

Jemena Electricity Networks (Vic) Ltd

Submission to Jemena Electricity Network Ltd
2016-20 regulatory proposal

Public

13 July 2015



An appropriate citation for this paper is:

Submission to Jemena Electricity Network Ltd 2016-20
regulatory proposal

Contact Person

Robert McMillan
General Manager Regulation
Ph: 03 8544-9000
robert.mcmillan@jemena.com.au

Jemena Electricity Networks (Vic) Ltd

ABN 82 064 651 083
321 Ferntree Gully Road
Mount Waverley VIC 3149

Postal Address

Locked Bag 7000
Mount Waverley VIC 3149
Ph: (03) 8544 9000
Fax: (03) 8544 9888

TABLE OF CONTENTS

Glossary	iv
Overview	1
1. Opex step changes	2
1.1 Assessment framework	2
2. Reporting actual RIN data	3
2.1 Driver	3
2.2 Options Analysis	4
2.3 Approach to assessing requirements to provide actual data	4
2.4 Opex step change forecast	6
3. Vegetation management	13
3.1 Driver	13
3.2 Impacted opex activities	16
3.3 Basis of the cost forecast.....	16
3.4 Opex step change forecast.....	18

GLOSSARY

AER	Australian Energy Regulator
RIN	Regulatory Information Notice
RIO	Regulatory Information Order
PM	Plant Maintenance
ESV	Energy Safe Victoria
RIS	Regulatory Impact Statement

OVERVIEW

Since submitting our initial 2016 to 2020 regulatory proposal on 30 April 15, new information has arisen that if not considered by the AER would result in a different regulatory outcome that ought to be the case. Therefore, to help the AER make a better regulatory decision we are providing this new material as a part of the public submission process.

The specific areas of change will impact our operating expenditure, on these items we are proposing adjustments to our operating expenditure step changes. These include:

- A new step change for reporting actual regulatory information notice (**RIN**) data. The AER has requested that the data we provide be assured as 'actual' data rather than estimated data which will require new processes for data collection, management and reporting to achieve this higher assurance and standard of compliance. We will incur additional costs to meet these new standards of \$19.65M (\$2015)
- An update to our existing vegetation management step change. JEN submitted a step change for vegetation management of \$5.63M (\$2015) based on the draft Electricity Safety (Electric Line Clearance) Regulations 2015. Finalisation of the order provides greater certainty around our obligations which means we are able to update previously submitted cost estimates. This resulted in an increase in our proposed step change to \$15.89M (\$2015).

The new RIN reporting step change and amended vegetation step change are outlined in Table 1–1 with forecast expenditure by regulatory year.

Table 1–1: Total step change (\$millions, \$2015)

Step changes	Step change forecast					
	2016	2017	2018	2019	2020	Total
RIN reporting	10.22	2.36	2.36	2.36	2.36	19.65
Vegetation management	3.25	3.16	3.16	3.16	3.16	15.89

As a part of this submission we are providing:

- Estimated cost with the supporting material consistent with the reset RIN¹ requirements;
- An updated operating expenditure model (see Attachment 1); *and*
- Supporting information for the amended vegetation management step change (see Attachments 2 and 3).

¹ AER, Regulatory Information Notice issued under Division 4 of Part 3 of the National Electricity (Victoria) Law, served 2 Feb 15

1. OPEX STEP CHANGES

1. In Jemena Electricity Network's (**JEN's**) 30 April 2015 regulatory proposal we outlined our proposed operating cost step changes.² Since submitting our initial 2016 to 2020 regulatory proposal on 30 Apr 15, new information has arisen that, if not considered by the AER, would result in a different regulatory outcome that ought to be the case. In this submission we propose to provide additional information in support of our proposed operating expenditure step changes.
2. This section provides the assessment framework for operating expenditure (**opex**) step changes. The remainder of the document provides information supporting:
 - A new step change for reporting actual RIN data
 - An update to the step change for vegetation management.

1.1 ASSESSMENT FRAMEWORK

3. The National Electricity Rules' (**Rules**, or **NER**) opex criteria are set out in Box 1–1:

Box 1–1 Rule 6.5.6(c) Criteria governing opex

The AER must accept the forecast of required opex of a Distribution Network Service Provider that is included in a building block proposal if the AER is satisfied that the total of the forecast opex for the regulatory control period reasonably reflects each of the following (the operating expenditure criteria):

1. the efficient costs of achieving the operating expenditure objectives; and
2. the costs that a prudent operator would require to achieve the operating expenditure objectives; and
3. a realistic expectation of the demand forecast and cost inputs required to achieve the capex and opex objectives.

4. We have proposed prudent and efficient step changes which are required to promote the opex objectives in the Rules. JEN has also taken into account the Australian Energy Regulator's (**AER's**) expenditure assessment guideline when identifying and proposing opex step changes.
5. The additional and modified step changes proposed in this submission are not reflected in our base year opex, and are not captured by the rate of change escalation applied to the operating expenditure forecasts prepared using the base, step and trend method.
6. JEN also notes that the AER's regulatory proposal RIN³ (**reset RIN**) requested information relevant to proposed step changes. This attachment provides the relevant information for the step changes.

² JEN, 2016-20 Electricity Distribution Price Review Regulatory Proposal, Attachment 8-6 'Operating expenditure step changes', 20 April 2015.

³ AER, Regulatory Information Notice issued under Division 4 of Part 3 of the National Electricity (Victoria) Law, 2 Feb 2015

2. REPORTING ACTUAL RIN DATA

2.1 DRIVER

7. JEN has regulatory obligations to report information to the AER through the annual, economic benchmarking and category analysis Regulatory Information Notices (**RINs**) served on JEN by the AER. The economic benchmarking and category analysis RIN's require ongoing annual reporting to 2024.
8. Collectively, the RINs require JEN to provide some data that we do not record or collect in the normal course of running our business. In our previous RIN responses, where JEN was unable to provide actual information required by the RINs, JEN used its best endeavours to generate the most appropriate estimate, providing the AER with the basis for the estimate and reasons why it is the most appropriate estimate. This complied with the RIN for the 2014 regulatory year. However, the AER stated that:
 - from the 2015 regulatory year onwards, no estimates may be used in the economic benchmarking RIN unless the information will inherently be an estimate as defined by the Notice⁴
 - from the 2016 regulatory year onwards, no estimates may be used in the category analysis RIN unless the information will inherently be an estimate as defined by the Notice⁵
9. In its interactions with the AER, JEN had understood that the AER would make a regulatory information order⁶ (**RIO**) to supersede the current suite of RINs and that this order would enable electricity distribution businesses:
 - to address compliance incrementally, and
 - to undertake a cost benefit based assessment of providing actual versus estimated data for elements of the RINs that require data which is not collected in the normal course of running the business.
10. Subsequent communications with the AER have indicated that this is no longer the case.⁷ Instead, the existing economic benchmarking and category analysis RINs will continue unchanged, with a new annual RIN being developed over the second and third quarter of 2015. JEN is therefore obliged to change its systems and processes to best meet the RIN requirements. Due to the lateness in communication from the AER that a RIO is now unlikely to be implemented in time for the next round of annual RIN reporting, we were unable to include cost estimates in our initial proposal; however, we did indicate that we would propose a further 'RIN' step change during the public consultation process.⁸
11. Immediate compliance with the expectation to provide actual data in the RINs presents challenges. This is because the RINs and their templates prescribe that we must report information in a way that is inconsistent with our current systems, processes and records that we use to meet our existing management, statutory accounting and regulatory requirements. JEN has not previously required the level of detail prescribed in the RINs in its day to day operations.

⁴ Email from AER staff to Jemena staff (and others), 10 June 2015.

⁵ See for example, Category Analysis RIN cover letter from Chris Pattas, 7 March 2014.

⁶ NEL, Division 4.

⁷ E-mail from AER staff to Jemena staff (and others), 10 April 2015 and 10 June 15. The timing of these communications did not allow JEN to include this step change in its 30 April 15 regulatory proposal.

⁸ JEN, 2016-20 Electricity Distribution Price Review Regulatory Proposal, Attachment 8-6 'Operating expenditure step changes', 20 April 2015, p 3.

2 — REPORTING ACTUAL RIN DATA

2.1.1 IMPACTED OPEX ACTIVITIES

12. These activities required to provide actual data are not unique to JEN and will be faced by other network businesses to meet their RIN requirements. JEN needs to identify a number of initiatives related (but not limited) to project management, system changes/enhancements, data capture, change management costs and training to significantly reduce the amount of estimated information provided in the RIN's.
13. JEN has assessed the required activities for each template and requirement within the RINs and has detailed these further in section 2.4.

2.2 OPTIONS ANALYSIS

14. JEN has considered the following options to meet the requirement to provide actual data:
 1. *Make no change*—this is not considered a viable option for JEN because:
 - a) Non-compliance with the RIN's can result in penalty under section 28N of the National Electricity Law (NEL)
 - b) The AER could also institute civil proceedings under section 59 of the NEL
 2. *Put in place the policies, procedures, systems and conduct necessary training, to provide the required actual RIN data in the timeframes required (where these are capable of providing actual data)*⁹—this option would best meet the requirements set out in the RINs, thereby ensuring compliance
 3. *The same as Option 2, but exclude providing actual data for areas where it is unlikely that providing actual data would meet a net benefit test*—this option would mostly meet the requirements set out in the RINs, thereby taking a pragmatic approach to compliance
 4. *Put in place policies, procedures, systems and conduct necessary to meet some, but not all of the obligations*—this option would allow JEN and the AER to determine an optimal mix of actual and estimated information to best serve the long term interests of customers.
15. The costs in this step change are based on proceeding on the basis of Option 3. We have detailed the costs for JEN to provide actual data.
16. An example of our pragmatic approach taken under Option 3 with regard to the economic benchmarking RIN is the provision of average power factor conversion for low voltage distribution lines¹⁰. JEN would propose that the cost to provide this information as 'actual' exceeds the benefit and therefore shouldn't be reported as actual data as it would require JEN to install power quality meters on a sample (20%) of our distribution substations to record kW and KVA data for the whole year. This would cost approximately \$50M as it would require approximately 1,250 meters at around \$40,000 per meter (with communications).

2.3 APPROACH TO ASSESSING REQUIREMENTS TO PROVIDE ACTUAL DATA

17. In preparing to transition from estimates to actual RIN data, JEN has examined the number of estimated items in the economic benchmarking and category analysis RINs.

⁹ There are some instances where it is only possible for estimated data to be provided. For example, Table 3.3.4.2 of the benchmarking RIN requires asset installation dates that have not been historically recorded.

¹⁰ As required under the 3.4 of the economic benchmarking RIN.

18. To provide cost estimates, our process included:
 - Identifying the extent of estimated and actual data currently provided
 - Identifying what system, process and practice changes are needed to collect and report actual instead of estimated data
 - Estimating the cost of each of these changes and validating this against previous changes or estimates from other networks.

19. We identified the measures required to collect and report actual information. There are multiple items across more than 14 templates within the two RINs currently considered estimated.

20. JEN engaged an expert consultancy¹¹ who is familiar with RIN audit requirements to undertake a review of JEN's proposed measures to transition from estimated to actual information. This review was based on the definitions of actual information, estimated information and material set out by the AER and replicated in Table 2-1.¹²

21. JEN has therefore provided cost estimates based on our expert's assessment of which data:
 - Will remain as estimates as the RIN's allow this¹³—not included in this incremental opex step change cost forecast
 - Will remain as estimates as JEN is unable to provide actual data in any scenario¹⁴—not included in this incremental opex step change cost forecast
 - That was previously considered estimates by JEN and would meet the actual information definition—not included in this incremental opex step change cost forecast
 - Requires further action by JEN to make progress to provide (and to maintain provision of) actual data—cost estimates are included in this opex step change (see section 2.4).

Table 2-1: Definitions used to determine if change in process or systems required

Term	Definition
Actual information	<p>Information presented in response to the Notice whose presentation is materially dependent on information recorded in DNSP's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is not contingent on judgments and assumptions for which there are valid alternatives, which could lead to a 'materially' different presentation in the response to the Notice.</p> <p>'Accounting records' include trial balances, the general ledger, subsidiary accounting ledgers, journal entries and documentation to support journal entries. Actual financial information may include accounting estimates, such as accruals and provisions, and any adjustments made to the accounting records to populate DNSP's regulatory</p>

¹¹ Jemena engaged Parsons Brinckerhoff.

¹² Economic benchmarking RIN for distribution network service providers, Instructions and Definitions, AER, November 2013.

¹³ This includes: 'Energy not supplied (planned or unplanned) - DQS0201 and DQS0202' within the Benchmarking RIN; and 'Mean and Standard deviation – Table 5.2 (Asset Age profile)' in the Category Analysis RIN.

¹⁴ This includes: 'Table 3.3.4.2, Asset Lives - estimated residual service life' within the economic benchmarking RIN; and 'Table 5.2, Asset Age Profile across various asset categories' and the installation dates for all assets within the category analysis RIN (the degree of estimation for installation dates is material so JEN cannot provide actual information. Assets with unknown installation dates are profiled in accordance with Asset Age Profiling Methodology ELEPR0011).

2 — REPORTING ACTUAL RIN DATA

Term	Definition
	accounts and responses to the Notice. 'Records used in the normal course of business', for the purposes of non-financial information, includes asset registers, geographical information systems, outage analysis systems, and so on.
Estimated information	Information presented in response to the Notice whose presentation is not Materially dependent on information recorded in DNSP's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is contingent on judgments and assumptions for which there are valid alternatives, which could lead to a materially different presentation in the response to the Notice.
Material	Information is material if its omission, misstatement or non-disclosure has the potential, individually or collectively to influence the economic decisions of users (including the AER) taken on the basis of the information provided in accordance with the Notice. This definition is based on the definition of materiality in the accounting standard AASB 1031. This accounting standard provides context for the interpretation of this definition of materiality.

Source: Economic benchmarking RIN for distribution network service providers, Instructions and Definitions, AER, November 2013.

2.4 OPEX STEP CHANGE FORECAST

22. JEN submits its opex step change costs to provide actual data for both the economic benchmarking RIN and category analysis RIN as summarised in Table 2–2. We have disaggregated these further as shown for the economic benchmarking RIN in Table 2–3 for one-off costs and Table 2–4 for ongoing annual costs and the category analysis RIN in Table 2–5 for one-off costs and Table 2–6 for ongoing annual costs.
23. The forecast costs in this submission are incremental to our existing forecasts as provided in our 30 April 15 regulatory proposal.

Table 2–2: Total step change (\$millions, \$2015)

	Step change forecast					
	2016	2017	2018	2019	2020	Total
RIN reporting	10.22	2.36	2.36	2.36	2.36	19.65

Table 2–3: Economic benchmarking RIN compliance—2016 cost forecast (\$2015)

Activity (rows)/ RIN requirement or template (columns)	Project management cost	3.3—assets (RAB)	3.4—operational data	3.5—physical Assets	3.6—quality of services	3.7—operating environment	Total
Project management cost	209,013	-	-	-	-		209,013
System changes/enhancements	-	57,960	-	-	-	127,190	185,150
Data capture	-	55,200	13,800	55,200	20,700	663,246	808,146
Training	-	6,900	6,900	6,900	-	34,500	55,200
Process change	-	31,740	-	-	-	17,940	49,680
Audit	-	3,665	1,833	7,331	1,833	3,665	18,328
Total	209,013	155,465	22,533	69,431	22,533	846,542	1,325,517

Table 2–4: Economic benchmarking RIN compliance—2017-2020 annual cost forecast (\$2015)

Activity (rows)/ RIN requirement or template (columns)	Project management cost	3.3—assets (RAB)	3.4—operational data	3.5—physical Assets	3.6—quality of services	3.7—operating environment	Total
Finance resource	-	38,000	38,000	38,000	38,000	38,000	190,000
Project management cost	-	-	-	-	-	-	-
System changes/enhancements	-	-	-	-	-	-	-
Data capture	-	-	13,800	-	-	448,500	462,300
Training	-	6,900	6,900	-	-	34,500	48,300
Process change	-	-	-	-	-	-	-
Audit	-	7,237	5,404	10,902	5,404	7,237	33,793
Total	-	52,136	64,104	48,902	43,404	528,237	734,393

2 — REPORTING ACTUAL RIN DATA

Table 2–5: Category analysis RIN compliance—2016 cost forecast (\$2015)

Activity (rows)/RIN requirement or template (columns)	Project management cost	2.2—replex	2.3—augex	2.5—connections	2.7—vegetation management	2.8—maintenance	4.1—public lighting	4.2—metering	5.3—MD network level	5.4—MD & utilisation level	Total
Project management cost	996,475	-	-	-	-	-	-	-	-	-	996,475
System changes/enhancements	-	563,500	563,500	563,500	84,295	204,240	267,720	30,475.00	-	-	2,277,230
Data capture	-	41,400	41,400	48,300	708,078	377,200	269,100	-	-	-	1,485,478
Change management	171,120	104,880	100,740	100,740	13,800	6,900	76,590	-	-	-	574,770
Training	561,200	193,200	167,900	167,900	13,800	161,000	161,000	-	-	-	1,426,000
BI reporting	-	19,550	19,550	19,550	-	-	19,550	-	-	-	78,200
Incidentals	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	-	-	46,000
Additional resource	-	13,800	13,800	13,800	13,800	21,390	13,800	6,900	8,280	8,280	113,850
Audit	-	10,997	1,833	7,331	7,331	3,666	10,997	3,666	3,666	3,666	53,152
Post go live support	96,600	96,600	96,600	96,600	4,140	96,600	96,600	19,320	-	-	603,060
Ongoing monitoring	-	248,400	248,400	248,400	-	248,400	248,400	-	-	-	1,242,000
Total	1,831,145	1,298,077	1,259,473	1,271,871	850,994	1,125,146	1,169,507	66,111	11,946	11,946	8,896,215

Table 2–6: Category analysis RIN compliance—2017-2020 annual cost forecast (\$2015)

Activity (rows)/ RIN requirement or template (columns)	Project management cost	2.2—replex	2.3—augex	2.5—connections	2.7—vegetation management	2.8—maintenance	4.1—public lighting	4.2—metering	5.3—MD network level	5.4—MD & utilisation level	Total
Finance resource	-	21,111	21,111	21,111	21,111	21,111	21,111	21,111	21,111	21,111	190,000
Asset management resource	-	13,800	13,800	13,800	13,800	13,800	13,800	6,900	8,280	8,280	106,260
Audit	-	14,568	5,404	10,902	10,902	7,237	14,568	7,237	7,237	7,237	85,291
Ongoing monitoring	-	248,400	248,400	248,400		248,400	248,400				1,242,000
Total	-	297,879	288,715	294,213	45,813	290,548	297,879	35,248	36,628	36,628	1,623,551

Table 2–7 and Table 2–8 below describe the process undertaken by JEN to quantify the incremental operating and maintenance cost for each template in the economic benchmarking and category analysis RIN.

Table 2–7: Economic benchmarking RIN – process used to estimate incremental opex (\$2015)

Templates	Cost per template	Description of process to estimate incremental opex
Project management	209,012.50	JEN will incur these costs to manage the full life cycle of this project from initiation to implementation.
3.3 Assets	155,465.63	JEN will incur costs to analyse the current system's capabilities and, for all data currently stored outside the system, develop the architecture and/or software to enhance the system to generate data directly.
3.4 Operational data	22,532.81	JEN will incur costs for manual data capture, recording and to undertake annual audits.
3.5 Physical assets	69,431.25	JEN will need to record the transformer capacity for each of its HV customers. The costs include data capture, data recording and additional audit costs.

2 — REPORTING ACTUAL RIN DATA

Templates	Cost per template	Description of process to estimate incremental opex
3.6 Quality of service	22,532.81	To report system losses on a calendar year basis requires JEN to change the process to capture and record data annually.
3.7 Operating environment factors	846,542.03	JEN will need to use an external service provider to capture the tree volume data and enhance the vegetation management system to record this data. In addition, JEN will need to engage an external service provider to visit its 5,200 poles to provide actual standard vehicle access data.

Table 2–8: Category analysis RIN – process used to estimate incremental opex (\$2015)

Templates	Cost per template	Description of process to estimate incremental opex
Project management	2,245,145.00	These include full project lifecycle costs JEN will incur including change management costs (as the data capture will need to incur in the field and the field staff will need to be trained to capture the required data). These costs also include support costs following implementation of new data capture systems, where technical specialists will provide support for a limited period of time. Costs also include those required to backfill field staff whilst they are being trained in data recording for RIN reporting.
2.2 Repex	1,298,076.88	JEN proposes to modify its current process enabling the field staff to capture data in the required asset category. This requires a significant change in our current methodology; change management and extensive training that will need to be provided to approximately 250 staff. In addition to capturing the data, JEN will also need to customise its current system to record the data or write customised reports to generate the output in the required RIN format. Ongoing monitoring will be required and additional system maintenance costs will be incurred annually.
2.3 Augex	1,259,472.81	For major zone sub projects (>\$5M) the civil works expenditure components will need to be identifiable and separable. This process change requires expenditure to be disaggregated and classified as civil works and by material, contract, labour, other, related party, and overheads to fill in the other categories and sections in the RIN. JEN proposes to modify its current process. JEN propose to establish recording of overhead separately from underground through a project structure change and system change. This requires a change in our current methodology; change management and extensive training will need to be provided to approximately 250 staff. In addition to capturing the data, JEN will also need to customise its current system to record the data or write customised reports to generate the output in the required RIN format. Ongoing monitoring will be required and additional system maintenance costs will be incurred annually. Also where the civil works are only a component of the contractor cost, JEN will need to identify this in SAP, and separately identify the works that are only civil works related.
2.5 Connections	1,271,871.25	JEN will need to customise some fields in its systems to collect connections data in the required categories. Forecast costs include those

Templates	Cost per template	Description of process to estimate incremental opex
		required to resolve issues with industrial estates where a number of connections are not recorded. JEN will also need a customised report to be written to generate the output in the required RIN format. Revised solution is to collect timesheet information from field staff. JEN proposes to modify its current process. This requires a significant change in our current methodology; change management and extensive training will need to be provided to approximately 250 staff. In addition to capturing the data, JEN will also need to customise its current system to record the data or write customised report to generate the output in the required RIN format. Ongoing monitoring will be required and additional system maintenance costs will be incurred annually.
2.7 Vegetation management	850,994.25	JEN will use an external service provider to capture the length per maintenance span and average number of trees per maintenance span. The data will then need to be recorded in the vegetation management systems which will need some enhancement to hold the data. Customised reports will need to be generated to extract data in the required RIN format.
2.8 Maintenance	1,125,145.63	JEN will need to customise its existing systems to enable grouping JEN activities into RIN categories. This involves the grouping/allocation of activities to the appropriate RIN activity and would include designing and implementing appropriate system fields, catalogues and reports. Training will need to be developed and presented to activity owners, project managers and maintenance planners. The incremental operating and maintenance cost to manage, monitor, report and correct the data is 12 days X 12 activity owners X \$2,200 = \$316.8k annually (\$2015) The data captured through this process is used to accurately apportion the total Routine and Non-Routine maintenance cost to each RIN activity. This is performed annually on request for RIN purposes.
4.1 Public lighting	1,169,506.88	JEN will need to specify the requirement to their contractors to capture data in the required RIN format. This will result in additional resources required by the contractors and additional training and change management costs. Once the data is captured, JEN needs to record this data in its current system and have a customised report written to generate the required RIN report output.
4.2 Metering	66,110.63	JEN will need to incur a small cost towards data capture and recording, enabling it to report the variable as actual. However, additional annual audit costs will be incurred.
5.3 MD network level	11,945.63	Change in methodology is currently endorsed by the auditors. However JEN will incur additional audit costs to verify this methodology every year.
5.4 MD & utilisation level	11,945.63	Change in methodology is currently endorsed by the auditors. However JEN will incur additional audit costs to verify this methodology every year.

2 — REPORTING ACTUAL RIN DATA

24. The costs in Table 2–7 and Table 2–8 above are based on the incremental operating and maintenance costs from JEN’s field and engineering employees. The smaller incremental operating and maintenance cost required from JEN’s finance division has been included in the total step change. The areas of RIN reporting requiring financial information that are currently identified as ‘estimates have been thoroughly reviewed, to determine how to move to actual or calculated actual.
25. In May 2015 Jemena implemented a new configuration of SAP that requires the use of plant maintenance (**PM**) orders for cost collection for both opex and capex. This improved functionality enables the business to set PM orders or groups of orders to capture costs at levels required for regulatory reporting. There will be some business as usual activity required to determine what additional cost capture is required, set up the PM orders and implement a change process within the business. This has not been included as a step change.
26. In other areas, the additional engineering / non-finance improvements in recording will enable a move from estimate to actual or calculated actual. Two areas of additional cost have been determined:
 1. an improvement in Cost Allocation Methodology (**CAM**) management, requiring an additional resource; and
 2. two additional resources for the preparation of the significant additional information required to be analysed for the RIN’s and additional external financial audit fees resulting from the extra information.

3. VEGETATION MANAGEMENT

3.1 DRIVER

27. JEN submitted a vegetation management step change in its regulatory proposal on 30 April 2015¹⁵. In that submission, we identified two drivers that underpin the basis for the step change:
1. the Electricity Safety (Electric Line Clearance) Regulations 2015 under the Electricity Safety Act 1998, and
 2. The Electricity Safety Amendment (Bushfire Mitigation) Act 2014.
28. The first of the two drivers—the Electricity Safety (Electric Line Clearance) Regulations 2015—was in draft form at the time JEN submitted its regulatory proposal. Accordingly, JEN’s proposed step change provided its best view at the time of which activities proposed in the draft regulations would be included in the final regulations. Amendments to the Electricity Safety (Electric Line Clearance) Regulations 2015 were finalised on 30 June 2015 (hereafter referred to as the **2015 regulations**), providing clarity around the incremental operating and maintenance expenditure the business will incur to comply with the 2015 regulations and therefore JEN submits this revised step change proposal for the 2015 regulations driver only.
29. Table 3–1 below shows the expenditure breakdown between the two drivers of the vegetation management step change as submitted in JEN’s regulatory proposal, based on the draft Electricity Safety (Electric Line Clearance) Regulations. The expenditure in relation to the Electricity Safety Amendment (Bushfire Mitigation) Act 2014 remains unchanged from JEN’s original step change proposal at \$0.09M (real \$2015) incurred in 2016 only. Expenditure is incurred in 2016 only (and not ongoing) because the discrete number of trees to be maintained in order to achieve compliance, will all be addressed within 2016. Ongoing maintenance for these trees beyond 2016 will be absorbed in routine vegetation management maintenance. Only the expenditure in relation to the 2015 regulations has changed.

Table 3–1: Expenditure breakdown between drivers of vegetation management step change in JEN’s regulatory proposal (\$2015, \$millions)

	Step change forecast					
	2016	2017	2018	2019	2020	Total
Electricity Safety (Electric Line Clearance) Regulations 2015	1.11	1.11	1.11	1.11	1.11	5.54
Electricity Safety Amendment (Bushfire Mitigation) Act 2014	0.09	0.00	0.00	0.00	0.00	0.09
Total step change	1.20	1.11	1.11	1.11	1.11	5.63

Table 3–2 shows the incremental increase in operating and maintenance expenditure JEN requires to comply with the final 2015 regulations.

¹⁵ JEN regulatory proposal, 30 April 2015, Attachment 08-06 Operating expenditure step changes, p16

Table 3–2: Expenditure breakdown between drivers of vegetation management step change in JEN’s revised step change proposal (\$2015, \$millions)

	Step change forecast					
	2016	2017	2018	2019	2020	Total
Electricity Safety (Electric Line Clearance) Regulations 2015	3.16	3.16	3.16	3.16	3.16	15.80
Electricity Safety Amendment (Bushfire Mitigation) Act 2014	0.09	0.00	0.00	0.00	0.00	0.09
Total step change	3.25	3.16	3.16	3.16	3.16	15.89

30. The final 2015 regulations mandate a heavier compliance burden than JEN anticipated when it submitted its regulatory proposal. At the time JEN’s expectations were based upon verbal guidance provided by Energy Safe Victoria at a meeting called by Energy Safe Victoria (ESV) and the Victorian DNSPs on 18 December 2014 which outlined activities that were likely to be applied in the final 2015 regulations. It was only with the recent publication that JEN was able to determine that all but two¹⁶ of the compliance activities in the draft regulations were included in the final 2015 regulations—a materially higher compliance burden than JEN expected and accounted for in its step change proposal on 30 April 2015.
31. JEN’s expectation that the final 2015 regulations would be less onerous than what was finally applied are reasonable given the feedback received from ESV a week before the 2015 regulations were gazetted in a letter to JEN¹⁷ summarising the changes the ESV made to the draft legislation based on the industry’s feedback to a Regulatory Impact Statement¹⁸ (RIS). This letter is provided as Attachment 2. With regard to the new compliance obligations relating to enhanced notification and consultation requirements, ESV advised in their letter that “the policy intent of the consultation, notification and dispute resolution clauses did not change but the clauses were reviewed to improve clarity” (see Attachment 2, page 2). This advice suggests that the detail of the scope of the compliance obligations were considered during the RIS process.
32. Consequently, JEN assessed the final 2015 regulations to accurately determine which activities and associated costs (developed for the formal response to the RIS) were applicable. The outcome is a revised step change proposal for this driver of \$15.80M (real \$2015) over the 2016-2020 regulatory control period, an increase of \$10.17M (real \$2015) from that originally submitted in JEN’s regulatory proposal. The incremental expenditure proposed in this revised step change reconciles with the expenditure JEN submitted in its response to the RIS. JEN considers that these are the best cost estimates available as the quantum of expenditure for each compliance activity has been provided to JEN by its competitively tendered external vegetation management contractor and has also been verified by JEN’s staff for reasonableness.
33. The following sections provide detailed explanations of the drivers of the increase in the proposed step change for vegetation management.

¹⁶ The two compliance obligations included (and costed) in JEN’s response to the RIS are enhanced notification requirements under Schedule 1 Part 2 Division 3 Clause 14 8(a)-(c) costed at \$3.3M (real \$2015) over 2016-20 and Schedule 1 Part 3 Division 1 and Schedule 2 Graphs 1-6 costed at \$7.65M (real \$2015) over 2016-20.

¹⁷ Energy Safe Victoria, Response to the Regulatory Impact Statement for the proposed Electricity Safety (Electric Line Clearance) Regulations 2015, 23 June 2015

¹⁸ A RIS was issued by ESV on 19 September 2014 following publication of the exposure draft legislation requesting Victorian DNSPs respond to the proposed changes to the Electricity Safety (Electric Line Clearance) regulations, including the cost to comply.

3.1.1 2015 REGULATIONS

34. JEN's response to the RIS¹⁹ in January 2015 advised that \$26.7M (real \$2015) over 2016—2020 would be incurred in incremental operating and maintenance expenditure if all the recommendations within the RIS were legislated. JEN's response to the RIS is provided with this revised step change proposal at Attachment 3.
35. On the basis that JEN's consultation with ESV led to expectations that the final 2015 regulations would only include a small subset of the proposed regulations outlined in the RIS, JEN proposed a step change in operating and maintenance expenditure of \$5.63M (real \$2015) to comply with the expected subset of the proposed regulations.
36. Our original proposed step change identified three drivers for increased opex arising from changes in regulatory obligations outlined in the 2015 regulations. They are:
1. Adoption of amenity tree management standard AS 4373
37. JEN will need to adopt amenity tree management standard AS 4373 to comply with the proposed 2015 regulations. The standard provides guidance on the means of carrying out required pruning while maintaining the health and natural appearance of the tree as far as possible, thus delivering standardised amenity outcomes.
2. Enhanced notification and consultation provisions
38. New extensive notification and consultation provisions will require JEN to write to more affected persons than before, and provide them with a much greater depth of detail of the intended pruning or tree removal (including needing to physically draw pictures of each tree, its position relative to electrical assets and how the intended pruning will alter its visual amenity). This notification will provide more detailed information than in the past and also includes a new requirement to publish notices in a generally circulating newspaper, and additional details of arrangements for dispute resolution.
3. Assistance which must be provided to Councils
39. Proposed changes require JEN to assist a Council, if requested, that has concerns about the safety of cutting or removal of a tree for which the Council has clearance responsibilities, or concerns about determining the allowance for cable sag and sway, to:
- ensure the cutting or removal of the tree can be undertaken safely
 - set safe limits of approach to electric lines for cutting/removing the tree
 - establish safe methods for cutting/removing the tree
 - determine the additional distance by which the minimum clearance space must be extended to allow for sag and sway of cable spans exceeding 100 metres.
40. More details of these additional compliance activities required under the 2015 regulations are itemised in Table 3–4.

¹⁹ Jemena comments on the Regulatory Impact Statement and proposed Electricity Safety (Electric Line Clearance) Regulations 2015, 13 January 2015

3 — VEGETATION MANAGEMENT

3.2 IMPACTED OPEX ACTIVITIES

41. As new obligations, JEN is proposing an increase to the existing regulatory allowance for vegetation management to enable this program to confirm with new legislative requirements.
42. Adopting the uniform tree pruning procedures and practices defined in amenity tree management standard AS 4373 and its associated guidelines will allow JEN to meet its regulatory obligations. JEN already complies with this standard in-as-far as "cutting" is specified, e.g. when removing a branch, the position of the final cut should be a clean cut to the branch collar or, in the absence of a collar, to a position determined by the branch bark ridge.
43. In a small number of cases JEN may need to employ the use of climbing spikes. To meet the requirements of AS 4373, spikes may only be used on the parts of a tree not being retained. Therefore an EPV and traffic management will need to be used in these climbing cases.
44. Enhanced notification and consultation provisions will require JEN as the Responsible Person to notify intended cutting or removal to all affected persons both in writing and by publication in a newspaper circulating generally to the locality. The proposed form of the notice will require JEN to detail, among other things, the dispute resolution mechanisms, images, sketches and individual impact statements.
45. JEN is now responsible for additional tree clearing that was previously the responsibility of a public land manager (e.g. Vic Roads) in its distribution area.
46. Assisting councils with vegetation trimming / removal and ensuring that this work is done safely will require ongoing audit of council vegetation management practice.

3.3 BASIS OF THE COST FORECAST

3.3.1 ADOPTION OF AMENITY TREE MANAGEMENT STANDARD AS 4373

47. Compliance with AS4373 is a new requirement that will require changes to existing and entirely new compliance obligations be imposed upon JEN.
48. The new requirement to use Arborists for Inspection with a Certificate 3 qualification will add cost of \$15k per year per inspector. JEN has a crew of 4 inspectors. This results in a total cost of \$0.06M per annum (\$2015). These costs were originally quoted by JEN's competitively tendered external vegetation management contractor and verified by JEN for reasonableness.
49. The requirement to use Arborists for Cutting with a Certificate 2 qualification will add cost of \$7.5k per year per cutter. JEN has a crew of 12 cutters. This results in a total cost of \$0.09M per annum (\$2015). These costs were originally quoted by JEN's competitively tendered external vegetation management contractor and verified by JEN for reasonableness.
50. With regard to the new requirement to not use climbing spikes, we have adopted a volume and unit-rate driven forecasting method to estimate the incremental cost impact to JEN and its customers. JEN considers this bottom-up approach to yield the best estimate given the information at hand. We estimated 50 cases requiring climbing per annum. The estimated cost per case includes \$2,000 for use of an elevated work platform and \$1,500 per case for traffic management. This results in a total cost of \$0.175M per annum (\$2015).
51. Adopting AS 4373 also requires JEN to not use mechanical cutters such as "Jarrafs". These devices are currently used to improve safety and productivity (particularly in less densely populated areas of our network with rows of trees). Use of these devices does not comply with AS4373. JEN cuts about 250 spans each year

using mechanical cutters. Alternative cutting methods will increase JEN's use of human labour for these spans and will increase cutting costs by \$500 per span. This results in a total cost of \$0.125M per annum (\$2015).

52. The total incremental cost to comply with AS4373 is \$0.45M per annum (\$2015).

3.3.2 ENHANCED NOTIFICATION AND CONSULTATION PROVISIONS

53. The new compliance obligations relating to enhanced notification and consultation require JEN to notify owners of contiguous land if a tree on adjacent private land is to be cut and that cutting may affect the contiguous land during cutting or removal. The notice must contain details and a diagram in accordance with clause 15(5). For the increased scope of who is notified and the increased detail required on the notices it is estimated, with the assistance of JEN's vegetation management contractor, this will result in a total cost of \$1.32M per annum (\$2015).
54. The new requirement to include the contact details of the person carrying out the intended cutting or removal will require a total change to the scheduling and allocation of cutting personnel. JEN consulted with its vegetation management contractor to understand the effect this requirement will have on the productivity of its contractors and agreed that productivity will be (conservatively) affected by 10% as cutters will no longer be allocated to jobs based on availability. This results in a total cost of \$0.15M per annum (\$2015).
55. Due to the significant additional requirement for each notice to contain diagrams and individual impact statements, JEN—with advice from its vegetation management contractor—forecast an additional three assessors (and associated vehicle and equipment to process notices on site) are required. This results in a total cost of \$0.66M annually (\$2015).
56. The new requirement to published notices "in a newspaper circulating generally in the locality of the land in which the tree is to be cut or removed" for street trees for which JEN has electric line clearance responsibility will require JEN to incur incremental costs. As the cutting is on a continuous program, advertisements will need to be placed at least weekly to advise the public of the intended areas and dates. Advertisements in three local papers will cost JEN \$2k per week per newspaper (for 5 months of the year in the High Bushfire Risk Areas of the network, i.e. non-declared area) plus a full time resource to manage the activity. This results in a total cost of \$0.27M per annum (\$2015).
57. The total incremental cost to comply with the enhanced notification and consultation provisions is \$2.40M per annum (\$2015).

3.3.3 ASSISTANCE WHICH MUST BE PROVIDED TO COUNCILS

58. The 2015 regulations require JEN to provide advice to the Council on, (a) safe limits of approach to electric lines for cutting or removing the tree; and (b) safe methods for cutting or removing the tree. JEN must also assist councils by determining the additional distance required for sag and sway. JEN expect that 1 FTE is required to address new enquiries and will be able to meet this new activity. This results in a total incremental cost to JEN of \$0.15M per annum (\$2015).

3.3.4 REMOVAL OF ROADS CORPORATION AS A RESPONSIBLE PERSON

59. This item remains unchanged from the step change submitted with JEN's regulatory proposal.
60. We have completed an assessment of the areas affected by the regulatory change. JEN is responsible for approximately 565 additional spans.
61. As of 1 April 2014, JEN has been responsible for maintaining electric line clearance for these areas and vegetation management activities have already commenced. However, expenditure in the balance of CY14 (i.e. April 2014 to December 2014) does not represent a full representative year of expenditure.

3 — VEGETATION MANAGEMENT

62. Ongoing vegetation maintenance requires an incremental \$0.09M in CY16 to bring us to a compliant state relative to CY14 expenditure.

3.4 OPEX STEP CHANGE FORECAST

63. Table 3–3 below provides a copy of the vegetation management step change forecast as submitted on 30 April 2015 with expenditure attributed to the four main compliance categories identified by the regulatory year and is that which JEN proposed before the final 2015 regulations were legislated.

Table 3–3: Vegetation management step change forecast (\$2015, millions)

	Step change forecast					
	2016	2017	2018	2019	2020	Total
Amenity tree management standard AS 4373	0.18	0.18	0.18	0.18	0.18	0.90
Enhanced Notification and Consultation provisions	0.62	0.62	0.62	0.62	0.62	3.08
Assistance which must be provided to Councils	0.31	0.31	0.31	0.31	0.31	1.55
Removal of Roads Corporation as a Responsible Person	0.09	0.00	0.00	0.00	0.00	0.09
Total step change	1.20	1.11	1.11	1.11	1.11	5.63

Table 3–4 below itemises each of the compliance activities another level further into sub-categories with expenditure by regulatory year based on the finalised legislative requirements for individual activities. Table 3–4 also reveals the additional compliance activities costed under this revised step change proposal, relative to the three activities included in JEN’s regulatory proposal—identified with orange boxes. The slight variation in expenditure between Table 3–3 and Table 3–4 arise due to minor clarification of required activities provided in the final 2015 regulations.

Table 3–4: 2015 regulations compliance activities by regulatory year (\$millions, real \$2015)

	Regulations compliance categories	Sub categories	Step change forecast					
			2016	2017	2018	2019	2020	Total
Electricity Safety (Electric Line Clearance)	Amenity tree management standard AS 4373	Use no less than a Certificate 3 qualified arborist for inspection	0.06	0.06	0.06	0.06	0.06	0.30
		Use no less than a Certificate 2 qualified arborist for cutting	0.09	0.09	0.09	0.09	0.09	0.45
		Non-use of tree climbing spurs/spikes*	0.18	0.18	0.18	0.18	0.18	0.88
		Use of mechanical cutters such as jarrafs	0.13	0.13	0.13	0.13	0.13	0.63
		Sub total						2.25
Electricity Safety (Electric Line Clearance)	Enhanced Notification and Consultation provisions, (Schedule 1 Part 2 Division 3 Clause 14)	(3)(c) A notice must be given to owners of contiguous land to which a tree is to be cut or removed. The notice must contain details and a diagram in accordance with clause 15(5).	1.32	1.32	1.32	1.32	1.32	6.60

Regulations compliance categories	Sub categories	Step change forecast					
		2016	2017	2018	2019	2020	Total
	(4) Contact details of the person actually carrying out the intended cutting or removal must be provided on the notice.	0.15	0.15	0.15	0.15	0.15	0.75
	The written notice must include additional information: (5)(c) ...details of the impact that the intended cutting or removal may have on the affected person's use of their land during the cutting or removal and (5)(a)(iii) ... a diagram that shows the tree and where the electric line is in relation to the tree and where the tree will be cut.	0.66	0.66	0.66	0.66	0.66	3.30
	Clause 16(3) A written notice published under subclause (2) must be published in a newspaper circulating generally in the locality of the land in which the tree is to be cut or removed.	0.27	0.27	0.27	0.27	0.27	1.35
	Sub total						12.00
Assistance which must be provided to Councils (Schedule 1 Part 2 Division 4 Clause 19)	Clause 20(2) a distribution company... when requested to do so must provide advice to the Council on – (a) safe limits of approach to electric lines for cutting or removing the tree; and (b) safe methods for cutting or removing the tree. Clause 21 a distribution company, when requested to do so must assist councils by determining the additional distance required for sag and sway	0.31	0.31	0.31	0.31	0.31	1.55
	Sub total						1.55
Revised 2015 step change		3.16	3.16	3.16	3.16	3.16	15.80
Removal of Roads Corporation as a Responsible Person		0.09	0	0	0	0	0.09
Total vegetation management revised step change							15.89

(1) Orange boxes represent compliance activities included in the original vegetation management step change proposal on 30 April 2015

(2) Numbers may not add due to rounding