

# Jemena Electricity Networks (Vic) Ltd

## 2016-20 Electricity Distribution Price Review Regulatory Proposal

Attachment 7-1

Historical capital expenditure report for the 2011  
regulatory period

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## ABBREVIATIONS

AER	Australian Energy Regulator
capex	Capital expenditure
CESS	Capital Expenditure Sharing Scheme
DMS	Distribution Management Systems
EDPR	Electricity Distribution Price Review
ESL	Environmental, Safety and Legal
JEN	Jemena Electricity Network (Vic) Ltd
OMS/DMS	Outage Management and Distribution Management Systems
REPEX	the AER's replacement model
RQM	Reliability and Quality Maintained
RTS	Real Time Systems
SCADA	Supervisory Control and Data Acquisition
UE	United Energy

## 1. PURPOSE

1. The purpose of this document is to demonstrate that Jemena Electricity Networks' (Vic) Ltd (**JEN**) capital expenditure (**capex**) for the 2011 regulatory period has been prudent and efficient, and undertaken in a manner consistent with good industry practice.
2. This document includes a comparison of JEN's actual capex for the 2011 regulatory period against the capex forecast in our revised 2011-15 EDPR proposal (**revised proposal**), and the Australian Energy Regulator's (**AER's**) final decision. The comparison shows that while we expect to spend more than the regulatory allowance for standard control services (**distribution services**) by approximately 27%; our capex is in line with the capex forecast in our revised proposal.
3. This document explains the key reasons for the variances between our actual capex, the capex we forecast in our revised 2011 proposal and the regulatory allowance. It demonstrates that while we have exceeded the regulatory allowance, this has been necessary to comply with *all applicable regulatory obligations or requirements associated with the provision of standard control services*.<sup>1</sup>

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<sup>1</sup> NER S6.2.2(1)

### 2. PERFORMANCE OVER THE 2011 REGULATORY PERIOD

#### Box 2-1 Key messages – historical capex

- Our expected capex for the 2011 regulatory period is within 1% of the capex forecast in our revised proposal, but approximately 27% greater than the regulatory allowance
- Our service outcomes, achieved whilst spending in line with what we forecast in our 2011 revised proposal, show that we forecast our expenditure requirements well.
- As a privately owned network, JEN is incentivised to spend within the regulatory allowance. However, as a prudent service provider, we cannot compromise on our safety and service standard commitments to customers, or on the regulatory obligations and requirements associated with the provision of distribution services.
- Where we spent more than the regulatory allowance, this has been necessary to comply with all applicable regulatory obligations or requirements associated with the provision of standard control services.
- Our asset management and governance framework, which is PAS 55 accredited, ensures that we only incur capex when it is prudent and efficient to do so.
- Variances between our proposed capex and our expected capex for the 2011 regulatory period at the category level have primarily been driven by adjustments to the capital program to respond to changing circumstances which were not reasonably foreseen by JEN or the AER at the time that the 2011 Distribution Determination was made.

#### 4. This section of the report:

- Outlines JEN's distribution actual capex for the 2011 regulatory period and compares it to JEN's proposed capex,<sup>2</sup> and to the regulatory **allowance**
- Provides the reasons for the differences between our actual/forecast and proposed capex and the regulatory allowance
- Demonstrates that we are an efficient and prudent operator that responds to incentives and the changing environment.

#### 2.1 OVERVIEW OF HISTORICAL CAPEX IN THE 2011 REGULATORY PERIOD

5. **Table 2-1** sets out the 2011 regulatory period actual capex by category and compares it to JEN's proposed capex for the 2011 regulatory period, and the regulatory capex allowances.

<sup>2</sup> Proposed standard control services capex as reported in Jemena Electricity Networks, *Revised regulatory proposal*, 20 July 2010, Table 8-9, pp197-198

**Table 2–1: 2011-15 actual/estimate capex, JEN proposed, and approved (\$2015, \$millions)**

	2011 regulatory period			Variance (%) Actual/estimate vs.:	
	JEN revised proposal	Regulatory allowance <sup>1</sup>	Actual/expected	JEN revised proposal	Regulatory allowance
Gross demand connections	181.5	161.4	209.8	16%	30%
Reinforcements	145.4	111.6	139.1	-4%	25%
Reliability and quality maintained ( <b>RQM</b> )	180.5	59.9	101.5	-44%	70%
Environmental, safety and legal ( <b>ESL</b> )	40.8	91.4	107.9	164%	18%
Supervisory control and data acquisition ( <b>SCADA</b> ) and network control	3.6	3.3	6.4	79%	93%
Non-network IT	81.7	72.6	76.2	-7%	5%
Non-network general - other	70.7	52.3	62.2	-12%	19%
<b>Total</b>	<b>704.1</b>	<b>552.6</b>	<b>703.2</b>	<b>0%</b>	<b>27%</b>

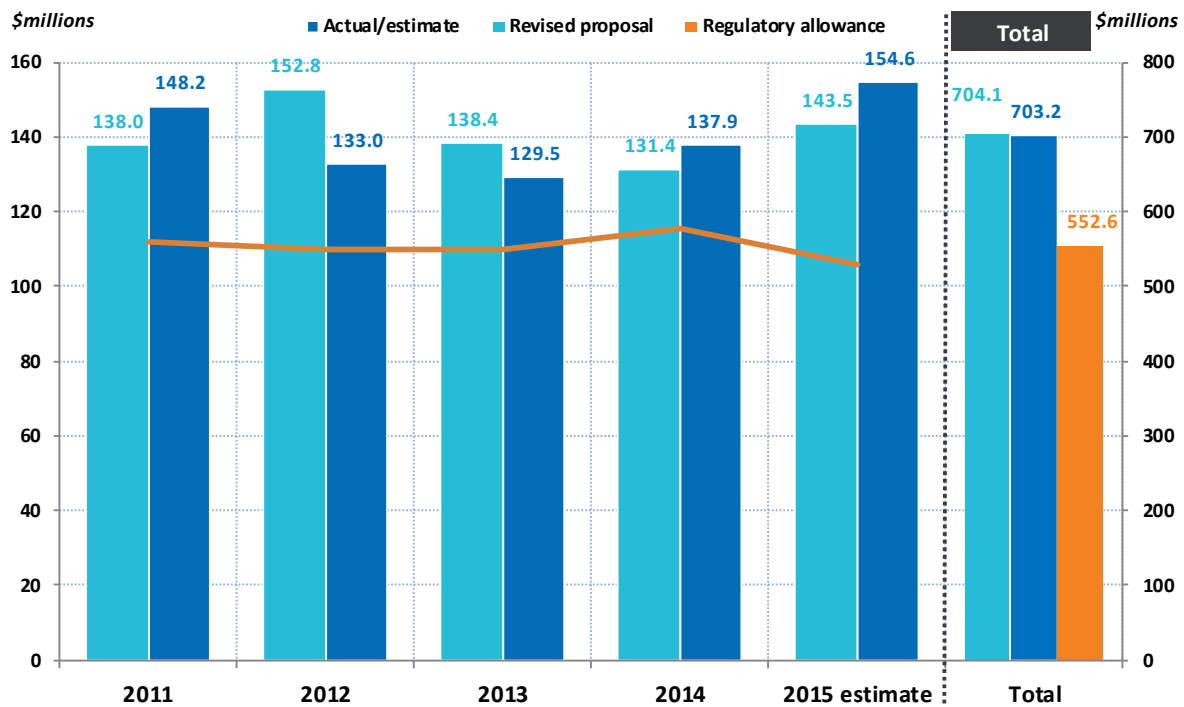
Source: JEN, Revised regulatory proposal, 20 July 2010, pp197-198; AER final determination (post-merits review); JEN capex model

(1) Regulatory allowances were set in 2010 dollars, and have been converted to 2015 dollars using actual inflation data (Sep to Sep quarter).<sup>3</sup>

6. Over the 2011 regulatory period we expect to incur capex of \$703m, which is 27% higher than the regulatory allowance. We expect to spend more than the regulatory allowance in all categories of capex. Expenditure on gross demand connections, RQM and reinforcements are the key drivers of JEN exceeding the regulatory allowance.
7. Figure 2–1 shows JEN’s actual capex over the 2011 regulatory period compared to the revised proposal and the regulatory allowance. Although we have spent more than the regulatory allowance, our expected capex for the 2011 regulatory period is within 1% of the capex forecast in our revised proposal.
8. Our service outcomes, achieved whilst spending in line with what we forecast in our 2011 revised proposal, show that we forecast our expenditure requirements well. An overview of our service performance over the 2011 regulatory period is provided in Attachment 2-1.

<sup>3</sup> From the Australian Bureau of Statistics, consumer price index, weighted average of eight capital cities, series ID A2325846C.

Figure 2–1: Comparison of JEN’s proposed and actual capex vs. the regulatory allowance



Source: JEN, Revised regulatory proposal, 20 July 2010, Table 8-9; AER final determination (post merits review); JEN capex model

9. As a prudent service provider, we regularly review and update the capital program to ensure that expenditure is directed towards those projects necessary to meet all applicable regulatory obligations or requirements associated with the provision of distribution services. Variances between our proposed capex and our expected capex for the 2011 regulatory period have primarily been driven by adjustments to the capital program to respond to changing circumstances. For example, we deferred a number of network augmentation projects when forecast increases in demand did not materialise. At the same time, we were required to redirect investment into replacement projects where it was not possible to achieve service targets and ensure customer safety without incurring capex. More details on the drivers of capex variances throughout the 2011 regulatory period are provided in section 2.2.
10. Whilst implementing steps to redirect and defer capex where possible over the 2011 regulatory period, we incurred capex that was greater than the regulatory allowance. Spending above the allowance is commercially undesirable, as JEN has to bear the financing costs and a depreciation penalty for any overspends. This acts as a strong incentive to us, as a privately funded business, to maintain expenditure within the regulatory allowance. However, as a prudent service provider, JEN cannot compromise on its safety and service standard commitments to customers, or on the regulatory obligations and requirements associated with the provision of distribution services. In order to meet our commitments and obligations over the 2011 regulatory period, it has been necessary to exceed the regulatory allowance.
11. Over-spending the allowance is not sustainable over the longer-term. The introduction of the capital expenditure sharing scheme (**CESS**) and ex-post efficiency reviews from 2014 onwards, means that the penalties for exceeding the allowance are even stronger. Ultimately, this means that we must get an allowance that ensures we can:
  - deliver the forecast program of capital work that meets our safety and service standard obligations



- maintain the level of reliability our customers have indicated they expect
- minimise the impact of our forecast investments on our customers' bills

## 2.2 DRIVERS OF CAPEX VARIANCES IN THE 2011 REGULATORY PERIOD

12. The following sections provide an overview of the drivers of capex in the 2011 regulatory period, and an explanation of the key reasons for the difference between the regulatory allowance and JEN's actual and expected expenditure.

### 2.2.1 RELIABILITY AND QUALITY MAINTAINED, AND ENVIRONMENTAL, LEGAL AND SAFETY CAPEX

13. In its final decision, the AER reclassified a number of RQM projects to the ESL category. Therefore, to undertake a comparable review of historical expenditure against our revised proposal and the regulatory allowance, we have combined the expenditure in these two categories.
14. RQM expenditure is primarily associated with maintaining existing levels of reliability and quality of supply to customers. The vast majority of this category is associated with asset replacement investment. ESL capex is primarily associated with ensuring compliance with existing and new environmental, safety and legal obligations. Projects typically include managing risks with overhead services, poles, pole top structures and overhead conductor.
15. We expect that RQM and ESL capex in the 2011 regulatory period will exceed the regulatory allowance by approximately \$58m.

**Table 2–2: RQM and ESL capex (\$2015, \$millions)**

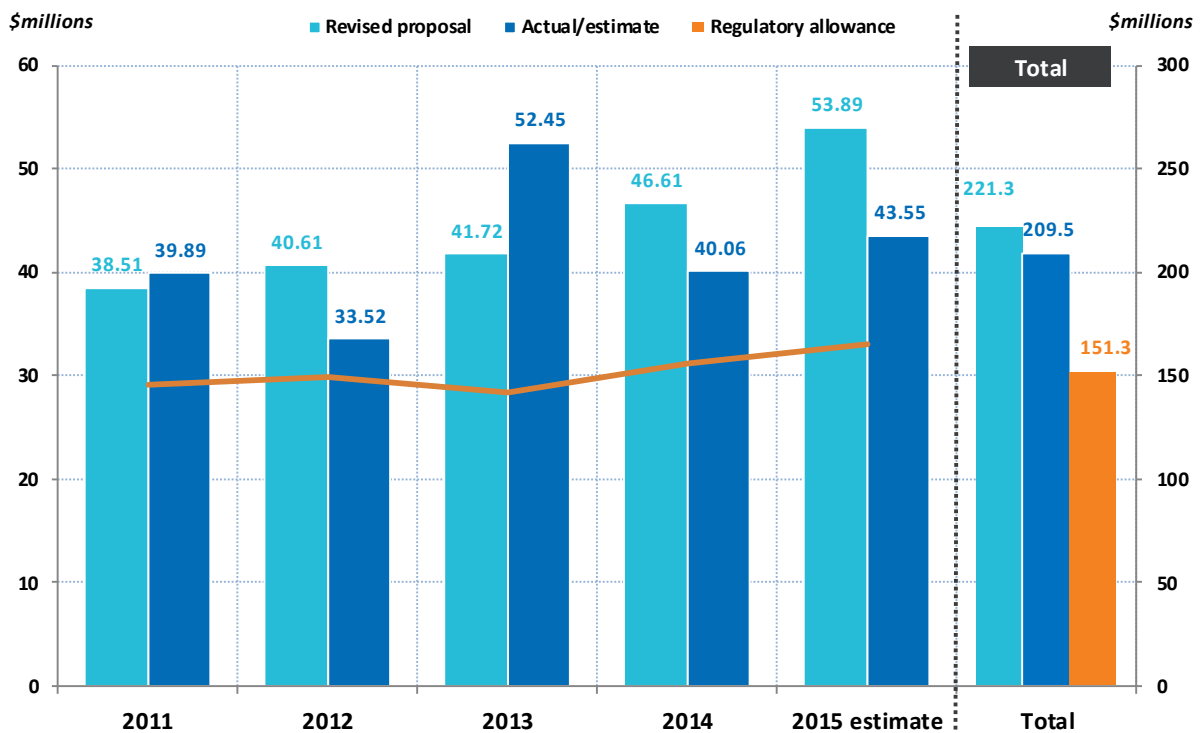
	2011	2012	2013	2014	2015 estimate	Total	Variance to actual/forecast
Revised proposal	38.5	40.6	41.7	46.6	53.9	221.3	11.9
Regulatory allowance (incl. Merits review outcomes) <sup>1</sup>	29.0	29.9	28.3	31.1	33.1	151.3	-58.1
Actual/estimate	39.9	33.5	52.4	40.1	43.6	209.5	-
Actual/forecast less regulatory allowance	10.9	3.7	24.2	9.0	10.5	58.1	-

Source: JEN, Revised regulatory proposal, 20 July 2010, pp197-198; AER final determination (post-merits review); JEN capex model

(1) Regulatory allowances were set in 2010 dollars, and have been converted to 2015 dollars using actual inflation data (Sep to Sep quarter).<sup>4</sup>

<sup>4</sup> From the Australian Bureau of Statistics, consumer price index, weighted average of eight capital cities, series ID A2325846C.

Figure 2–2: RQM and ESL capex (\$2015, \$millions)



Source: JEN, Revised regulatory proposal, 20 July 2010, Table 8-9; AER final determination (post merits review); JEN capex model

16. The regulatory allowance for the 2011 regulatory period was based on the AER's replacement model (**REPEX**). JEN's actual replacement capex spend is determined by asset conditions as revealed through its asset inspection program. As JEN advised in its response to the draft decision<sup>5</sup>, the AER's REPEX model systematically understates required replacement capex for JEN's network, particularly in the area of replacement unit rates.
17. JEN considers that predictive modelling may provide 'first-pass' information on whether a service provider's forecast costs are likely to represent prudent and efficient costs and, if not, to highlight aspects of the forecast which should be the subject of more detailed examination. However, predictive modelling measures are necessarily limited in their ability to account for factors which may affect a service provider's forecast of expenditure requirements (refer to Attachment 8-4).
18. The following project and programs have been the key drivers for JEN exceeding the regulatory allowance for capex.
  - *Non-preferred service replacement* – As shown in Table 2–3, JEN is on track to deliver the AER's approved volume of non-preferred service replacements for the 2011 regulatory period. Our non-preferred services replacement program prioritises replacement of non-preferred services which fail to meet minimum height requirements—the planned replacement of non-preferred services due to height program. However, as the regulatory allowance was based on a lower unit rate than what we proposed in our revised proposal (as shown in Table 2–4), we expect actual capex to exceed the regulatory allowance.

1. <sup>5</sup> JEN, Revised Regulatory Proposal 2011-15, 20 July 2010, p.157.

- *Pole reinforcement* – Upon being classified as unserviceable, poles may be either replaced or reinforced. In the 2011 regulatory period, there has been an increase in the volume of unserviceable poles, and a large proportion of these have been identified unsuitable for reinforcement. JEN expects to reinforce (stake) 1,368 more poles than assumed by the regulatory allowance (refer to the last two rows of Table 2–3). This increased volume of pole reinforcements, together with outturn higher unit rates used to determine the regulatory allowance (Table 2–4), has contributed to JEN’s expenditure exceeding the AER’s allowance.
- *Pole replacement* – JEN undertakes pole replacement according to asset condition. In the 2011 regulatory period, we expect to replace an additional 244 poles than what the AER has approved (refer to Table 2–3). This increased volume and of pole replacements, together with outturn higher unit rates that assumed in the regulatory allowance, contributes to JEN’s expenditure exceeding the regulatory allowance.

**Table 2–3: Pole and service replacement and reinforcement volumes**

	Allowance	Actual/forecast	Variance	Variance to allowance (%)
Planned non-preferred services replacements	33,987	33,999	12	0%
Replace poles - based on age and condition	1,294	1,538	244	19%
Stake poles - based on age and condition	1,114	1,866	752	68%
Replace undersized poles <sup>1</sup>	1,385	1,385	0	0%
Stake undersized poles	1,100	1,716	616	56%

(1) The volume of undersized poles suitable for staking has been higher than was anticipated. The pole replacement and staking programs for undersized poles should be considered together, and therefore the total variance is 30 poles.

**Table 2–4: Pole and service replacement and reinforcement average unit rates (\$2015)**

Direct unit costs	Allowance	Actual unit rate (average, 2011-14)	Variance to allowance (%)
Non-preferred services replacements	341	[c-i-c]	
Replacement of poles - based on age and condition <sup>1</sup>	5,582		
Stake poles - based on age and condition	827		
Replacement of undersized poles <sup>1</sup>	5,122		
Stake undersized poles	820		

(1) Pole replacement: the cost to replace a pole varies depending on the complexity and type of poles to be replaced (e.g. subtransmission, high voltage and low voltage poles). Therefore, the average unit rate will be higher should a higher proportion of complex high voltage poles be replaced.

(2) Pole staking: similar to pole replacement, the cost of staking a pole varies depending on strength and the type of poles to be staked. Hence, a high average unit rate could signify a higher proportion of high voltage poles have been staked.

- *Yarraville zone substation rebuild* — JEN’s revised proposal included \$4.5m for a number of RQM projects related to the retirement of Yarraville zone substation. These projects included constructing new feeders in Braybrook and Flemington, retiring relevant switchgear and reconfiguring relevant existing feeders. However, due to higher than anticipated urban infill, JEN deemed it prudent to rebuild the existing Yarraville zone substation to maintain reliability in the area. We expect to incur \$14.7m for the rebuild works.

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### 2.2.2 REINFORCEMENTS CAPEX

19. Expenditure in this category includes a broad range of projects and programs identified through our annual planning review process, which focus on load-growth related increases in capacity. Typical investment includes new and upgraded zone substations and feeders, works to deliver communication, protection and control requirements. The key driver for reinforcement expenditure is growing demand for electricity (typically over the summer period), whether through new customer connections or existing customers increasing their load.
20. We expect that expenditure on reinforcements throughout the current regulatory period will exceed the regulatory allowance.

**Table 2–5: Reinforcements capex (\$2015, \$millions)**

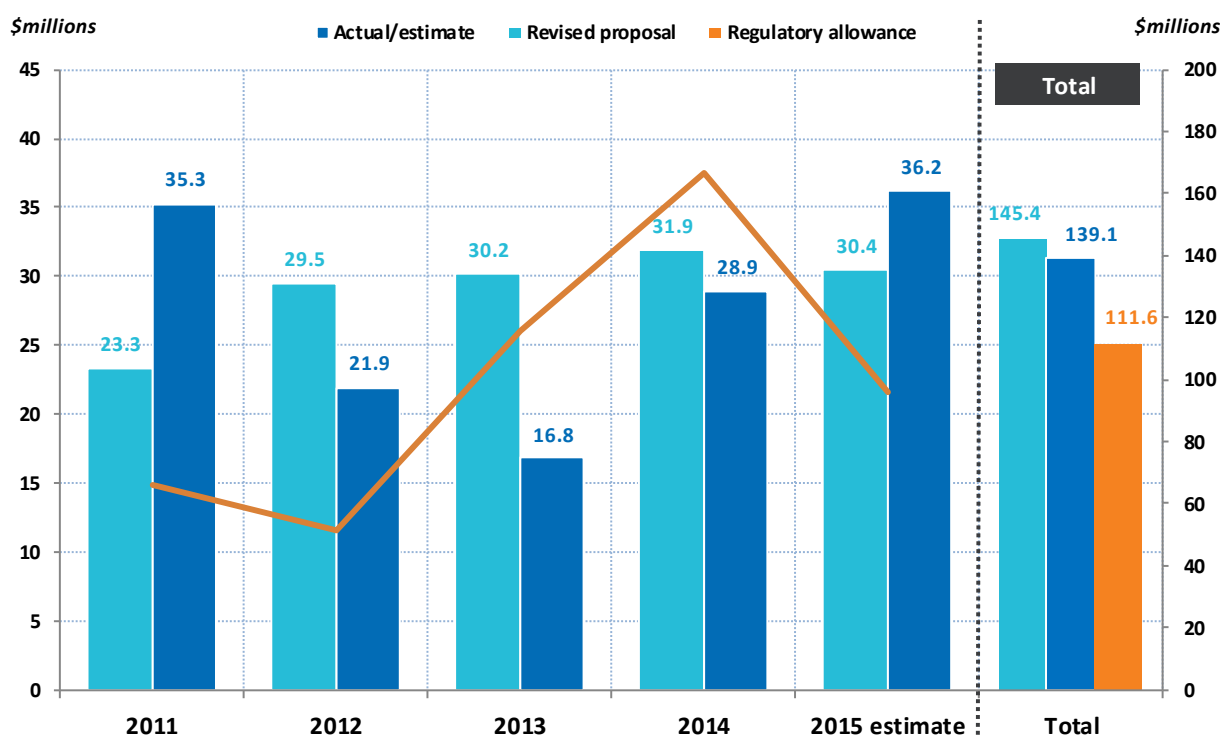
	2011	2012	2013	2014 estimate	2015 forecast	Total	Variance to actual/forecast
Revised proposal	23.3	29.5	30.2	31.9	30.4	145.4	6.2
Regulatory allowance (incl. Merits review outcomes)	14.9	11.6	26.0	37.6	21.5	111.6	-27.5
Actual/estimate	35.3	21.9	16.8	28.9	36.2	139.1	-
Actual/forecast less regulatory allowance	20.4	10.4	-9.2	-8.7	14.7	27.5	

Source: JEN, Revised regulatory proposal, 20 July 2010, pp197-198; AER final determination (post-merits review); JEN capex model

(1) Regulatory allowances were set in 2010 dollars, and have been converted to 2015 dollars using actual inflation data (Sep to Sep quarter).<sup>6</sup>

<sup>6</sup> From the Australian Bureau of Statistics, consumer price index, weighted average of eight capital cities, series ID A2325846C.

Figure 2–3: Reinforcements capex (\$2015, \$millions)



Source: JEN, Revised regulatory proposal, 20 July 2010, Table 8-9; AER final determination (post merits review); JEN capex model

21. Over the 2011 regulatory period, we have actively sought to defer reinforcement capex in areas of the network where demand has not materialised, or has been slower than anticipated. Examples where we have deferred capex include the Craigieburn and Flemington reinforcement projects. However, in order to meet growing demand in other areas of the network experiencing growth, it has been necessary to spend more than the regulatory allowance.
22. Expenditure on reinforcements exceeded the regulatory allowance in the first two years of the current regulatory period. This was driven by the need to proceed with a number of major reinforcement projects to ensure security of supply was not compromised, and network peak demand was met. In 2013 and 2014, expenditure on reinforcements was lower than that forecast by JEN in its revised proposal, and the regulatory allowance. This was driven by projects which were either completed earlier in the regulatory period, or rescheduled for later years.
23. The following major projects were deferred during the 2011 regulatory period, contributing to lower expenditure than forecast in JEN’s revised proposal:
  - Craigieburn zone substation – JEN’s revised proposal included \$5.8m to purchase land and commence establishment of a zone substation in Craigieburn. As demand growth in the northern corridor has been slower than forecast in 2010, the zone substation has been deferred to the 2016 regulatory period, with the land purchase expected to occur in 2015.
  - Preston Area Conversion (stages P4, EP4, P5 and P6) – JEN’s revised proposal included \$20m for four stages of the Preston Area conversion program. These projects have been deferred to the 2016 regulatory period following delays that occurred during previous stages of the Preston area conversion program. These delays resulted in conversion stages expected to be completed by 2010/11 taking an additional two years to complete, as a result of the need to negotiate with impacted customers and minimise supply interruptions.

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- Bulla (BLA) zone substation land – JEN's revised proposal included \$2m to purchase property for a Bulla zone substation. This purchase was deferred following a review of land purchase options in surrounding areas, to locate future zone substations within load centres, and is now forecast to occur in the 2016 regulatory period, but has been renamed as Plumpton zone substation land.
  - Flemington zone substation – JEN's revised proposal included \$3.5m to install a third transformer and third bus at the zone substation to address capacity constraints, however the condition of the zone substation building and safety concerns regarding working in close proximity to the 66kV indoor roof-suspended assets, resulted in the project being deferred and alternative solutions being investigated. With the Flemington racecourse and Showgrounds both contributing to increased demand in the area, and new housing developments in and around the racecourse, additional capacity out of the Flemington zone substation is needed immediately. As such, the RIT-D for this project is commencing in early 2015, with the expectation that augmentation can be achieved by late 2017.
24. These deferrals have been offset by the following projects, which have exceeded the expenditure included in JEN's revised proposal:
- *Broadmeadows South zone substation* – Our revised proposal included \$13.3m to establish this zone substation (inclusive of land purchase). Originally planned for service by the end of 2014, this project has been deferred by one year, and is expected to be delivered at an estimated cost of \$23.5m. This variance resulted from significant additional costs of undergrounding sections of the new high-voltage feeders (following project consultation with community and customers), and an expanded scope to introduce a modernised protection and control standard (IEC61850) and advancing the installation of the second transformer to maximise the long-term benefits of consumers.
  - *Tullamarine zone substation* – \$10.5m was included in JEN's revised proposal to establish this zone substation (excluding land purchase). Originally planned for service by the end of 2012, this project has been deferred by three years, and is expected to be delivered at an estimated cost of \$18.9m. This variance resulted from Tullamarine zone substation land purchase (\$2m) which was expected to occur during 2010 but fell into the 2011 regulatory period, and an expanded scope to introduce a modernised protection and control standard (IEC61850) and advancing the installation of the second transformer to maximise the long-term benefits of consumers.
  - *Preston Area Conversion (stage P3)* – \$0.9m was included in JEN's revised proposal for this project, representing 15% of the total forecast project cost (\$6.4m), with 85% expected to have been incurred in 2010. However, due to the project delays mentioned above, the full project cost was incurred in the current regulatory period, totalling \$9m. The variance of \$2.6m between the actual and forecast project cost is mainly due to additional works undertaken to correct technical non-compliance issues at a number of distribution substations.

### 2.2.3 GROSS DEMAND CONNECTIONS

25. Expenditure in this category is required to connect new customers to the network. JEN is obliged to connect new customers to its network, ranging from individual properties and urban residential developments through to new large commercial and industrial customers.
26. We expect that expenditure on gross demand connections throughout the current regulatory period will exceed the forecasts in our revised regulatory proposal, and the regulatory allowance.

**Table 2–6: Gross demand connections capex (\$2015, \$millions)**

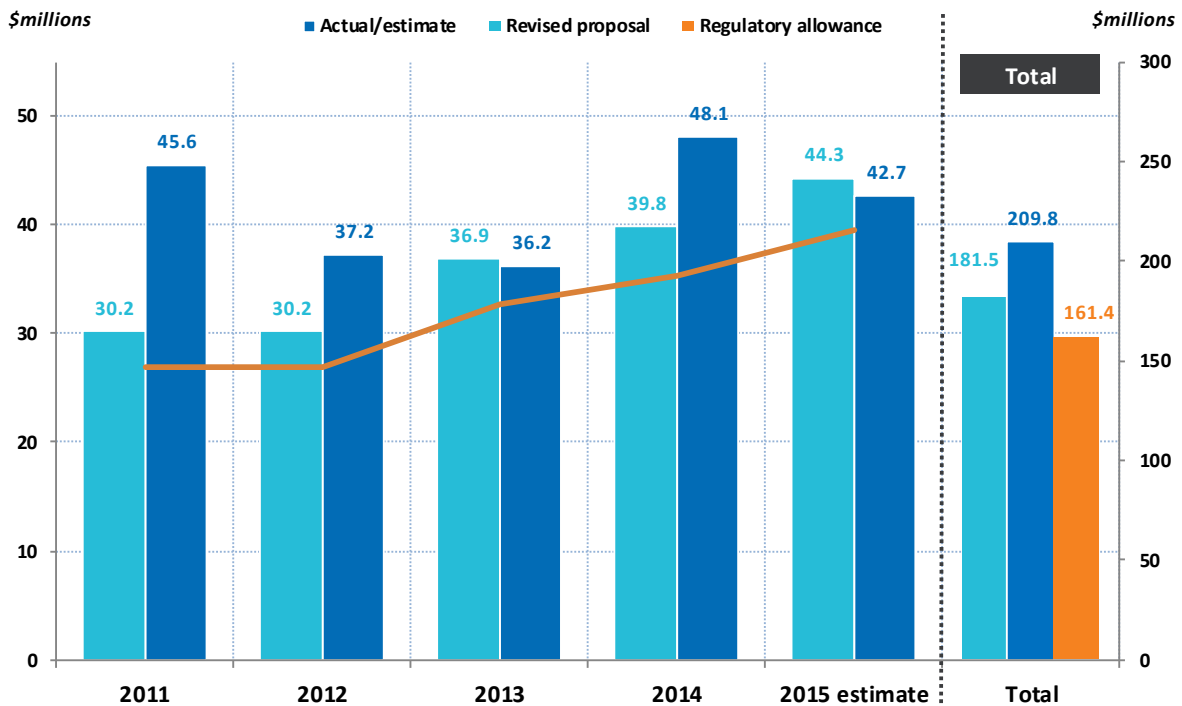
	2011	2012	2013	2014	2015 estimate	Total	Variance to actual/forecast
Revised proposal	30.2	30.2	36.9	39.8	44.3	181.5	-28.3
Regulatory allowance (incl. Merits review outcomes)	26.9	26.9	32.7	35.4	39.5	161.4	-48.4
Actual/estimate	45.6	37.2	36.2	48.1	42.7	209.8	-
Actual/forecast less regulatory allowance	18.7	10.3	3.5	12.7	3.2	48.4	

Source: JEN, Revised regulatory proposal, 20 July 2010, pp197-198; AER final determination (post-merits review); JEN capex model

(1) Regulatory allowances were set in 2010 dollars, and have been converted to 2015 dollars using actual inflation data (Sep to Sep quarter).<sup>7</sup>

27. As shown in **Figure 2–4**, actual and forecast expenditure on gross demand connections will exceed the regulatory allowance in all years of the 2011 regulatory period.

**Figure 2–4: Gross demand connections capex (\$2015, \$millions)**



Source: JEN, Revised regulatory proposal, 20 July 2010, Table 8-9; AER final determination (post merits review); JEN capex model

28. Over the first two years of the 2011 regulatory period expenditure on gross demand connections exceeded the forecasts in our revised proposal and the AER’s capex allowance. This was due to higher levels of activity in

<sup>7</sup> From the Australian Bureau of Statistics, consumer price index, weighted average of eight capital cities, series ID A2325846C.

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business supply, residential sectors (medium density housing, dual and multiple occupancy) and special capital works, specifically underground cable works. Unit costs were also higher than those used to forecast gross demand connections in our revised proposal. JEN expects gross demand connections capex will continue to exceed the allowance for the remainder of the regulatory period, as reflected in the estimated 2015 capex.

29. Sections 6 and 7 of JEN's Electricity Distribution Licence (ESC October 2008) require JEN to offer connections in response to a request from a retailer, customer or embedded generator. The increase in customer connection capex is therefore beyond JEN's control, as JEN was obliged to incur the associated connection costs.
30. **Table 2-7** shows the number of new customer connections assumed by JEN in the revised proposal and the actual number of new connections over the 2011 regulatory period.

**Table 2-7: New customer connection numbers**

	2011	2012	2013	2014	2015 forecast	Total	Total variance	Variance (%)
Revised proposal <sup>1</sup>	7,275	6,730	5,823	5,305	5,759	30,892	-	-
Actual/forecast <sup>2</sup>	6,321	7,136	7,409	8,268	8,180 <sup>3</sup>	37,314	6,422	21%

Source: A02.1 JEN consolidated RIN Template, Tab 6.3 Demand, Table 2; RINA 2011-2014; RINE Tab 2.5 Connections Table 2.5.1

### 2.2.4 SCADA AND NETWORK CONTROL CAPEX

31. Expenditure in this category contains SCADA and network control capex. We expect that expenditure on SCADA and network control capex throughout the current regulatory period will exceed the forecasts in our revised regulatory proposal, and the regulatory allowance.

**Table 2-8: SCADA and network control capex (\$2015, \$millions)**

	2011	2012	2013	2014	2015 estimate	Total	Variance to actual/forecast
Revised proposal	0.8	1.1	1.3	0.4	0.0	3.6	-2.8
Regulatory allowance (incl. Merits review outcomes)	0.7	1.0	1.2	0.3	0.0	3.3	-3.1
Actual/estimate	0.1	0.9	1.0	0.4	3.9	6.4	-
Actual/forecast less regulatory allowance	-0.6	-0.1	-0.3	0.1	3.9	3.1	

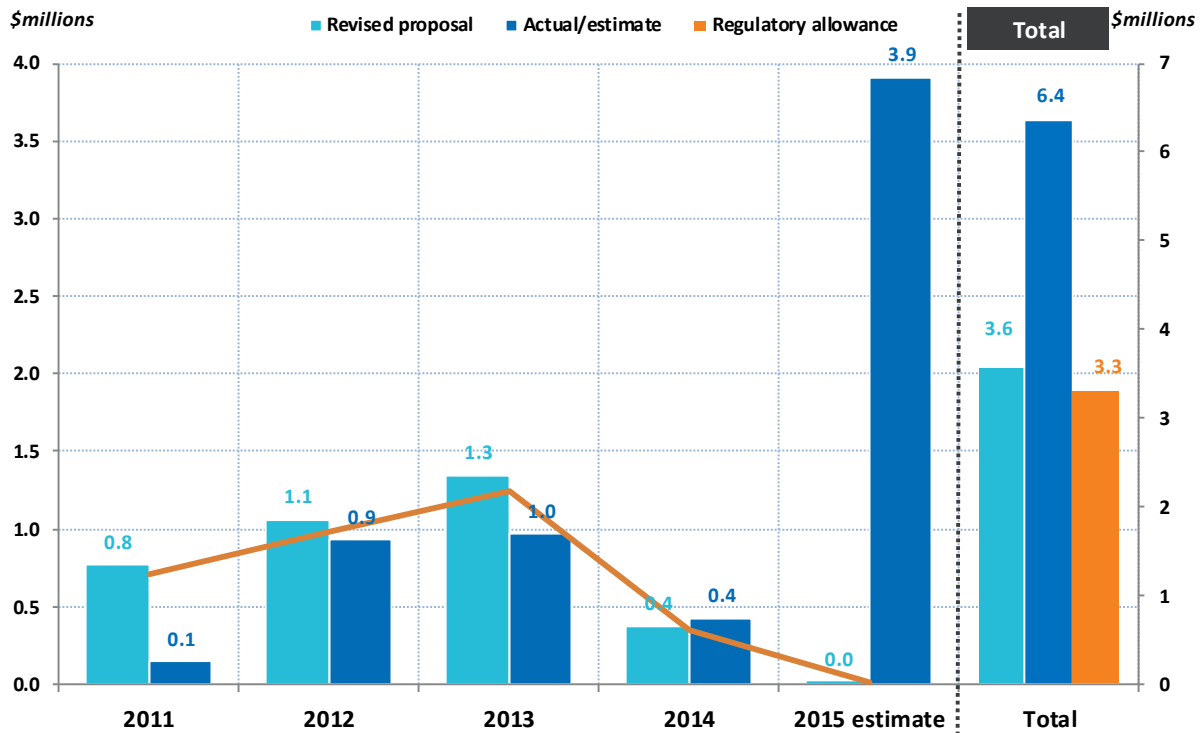
Source: JEN, Revised regulatory proposal, 20 July 2010, pp197-198; AER final determination (post-merits review); JEN capex model

- (1) Regulatory allowances were set in 2010 dollars, and have been converted to 2015 dollars using actual inflation data (Sep to Sep quarter).<sup>8</sup>

<sup>8</sup> From the Australian Bureau of Statistics, consumer price index, weighted average of eight capital cities, series ID A2325846C.



Figure 2–5: SCADA and network control capex (\$2015, \$millions)



Source: JEN, Revised regulatory proposal, 20 July 2010, Table 8-9; AER final determination (post merits review); JEN capex model

- 32. The underspend on **SCADA** and Real Time Systems (**RTS**) over the first half of the regulatory period has largely been driven by uncertainty in the product future roadmap for the current SCADA and Distribution Management Systems (**DMS**) IT software applications. This has been highlighted by the recent decision by the vendor to suspend future development and offer a transition plan for their customer base to move to an alternative product set.
- 33. Additionally, there is increasing convergence occurring between SCADA/RTS systems and Outage Management and Distribution Management Systems (**OMS/DMS**) in the products available in the marketplace. The timing of this is particularly pertinent to JEN given the need to replace the current OMS/DMS tool set. This project was deferred from the program of work for non-network IT in the 2011 regulatory period
- 34. JEN is considering these factors in developing its IT strategy and product choice for these systems and is preparing for a replacement of core systems in both SCADA/RTS and OMS/DMS in the 2016 regulatory period. As a consequence, historical investments in SCADA and RTS have been kept to the minimum required to maintain the systems until such time as the new path is chosen for these, increasingly integrated, applications.
- 35. Expenditure in 2015 relates to works to prepare for the major replacement program for both the SCADA and OMS/DMS systems, which is planned for the 2016 regulatory period.

2.2.5 NON-NETWORK IT CAPEX

- 36. Expenditure in this category comprises IT system implementations, upgrades, replacements, organic growth and enhancements designed to facilitate delivery of network services.
- 37. JEN's non-network IT capex expenditure for the 2011 regulatory period is expected to total \$76m, which is in line with the regulatory allowance of \$73m.

## 2 — PERFORMANCE OVER THE 2011 REGULATORY PERIOD

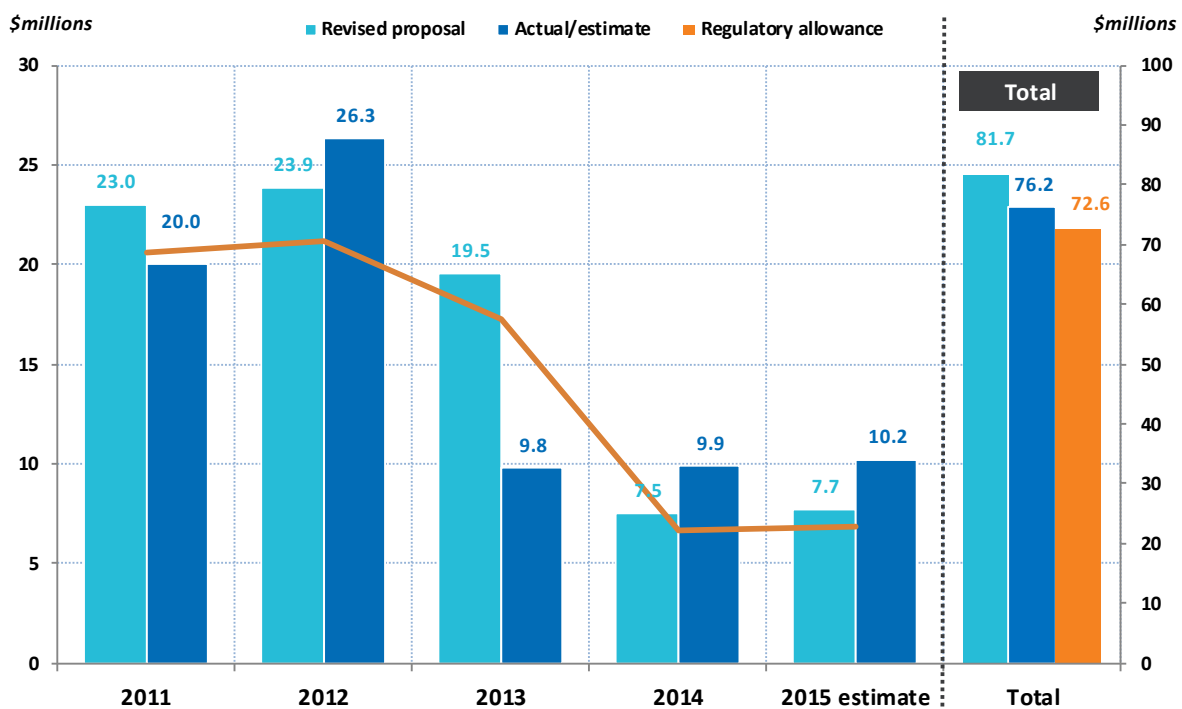
**Table 2–9: Non-network IT capex (\$2015, \$millions)**

	2011	2012	2013	2014	2015 estimate	Total	Variance to actual/forecast
Revised proposal	23.0	23.9	19.5	7.5	7.7	81.7	5.5
Regulatory allowance (incl. Merits review outcomes)	20.6	21.2	17.3	6.7	6.9	72.6	-3.6
Actual/estimate	20.0	26.3	9.8	9.9	10.2	76.2	-
Actual/forecast less regulatory allowance	-0.6	5.1	-7.5	3.2	3.4	3.6	

Source: JEN, Revised regulatory proposal, 20 July 2010, pp197-198; AER final determination (post-merits review); JEN capex model

(1) Regulatory allowances were set in 2010 dollars, and have been converted to 2015 dollars using actual inflation data (Sep to Sep quarter).<sup>9</sup>

**Figure 2–6: Non-network IT capex (\$2015, \$millions)**



Source: JEN, Revised regulatory proposal, 20 July 2010, Table 8-9; AER final determination (post merits review); JEN capex model

38. By the end of 2015 we will have completed all but two of the programs of work in the non-network IT category that were set out in our revised proposal. These two work programs are:
- *Mobility* – We will pilot mobility solutions in 2015, but the bulk of deploying capability to the field will not occur until the 2016 regulatory period. This deployment will use newly available mobile applications from SAP that interface back to our core systems for works and asset management.

<sup>9</sup> From the Australian Bureau of Statistics, consumer price index, weighted average of eight capital cities, series ID A2325846C.

- *Distribution Management System (DMS)* – Work on JEN’s DMS has been undertaken with acknowledgement of the need to deal with the SCADA and real time systems (**RTS**) in conjunction with DMS, and recognising the converging trends for these product sets in the software market. The DMS system was also intended to be shared with United Energy (**UE**), but this is now no longer an option.<sup>10</sup> JEN is planning to revisit the entire SCADA/RTS and **OMS/DMS** applications suite in the 2016 regulatory period.
39. The minor overspend over the 2011 regulatory period is associated with SAP related projects. This can be attributed to:
- The implementation of the core SAP ECC6 system which replaced two legacy systems creating a single, whole of business application for finance, HR and works management.
  - A JSAP operations alignment project in 2014-15 which is standardising processes across all of Jemena to a single set of operational procedures aligned with core SAP functionality. This involved reducing existing customisation of the product. This will deliver future dynamic and productive efficiency benefits by streamlining internal workflows and minimising capex work when upgrading SAP and deploying additional modules.

2.2.6 NON-NETWORK GENERAL – OTHER CAPEX

40. This category includes all non-network capex except for SCADA and network control capex. It includes expenditure on tool and equipment, buildings, property, vehicle and heavy machinery.
41. JEN’s non-network general – other capex expenditure for the 2011 regulatory period is expected to total \$62m, which exceeds the regulatory allowance of \$52m.

**Table 2–10: Non-network general – other capex (\$2015, \$millions)**

	2011	2012	2013	2014	2015 estimate	Total	Variance to actual/forecast
Revised proposal	22.2	27.5	8.7	5.2	7.1	70.7	8.4
Regulatory allowance (incl. Merits review outcomes)	19.9	19.2	4.2	4.2	4.8	52.3	-10.0
Actual/estimate	7.4	13.0	13.3	10.5	18.1	62.2	-
Actual/forecast less AER allowance	-12.6	-6.1	9.1	6.3	13.3	10.0	

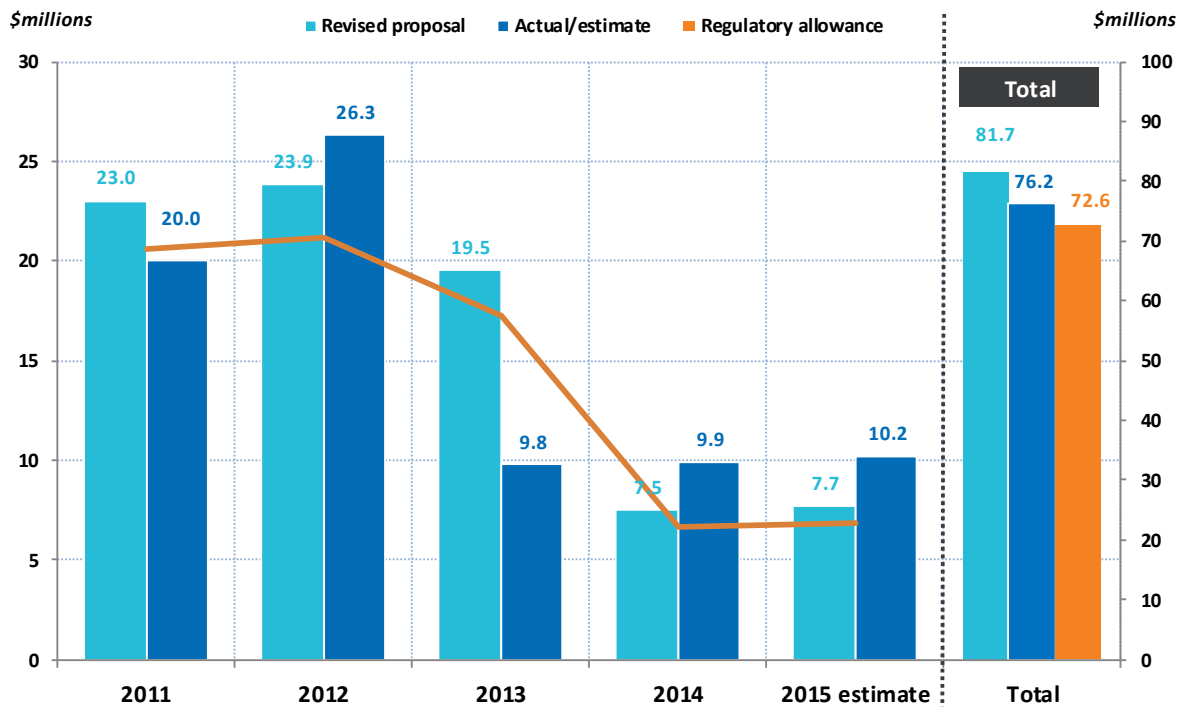
Source: JEN, Revised regulatory proposal, 20 July 2010, pp197-198; AER final determination (post-merits review); JEN capex model

(1) Regulatory allowances were set in 2010 dollars, and have been converted to 2015 dollars using actual inflation data (Sep to Sep quarter).<sup>11</sup>

<sup>10</sup> Until 1 July 2011, JEN shared some of its back office functions with UE, via Jemena Asset Management.

<sup>11</sup> From the Australian Bureau of Statistics, consumer price index, weighted average of eight capital cities, series ID A2325846C.

Figure 2–7: Non-network general – other capex (\$2015, \$millions)



Source: JEN, Revised regulatory proposal, 20 July 2010, Table 8-9; AER final determination (post merits review); JEN capex model

42. The variance in this category is mainly due to JEN’s property strategy in Victoria:

- *Victorian property project* – JEN is in the process of rationalising the office accommodation for all non-field based staff in Victoria. This project is part of a phased, multi-period property strategy. Currently based at different locations, staff will be relocated into a consolidated office in the last quarter of 2015. This expenditure was not forecast as a part of JEN’s proposal to the AER in 2010.
- *Broadmeadows and Sunshine depot mergers and relocation* – This project was originally scheduled for 2011 and 2012 with no forecast expenditure in 2014. The Broadmeadows site was the main depot for field based workers until mid-2014 when the Tullamarine depot became operational. In the 2016 regulatory period, the Broadmeadows depot redevelopment will involve the demolition of one of the existing buildings and the construction of a new operational and administration facility on one title.

### 2.3 SUMMARY

43. While our expected capex for the 2011 regulatory period is approximately 27% greater than the regulatory allowance, it is within 1% of the capex forecast in our revised proposal. Our service outcomes, achieved whilst spending in line with what we forecast in our 2011 revised proposal, show that we forecast our expenditure requirements well.
44. As a prudent service provider, we regularly review and update the capital program to ensure that expenditure is directed towards those projects necessary to meet all applicable regulatory obligations or requirements associated with the provision of distribution services.

45. Variances between our proposed capex and our expected capex for the 2011 regulatory period have primarily been driven by adjustments to the capital program to respond to changing circumstances. Over the 2011 regulatory period we deferred a number of network augmentation projects when demand did not materialise. At the same time, we were required to redirect investment into replacement projects where it was not possible to achieve service targets and ensure customer safety without incurring capex.
46. Despite efforts to redirect and defer capex where possible over the 2011 regulatory period, we incurred capex that was greater than the regulatory allowance. In particular, average unit rates for replacement activities have been significantly greater than assumed by the regulatory allowance. This has been a key factor in JEN exceeding the regulatory allowance for capex. Spending above the allowance is commercially undesirable, as JEN has to bear financing costs and a depreciation penalty for any overspends, and is not sustainable over the longer-term. It is important that we get an allowance that ensures we can meet our obligations and deliver the service levels that customers expect.