficient DNSPs (United Energy Distribution, CitiPower, Powercor, AusNet Distribution and South Australia Power Networks) and used this to calculate a reference base opex for each OEF. The OEF adjustments for each DNSP were then calculated relative to the reference group.

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<sup>1</sup> AER (prepared by Sapere Research Group and Merz Consulting), *Independent review of Operating Environment Factors used to adjust efficient operating expenditure for economic benchmarking* (Draft), December 2017.

<sup>2</sup> AER, *Annual Benchmarking Report, Electricity distribution network service providers*

Table 1.1 OEFs previously adopted by the AER

Sub-transmission assets	Bushfires	Taxes and levies
Licence conditions	Extreme weather	Capitalisation practices
OH&S regulations	Cyclones	Backyard reticulation
Termite exposure	Vegetation management	Standard control services connections

The AER is now consulting other DNSPs on the OEFs, including JEN.

The AER engaged Sapere Merz to:

- identify the most material operating environment factors driving apparent differences in estimated productivity and operating efficiency between the distribution networks in the NEM, and
- quantify the likely effect of each factor on operating costs in the prevailing conditions.

As part of this process Sapere Merz sent out a questionnaire to the Victorian, South Australian and Tasmanian DNSPs, seeking their views about the candidate OEFs that may be material to their networks. This was in recognition that these DNSPs had not previously provided material to the AER or had an opportunity to input into the AER’s previous regulatory assessments regarding OEFs. JEN responded to this request by providing a preliminary list of its OEFs, which can be found in Table 3.1.

## 1.3 STRUCTURE OF THIS REPORT

The remainder of this report is structured as follows:

Section 2 Approach - describes the approach adopted in this report for the assessment of an OEF candidate against the OEF criteria and the calculation of the OEF adjustment. In this section, we also discuss any critical assumptions that this report is based on.

Section 3 JEN’s Initially Proposed OEFs - describes the extent to which JEN’s preliminary proposed OEFs, provided to Sapere Merz in response to its consultation with DNSPs, have been incorporated in the Sapere Merz Report.

Sections 4 and 5 Describe JEN’s proposed changes to the Sapere Merz OEFs and JEN’s proposals for additional OEF’s – Each OEF candidate is assessed against the AER’s OEF criteria. Once it is established that it meets the OEF criteria, the impact on JEN’s opex is quantified and where possible the OEF adjustment is estimated.



## 2 REVIEW METHODOLOGY

This section describes the approach adopted in this report for the assessment of an OEF candidate and the calculation of the OEF adjustment.

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### 2.1 APPROACH

In its previous decisions, the AER has required that an OEF candidate must meet three criteria<sup>3</sup>:

- 1 **Exogeneity:** The first criterion is that an OEF should be outside the control of service providers' management. Where the effect of an OEF is within the control of a service provider's management providing an adjustment may mask inefficient investment or expenditure.
- 2 **Materiality:** The second criterion is that an OEF should create material differences in service providers' opex. Where the effect of an OEF is not material, the AER would generally not provide an adjustment for the factor. It is noted, however, that the AER has previously provided a collective adjustment for individually immaterial factors that meet the criteria for exogeneity and duplication.
- 3 **Duplication:** The third criterion is that the OEF should not have been accounted for elsewhere. Where the effect of an OEF is accounted for elsewhere, to provide an adjustment would be to double counting the effect of the OEF. This includes overlap with econometric benchmarking.

In each of the following OEF sections, we examine each OEF candidate using the following approach:

- It must meet the AER's OEF criteria for exogeneity and duplication
- It must meet the AER's OEF criteria for materiality, and to do so, it must:
  - be quantifiable
  - meet the materiality threshold.

Once it is established that the OEF candidate meets the OEF criteria, the OEF adjustment is calculated for JEN where the data is available for the reference group DNSPs.

#### 2.1.1 EXOGENEITY AND DUPLICATION

In assessing whether an OEF candidate meets the AER's OEF exogeneity criteria, we consider why it should be considered outside the control of the service providers' management. Where it arises from an imposed obligation on a DNSP, other DNSPs may undertake the same or similar activities as good asset management. This is considered under the duplication criteria.

In assessing whether an OEF candidate meets the AER's OEF duplication criteria, we examine whether the activity:

- is already adjusted for in the econometric modelling
- overlaps with another OEF
- is wholly or partly undertaken by all DNSPs and whether the additional requirements can be separated, identified and assigned a value.

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<sup>3</sup> AER, *Attachment 7 – Operating expenditure, Ergon Energy preliminary determination 2015-20*, April 2017, pp. 7-169, 7-170

## 2.1.2 QUANTIFICATION AND MATERIALITY

In assessing whether an OEF candidate meets the AER's OEF materiality criterion, we have firstly assessed whether the impact of the OEF on JEN's opex can be quantified to an appropriate level of accuracy. This is dependent on the availability of data about how the OEF candidate impacts opex.

Secondly, the impact on JEN's opex has been estimated and assessed against the materiality threshold for an OEF. This means that the impact must be equal or greater to the materiality threshold for JEN. In its previous decisions, the AER has treated any OEF that will increase a service provider's opex by 0.5 per cent or more, relative to the reference group, as material<sup>4</sup>. This approach has been adopted here.

### INDIVIDUALLY IMMATERIAL OEF CANDIDATES

It should be noted, that in its previous assessment of OEF candidates the AER made a collective adjustment for immaterial factors<sup>5</sup>. Where an individually immaterial OEF candidate met the duplication and exogeneity criteria, and the AER was able to quantify the effect of the factor that is individually immaterial it provided an OEF adjustment for the amount quantified.

In most cases, the AER was unable to quantify the effect of the individually immaterial factor, and in these cases it provided an adjustment for the individually immaterial factor equal to the materiality threshold, building up a collective adjustment for immaterial factors. The AER did this where there was a known cost advantage or disadvantage, and also where there was some doubt about if an individually immaterial OEF would provide a cost advantage or disadvantage.

In this report, we have also adopted the AER's approach by considering individually immaterial OEF factors that meet the OEF criteria for exogeneity and duplication, by proposing a collective adjustment.

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## 2.2 CALCULATION OF OEF ADJUSTMENT

Once it is established that the OEF candidate meets the OEF criteria, if RIN data is available for the reference group DNSPs, the OEF adjustment has been calculated for JEN relative to the reference group for the OEF candidate.

It was not possible to calculate the OEF adjustment where there is currently insufficient information available in the RINs to calculate the impact on opex for the other DNSPs. JEN would welcome the opportunity to revisit this once additional information has been made available for the other DNSPs.

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## 2.3 ASSUMPTIONS

In this report, we have assumed that the composition of the benchmarking reference group will not change. If the composition of the reference group was to change, this may impact the relative OEF adjustment for JEN and other non-reference group DNSPs. For example, the inclusion of TasNetworks, which is progressing towards the fifth most efficient DNSP as determined by the SFA model, in place of AusNet Distribution, would potentially alter the range of OEFs that JEN would propose in relation to differences between JEN and the reference group.

Assumptions specific to each proposed OEF are discussed in the relevant section.

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<sup>4</sup> AER, *Attachment 7 – Operating expenditure, Ergon Energy preliminary determination 2015-20*, April 2017, pp. 7-169, footnote 471

<sup>5</sup> AER, *Attachment 7 – Operating expenditure, Ergon Energy preliminary determination 2015-20*, April 2017, pp. 7-170

### 3 JEN'S INITIALLY PROPOSED OEFs

As part of the AER's current review of OEFs, Sapere Merz sent out a questionnaire to the Victorian, South Australian and Tasmanian DNSPs, seeking their views about the candidate OEFs that may be material to their networks. JEN responded<sup>6</sup> to this request by providing a preliminary list of its OEFs and an explanation of how these OEFs impact JEN's efficiency and costs of operating and maintaining its network.

This section describes the extent to which JEN's preliminary proposed OEFs have been incorporated into Sapere Merz's OEF proposal. This is summarised in Table 3.1.

Table 3.1 JEN's preliminary list of OEFs and extent to which included by Sapere Merz

JEN'S PRELIMINARY LIST OF OEFs	INCLUDED IN THE SAPERE MERZ REPORT
Bushfires and regulations	Partial inclusion. Vegetation management aspects only, not asset inspection, testing and auditing obligations. OEF adjustment not quantified by Sapere Merz.
Traffic congestion and management costs	Not included.
Ground conditions (rock)	Not included.
High proportion of wooden poles and pole top structures	Not included.
Dense urban network – Proximity to critical infrastructure, lack of easement, building regulations and congestion by other utilities	Not included.
Advanced Metering Infrastructure (AMI)	Not included.
Replacement of 6.6kV by 22kV lines	Not included.
Bats, protected species and termites	Termites included in AER's Termite Exposure OEF. Sapere Merz proposed use of higher base unit rate cost. Bats and protected species not included.
Extreme weather conditions	Included in Extreme Weather (Severe Storms) OEF.
Vegetation management – division of responsibility	AER included in Vegetation Management OEF and Sapere Merz proposed the same. OEF adjustment not quantified by Sapere Merz.

Sapere Merz partially included four of the ten OEFs submitted by JEN. The AER made OEF adjustments for these four OEFs in its previous decisions<sup>7</sup>, although Sapere Merz has proposed the combination of some OEFs and changes to the calculations of some OEF adjustments.

We note that Sapere Merz did not provide reasons for the non-inclusion of the six proposed OEFs that were not included.

<sup>6</sup> JEN, Letter to Sapere Merz - Consultation on operating environment factors for electricity distribution networks, dated 2 June 2017.

<sup>7</sup> AER, Attachment 7 – Operating expenditure, Ergon Energy preliminary determination 2015-20, April 2017, pp. 7-165-167,

# 4 PROPOSED CHANGES TO OEFs

This section relates to the range of OEFs proposed in the Sapere Merz report. WSP proposes that a new adjustment be made to the Sub-Transmission and Licence Conditions OEF as set out below.

## 4.1 SUB-TRANSMISSION AND LICENCE CONDITIONS OEF - TRANSMISSION CONNECTION POINT PLANNING

In its report, Sapere Merz proposed to combine the OEFs for Sub-Transmission and Licence Conditions to address issues of duplication between these previously separate OEFs. This combined OEF does not include the impact on opex imposed by the licence conditions for Victorian DNSPs (including JEN) that requires they undertake the planning and direction of the augmentation of transmission connection assets. This adjustment was not initially proposed by JEN, due to the small difference between JEN and the reference group, but it fits well as a factor within the combined OEF.

Based on the analysis, we find that the additional opex for Victorian DNSPs for Transmission Connection Point Planning meets the OEF criteria and that the OEF adjustment can be quantified. It is recommended that an OEF adjustment of 0.05% for JEN be added to the Sapere Merz OEF adjustment for Sub-Transmission and Licence Conditions.

### 4.1.1 EXOGENEITY

The licence conditions for the Victorian DNSPs requires that they undertake the planning and direction of the augmentation of transmission connection assets, to fulfil their obligations to offer connection services and supply to a customer. This includes management of the application process and each year JEN is required to undertake a planning study and prepare a transmission connection planning report jointly with the other Victorian DNSPs. These tasks are undertaken as opex and are not required of DNSPs in other jurisdictions.

The actual design of the connection point is capitalised, but not the annual routine studies and planning.

This requirement is imposed upon JEN by its Distribution Licence<sup>8</sup> and, as this is a legislative obligation, it satisfies the Exogenous criteria.

### 4.1.2 DUPLICATION

The costs associated with the transmission connection planning are not included in the opex input used by the Economic Insights Cobb Douglas SFA benchmarking analysis.

JEN's opex is reported in the Economic Benchmarking RIN<sup>9</sup>. Opex is reported in five categories, of which JEN completes three:

- DOPEX0201A Opex for network services
- DOPEX0203A Opex for connection services
- DOPEX0206A Opex for transmission connection point planning

Economic Insights uses DOPEX0201A for the SFA benchmarking (network opex excluding connection services and connection point services). However, DOPEX0206A is included in the calculation of the base year opex.

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<sup>8</sup> Jemena Electricity Networks Vic Ltd Electricity Distribution Licence, clause 14

<sup>9</sup> Economic Benchmarking RIN, Table 3.2.2, Opex Consistency.

The opex for transmission connection point planning, is therefore an additional expense for Victorian DNSPs (and JEN) that is included in the base year and is not duplicated in the benchmarking modelling, or by the application of another OEF, step change or other offsetting allowance.

Therefore, this satisfies the duplication criteria.

#### 4.1.3 QUANTIFICATION AND MATERIALITY

The opex impact on JEN and other DNSPs for transmission connection point planning is quantified in the RIN Table 3.2.2, variable DOPEX0206A.

This OEF candidate accounts for between 0.1% and 0.4% of JEN's annual opex, with an annual average 0.21% annual cost.

Compared to non-Victorian DNSPs, this represents a cost disadvantage to JEN.

The current composition of the reference group includes one non-Victorian DNSP and one Victorian DNSP that has not reported costs against this field in the RIN. The analysis indicates JEN will have a cost disadvantage relative to the reference group.

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## 4.2 FINDING

It was found that the additional opex incurred by JEN and other Victorian DNSPs for Transmission Connection Point Planning meets the OEF criteria and that the OEF adjustment can be quantified. It is recommended that an adjustment for additional opex be added to the Sapere Merz OEF adjustment for Sub-Transmission and Licence Conditions.

Based on the analysis, an OEF adjustment of 0.05% for JEN would be appropriate to account for the additional opex incurred.

# 5 NEW OEFS

In its initially proposed OEFS, JEN stated that it would continue to investigate other OEFS that may be impacting its costs and efficiency. In this section, several imposed obligations relating to inspection and testing are presented as a proposed OEF for Imposed Inspection and Testing Obligations. While the adjustment for each separate obligation is small, the overall impact on JEN's opex is expected to be material when compared to the reference group.

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## 5.1 IMPOSED INSPECTION AND TESTING OBLIGATIONS OEF

JEN is subject to obligations imposed on the Victorian DNSPs by state legislation that increase its required opex for inspection and testing activities:

- Straightening of Leaning poles
- Inspection of Poles in pavement
- Neutral supply testing
- Enclosed sub-station inspections
- ESV audits.

Based on the analysis, the additional opex meets the OEF criteria and the impact on JEN's opex can be quantified.

Individually, each of these opex items is not considered material, however, in the aggregate they represent a material disadvantage to JEN. For this reason, an OEF is proposed for the cumulative impact of the Imposed Inspection and Testing Obligations.

### 5.1.1 EXOGENEITY

Based on the following analysis, each of the requirements detailed below for the OEF candidates are externally imposed on JEN and out of JEN's control. Hence, they were found to meet the Exogeneity OEF criteria.

#### **Leaning poles**

JEN is required to ensure that poles do not lean more than 5 or 10 degrees depending on the location. This requirement is imposed upon JEN by the Electricity Safety (Installations) Regulations 2009<sup>10</sup>. As this is a legislative obligation it satisfies the Exogenous criteria.

#### **Inspection of poles in pavement**

JEN is required to inspect poles in its network and the location of JEN's network in a dense urban environment means there is a high proportion of poles in pavement. This situation arises from decisions made by town planners about the width and surface treatment of nature strip areas. It is also impacted by JEN's decision to install poles rather than to install underground cables, noting that options to use underground cables would raise the capital cost of the installation.

JEN's inspection procedure requires that field crews drill into the pole below ground level to assess the degree of deterioration (rot, fungal growth etc) and the amount of sound wood remaining. Inspection of poles that are embedded in bitumen or concrete (pavement) drives higher costs due to the additional labour to excavate below ground level to test pole integrity and then to reinstate the pavements. The high proportion of wood poles in pavement means that JEN incurs additional opex (incremental to normal inspection costs) to undertake the mandated inspection tasks. Options to avoid the

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<sup>10</sup> Electricity Safety (Installations) Regulations 2009, Victoria, Part 2—Electrical installation work, Division 1—Safety standards for electrical installations, Regulation 222 Construction and maintenance of poles and towers.

additional inspection costs by installing concrete or steel poles would raise the capital cost of the installation, also noting that concrete poles are generally too broad at the base to fit into narrow nature strip areas.

As JEN has no control over the surface treatment given to nature strips, in which their assets are required to be located, this satisfies the Exogenous criteria.

### **Neutral supply testing**

The obligation to perform Neutral Supply Testing (NST) arose from the Electricity Safety (Network Assets) Regulations 1999<sup>11</sup>, which specified that NST be conducted at least every ten years and in accordance with specific criteria. JEN incorporated these requirements into its standards, policies and life cycle management plans. The regulations were replaced in 2009 by the Electricity Safety (Installations) Regulations 2009<sup>12</sup>. The specific section for NST requirements did not transition into the Electricity Safety (Installations) Regulations 2009, as the requirement was then included as part of JEN's approved Electricity Safety Management Scheme. In the scheme, service testing is the accepted control to mitigate the risk of electric shock.

### **Enclosed sub-station inspections**

The obligation for enclosed sub-station inspections arises from the Electricity Safety Act 1998<sup>13</sup>, which requires an operator to manage 'at-risk electric line' to minimise bushfire risk. The Electricity Safety (Bushfire Mitigation) Regulations 2013<sup>14</sup> requires JEN to ensure that each polyphase electric line originating from every zone substation has the required capacity through testing before the specified bushfire risk period each year. Subsequently, Energy Safe Victoria (ESV) has clarified that this obligation also applies to kiosk substations, which would not require testing otherwise.

### **ESV audits**

The 2009 Victorian Bushfires Royal Commission recommendations amended sections of the bushfire mitigation regulations to ensure appropriate auditing of asset inspector competences and DNSP bushfire mitigation plans. The Powerline Bushfire Safety Taskforce Final Report 2011<sup>15</sup> recommended that the state amend the regulatory framework to strengthen ESV's mandate in relation to the prevention and mitigation of electricity-caused bushfires and to require it to fulfil that mandate. The Electricity Safety (Bushfire Mitigation) Regulations 2013<sup>16</sup> requires that the implementation of DNSP's Bushfire Mitigation Plans be monitored and audited.

In response to these recommendations and obligations the ESV conducts audits of Victorian DNSPs in preparation of the bushfire risk period each year. The key audits are:

- Compliance with Electrical Safety (Management) Regulations 2009 – These establish the requirement for each Victorian DNSP to submit an Electrical Safety Management Scheme to ESV every five years for acceptance. ESV regularly audits compliance.
- Compliance with Electrical Safety (Bushfire Mitigation) Regulations 2013 – These establish the requirement for each Victorian DNSP to submit a Electric Line clearance Management Plan to ESV every five years for acceptance. ESV regularly audits compliance.

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<sup>11</sup> Electricity Safety (Network Assets) Regulations 1999, Victoria, Regulation 23 Earthing and Electrical Protection, and Regulation 27 Inspection and Testing.

<sup>12</sup> Electricity Safety (Installations) Regulations 2009, Victoria.

<sup>13</sup> Electricity Safety Act 1998, Part 8 Bushfire Mitigation Requirements For Certain Operators And Electric Line Clearance, Section 83B General duty of specified operators to minimise bushfire danger.

<sup>14</sup> Electricity Safety (Bushfire Mitigation) Regulations 2013, Regulation 7(1)(ha) and 7(1)(hb).

<sup>15</sup> Powerline Bushfire Safety Taskforce Final Report, September 2011, Recommendations 28 and 34.

<sup>16</sup> Electricity Safety (Bushfire Mitigation) Regulations 2013, Regulation 7(n)(i) and 7(n)(ii).

- Compliance with Electricity Safety (Electrical Lines Clearance) Regulations 2015 - These establish the requirement for each Victorian DNSP to submit a Bushfire Mitigation plan to ESV every five years for acceptance. ESV regularly audits compliance.

Preparing the plans is considered to be an activity common across DNSPs. The auditing by ESV is a Victorian only activity. These audits have an impact on JEN's opex in preparation for and participation in these annual systems and field audits.

### 5.1.2 DUPLICATION

The opex required for these programs of work forms part of the base year and is not duplicated by the application of another OEF, step change or other offsetting allowance. Therefore, it meets the duplication criterion.

We note that the AER has previously said that the inclusion of customer density in the SFA model is adequate to adjust the model for differences related to scale. We do not believe that customer density is reflective of the volume of poles in pavement. This is because the treatment of nature strips is related to road widths (narrow roads typically have no grassed areas and hence poles are installed in pavements) and is not related to the relationship of customer premises to line length. No duplication exists between the two factors.

### 5.1.3 QUANTIFICATION AND MATERIALITY

The percentage impact on JEN's opex has been estimated for each of the OEF candidates based on quantities and opex sourced from JEN's asset database (SAP). This is summarised in Table 5.1.

The collective annual average impact on JEN's opex for these Imposed Inspection and Testing Obligations is estimated as 0.81%.

Table 5.1 Annual average opex impact for JEN of OEF candidates

OEF CANDIDATE	QTY	UNIT	AV. ANNUAL OPEX (\$,000)	% OPEX
Leaning Poles	28	Av. annual no. of pole rectifications	144	0.18%
Poles in Pavement	5,921	All poles in pavement (6.1% of total pole fleet)	138	0.18%
Neutral Supply Testing	1%	1% of total no. of services tested p.a.	200	0.26%
Enclosed Sub-Station Inspections	810	Quantity inspected in 2016	105	0.13%
ESV Audits	352	Person hours annually	47	0.06%
				<b>0.81%</b>

Note that the costs associated with NST have varied in the past, but are expected to be stable in the future. The first NST program concluded in 2009 at an approximate cost of \$2 million per annum. From 2010 to 2017 the roll out of the smart meter installation included the integrity testing of the neutral conductor of the service line, negating the need to conduct the NST program over this period. From 2018 the NST program will be based on information available from the recently installed smart meters. The forecast costs in 2018 are approximately \$100,000. The forecast costs from 2019 are \$200,000 per annum. These costs do not include analysis of the data, which is minimal, and are based on validating the data analysis through field testing 1% of services per annum.

Compared to non-Victorian DNSPs, this represents a cost disadvantage to JEN.



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## 5.2 FINDING

It was found that the additional opex incurred by JEN due to these Imposed Inspection and Testing Obligations meets the OEF criteria. Based on the analysis, the accumulative impact of the additional opex on JEN is estimated as 0.81%.

To estimate the OEF adjustment for JEN, the opex impact of the Imposed Inspection and Testing Obligations needs to be estimated for the reference group DNSPs. However, these items are not specifically reported in the RINs and therefore additional requests for information will be required if this OEF is to be accurately quantified. Where the DNSPs are impacted by these obligations, the DNSPs should be able to provide this information.

It is recommended that an OEF be included for Imposed Inspection and Testing Obligations.

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