Issues Paper

SP AusNet's electricity transmission revenue proposal

2014–15 to 2016–17

1 May 2013

AUSTRALIAN ENERGY REGULATOR

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Shortened forms

Shortened form	Extended form
AARR	aggregate annual revenue requirement
ACCC	Australian Competition & Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASRR	annual service revenue requirement
capex	capital expenditure
CPI	consumer price index
EBSS	efficiency benefit sharing scheme
kW	kilowatt
MAR	maximum allowed revenue
MW	megawatt
MWh	megawatt hour
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective
NER	National Electricity Rules
NTSC	negotiated transmission service criteria
opex	operating expenditure
PTRM	post tax revenue model
RAB	regulatory asset base
RFM	roll forward model
RIT–T	Regulatory Investment Test for Transmission
STPIS	service target performance incentive scheme
TAB	tax asset base
TNSP	transmission network service provider
TUOS	transmission use of system
WACC	weighted average cost of capital

Overview

SP AusNet recently submitted its electricity transmission revenue proposal for its next regulatory control period from 1 April 2014 to 31 March 2017 (2014–17 regulatory control period). We, the Australian Energy Regulator (AER), are responsible for determining the revenues of SP AusNet, and the revenues of all transmission network service providers in the National Electricity Market (NEM).

This issues paper is intended to assist stakeholders prepare their submissions on SP AusNet's regulatory proposal.[1] In particular, we are seeking views on SP AusNet's revenue proposal and responses to the questions we have raised (outlined in the grey boxes) in this paper.

While SP AusNet has forecast decreases in the transmission component of retail electricity bills, it is important that stakeholders provide us with their views on SP AusNet's revenue proposal to ensure they are not paying more than necessary. The pricing impacts of the CBD rebuilds will flow through to local connections. As such, we seek input during the review process from consumers who will be affected by these projects.

In November 2012, the Australian Energy Market Commission (AEMC) made its determination on the network regulation rule changes.[2] Given the timing of the rule change, the AEMC implemented transitional arrangements providing that a previous version of the NER (version 52) will apply to SP AusNet's 2014–17 regulatory control period.[3] The previous version does not require us to publish an issues paper. However, we have decided to publish one on this occasion. We invite comment on its style, format and content that will inform future issues papers on revenue proposals.

What to include in your submission

We are seeking your views on aspects of SP AusNet's revenue proposal. It is important that your submission is supported by evidence and analysis. General statements made about a revenue proposal are not particularly helpful for our review. However, submissions that address specific issues, supported by evidence and analysis, can be very useful for our review.

If you consider a certain aspect of SP AusNet's revenue proposal is not justified, you should state why you consider it is not justified, with reference to specific evidence that supports your claim. This could include a discussion of the economic merits of a project, historical costs, or alternative options. It could also include practical examples of how the project should be implemented. You should also state what further information you consider SP AusNet should provide to justify that aspect of its proposal.

We are primarily interested in receiving submissions on SP AusNet's forecast capex and opex. Given the weighted average cost of capital (WACC) parameters are fixed for transmission,[4] we do not consider the WACC to be contentious. As such, we would prefer if submissions did not focus on the WACC.

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1 AEMC, Rule determination, National Electricity Amendment (Economic Regulation of network Service Providers) Rule 2012, November 2012, p. 174.

2 AEMC, *Rule determination – National Electricity Amendment (Economic regulation of network service providers) Rule 2012 and National Gas Amendment (Price and revenue regulation of gas services) Rule 2012*, 29 November 2012.

3 NER, clause 11.59.3(a).

4 AER, *Electricity transmission and distribution network service providers, Statement of revised WACC parameters (transmission)*, May 2009.

Timelines

Table 1.1 sets out the key dates of the SP AusNet review process.

Table 1.1 Key dates in the SP AusNet review process

Task	Date
SP AusNet revenue proposal submitted to AER	28 February 2013
AER board considers compliance review	28 March 2013
Publish revenue proposal and supporting documents	4 April 2013
Stakeholder forum	24 April 2013
Stakeholder submissions close	17 May 2013
Draft decision	30 August 2013
Revised Revenue Proposal	27 September 2013
Final decision	31 January 2014

Structure of this document

We have tried to make this paper accessible to a wide ranging consumer audience.

Therefore, section 1 of this document contains background information about us and our regulatory processes, as well as some information about SP AusNet and its role in the electricity supply chain. If you already have that background knowledge, then move straight to section 2. For more detailed discussions of the issues in SP AusNet's revenue proposal, see section 3.

1 Background

The following section provides information about us and SP AusNet. If you are familiar with our processes and SP AusNet, then refer straight to section 2 (Regulatory framework).

1.1 The Australian Energy Regulator

We are Australia's national energy market regulator and an independent statutory authority. Our functions are set out in national energy market legislation and rules, and mostly relate to energy markets in eastern and southern Australia. These functions include:

- setting the prices charged for using energy networks (electricity poles and wires and gas pipelines) to transport energy to customers
- monitoring wholesale electricity and gas markets to ensure suppliers comply with the legislation and rules, and taking enforcement action where necessary
- publishing information on energy markets, including the annual State of the Energy Market report and more detailed market and compliance reporting, to assist participants and the wider community
- assisting the Australian Competition and Consumer Commission with energy-related issues arising under the Competition and Consumer Act, including enforcement, mergers and authorisations.

Specific to this review, we are responsible for the economic regulation of all transmission networks in eastern and southern Australia.

The National Electricity Law (NEL) and National Electricity Rules (NER) set out the regulatory framework for the NEM. Chapter 6A of the NER contains the timelines and processes for the regulation of transmission businesses. It provides that regulated transmission businesses must periodically apply to us to assess their revenue. Typically, this happens every five years. The application, or revenue proposal, starts a process often referred to as a revenue reset, or simply a 'reset'.

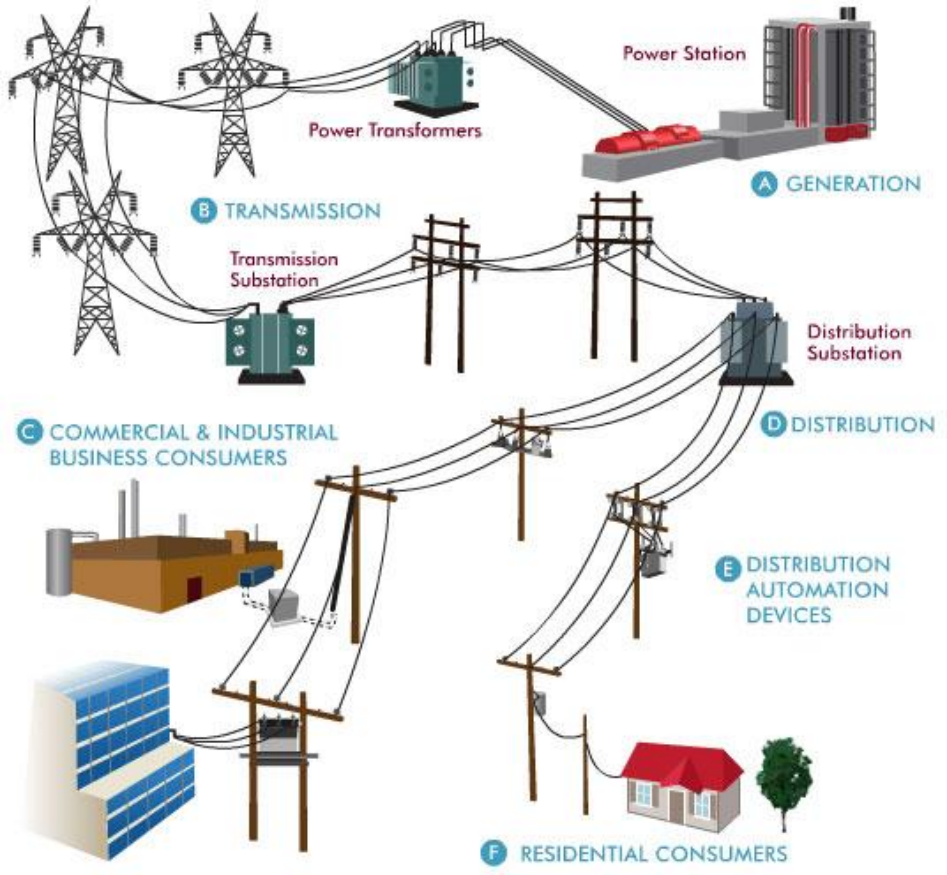
1.2 Who is SP AusNet and what does it do?

SP AusNet owns and operates the electricity transmission network in Victoria. Its role is to connect generators with demand centres in cities, towns and regional communities.

SP AusNet's transmission network is built around a 500 kV backbone running from the major generating source in the Latrobe Valley, through Melbourne and across the southern part of the state to Heywood near the South Australian border. The network provides key physical links in the NEM, connecting with networks in South Australia, NSW and Tasmania. The network consists of 6,553 kilometres of cable, running at voltages of 500kV, 330kV, 275kV, 220kV and 66kV.

To fund its activities, which are highly capital intensive, SP AusNet recovers its revenues from its direct customers (largely via AEMO which is responsible for levying transmission network charges in Victoria). SP AusNet's main customers are the distribution network operators in Victoria. Those transmission charges are then passed on to almost every Victorian household and business when they pay their final electricity bill. Figure 1.1 illustrates the electricity supply chain and the role of SP AusNet as an operator of the transmission network.

Figure 1.1 Electricity Supply chain



The electricity supply chain begins with a wholesale market in which generators produce electricity and sell it through a central dispatch process. Because generators are generally located near fuel sources, often hundreds of kilometres away from where consumers live and work, the electricity produced at a generator must be transferred over long distances. The most efficient way to do this is at high voltages since this minimises energy losses which naturally occur when electricity in transferred. This is SP AusNet's role: it operates a high voltage transmission network which transfers electricity, at high voltages, over long distances from where it is generated to where consumers need it.

The Victorian distribution networks[5] connect SP AusNet's transmission network. This occurs at zone substations. While electricity moves along a transmission network at high voltages to minimise energy loss, it must be stepped down to a lower voltage before it enters a distribution network. This is so the electricity can be safely used by end-users. Distribution networks criss-cross urban and regional areas to provide electricity to every electricity consumer, so they require high levels of investment.

Energy retailers issue the final electricity bill a consumer receives. Their function in the supply chain is to buy electricity in the wholesale market and package it with transportation services (transmission and distribution) for sale to consumers. In Victoria, energy retailers include AGL and Origin Energy.

[5] The Victorian distribution network service providers are Jemena, United Energy, Citipower, SP AusNet (distribution) and Powercor.

1.3 SP AusNet's consumer engagement and community consultation

SP AusNet liaises with the Victorian distribution network service providers, generators, direct connect customers and the Australian Energy Market Operator in the course of carrying out its business.[6] SP AusNet has met with the Energy Users Association of Australia (EUAA) and the Consumer Utilities Advocacy Centre (CUAC) to discuss its revenue proposal. SP AusNet has endeavoured to provide bill impact information to larger industrial customers in the revenue proposal.[7] It has undertaken to engage further with the EUAA and CUAC throughout the review process and to identify issues of concern.[8]

SP AusNet has also provided information on community consultation it has undertaken in relation to its CBD rebuild capex projects.[9] It conducted community consultation on the Richmond terminal station rebuild through newsletters, feedback forms, a phone hotline and face to face discussions during 'door–knocks'. SP AusNet will undertake the same process for the West Melbourne terminal station rebuild. SP AusNet's community consultation program is outlined in section 2.8 of its revenue proposal.

We would like feedback from user groups and the community in relation to SP AusNet's consultation procedures, particularly in relation to its proposed CBD rebuild projects and other major replacement projects. Under SP AusNet's pricing methodology, these projects will have localised pricing implications for customers. We want to know whether these pricing implications have been communicated to you.

Question for stakeholders – SP AusNet's consumer and community engagement

1) Are you satisfied with the level of engagement that SP AusNet has undertaken? If so, what in particular did you appreciate? If not, what additional engagement could SP AusNet have done?

2) Has SP AusNet communicated the pricing implications of the proposed CBD rebuilds and other major replacement capex projects?

6 SP AusNet, *Revenue proposal*, pp. 31–33.
7 SP AusNet, *Revenue proposal*, pp. 32–33.
8 SP AusNet, *Revenue proposal*, p. 33.
9 SP AusNet, *Revenue proposal*, p. 45.

2 Regulatory framework

SP AusNet operates under a unique regulatory framework, in terms of the version of the NER applicable to it over the 2014–17 regulatory control period and the planning arrangements in Victoria.

2.1 Applicable version of the National Electricity Rules

In November 2012, the AEMC made its determination on the network regulation rule changes.[10] This implemented a new version of the NER. However, given the rule change decision was released just before SP AusNet submitted its revenue proposal, in February 2013, the new rules could not apply to its transmission determination.

The AEMC therefore implemented transitional arrangements providing that the previous version of the NER (version 52) will apply to SP AusNet's 2014–17 regulatory control period.[11]

The minimum length of a regulatory control period is usually five years. However, the transitional arrangements allow for a reduced period of three years for SP AusNet's next regulatory control period so it can transition to the current version of the NER on 1 April 2017.[12]

Importantly, the previous version of the NER does not permit us to conduct an 'ex post' review of SP AusNet's capex.[13] This means we are not allowed to adjust SP AusNet's opening regulatory asset base for any inefficient capex during the 2008–14 regulatory control period. However, SP AusNet's historical capex and opex will inform our assessment of its expenditure forecasts.

2.2 Maximum allowed revenue

SP AusNet recovers revenue from its customers via its network tariffs. Its pricing methodology (appendix 13A to its revenue proposal), prescribes the way it recovers this revenue. To determine SP AusNet's revenue for the 2014–17 regulatory control period, we assess the total revenue required to provide prescribed transmission services for each year of the period. This annual revenue requirement reflects the efficient costs of providing prescribed transmission services across the Victorian electricity transmission network.

In accordance with the NER, we use the building block approach to determine the annual revenue requirement. That revenue requirement is determined by estimating the efficient costs that SP AusNet is likely to incur in providing prescribed transmission services. The underlying cost elements include:[14]

- a return on the regulatory asset base (return on capital)
- depreciation of the regulatory asset base (return of capital)
- forecast operating expenditure (opex)
- increments or decrements resulting from the efficiency benefit sharing scheme (EBSS)
- the estimated cost of corporate income tax.

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10 AEMC, *Rule determination – National Electricity Amendment (Economic regulation of network service providers) Rule 2012 and National Gas Amendment (Price and revenue regulation of gas services) Rule 2012*, 29 November 2012.

11 NER, clause 11.59.3(a).

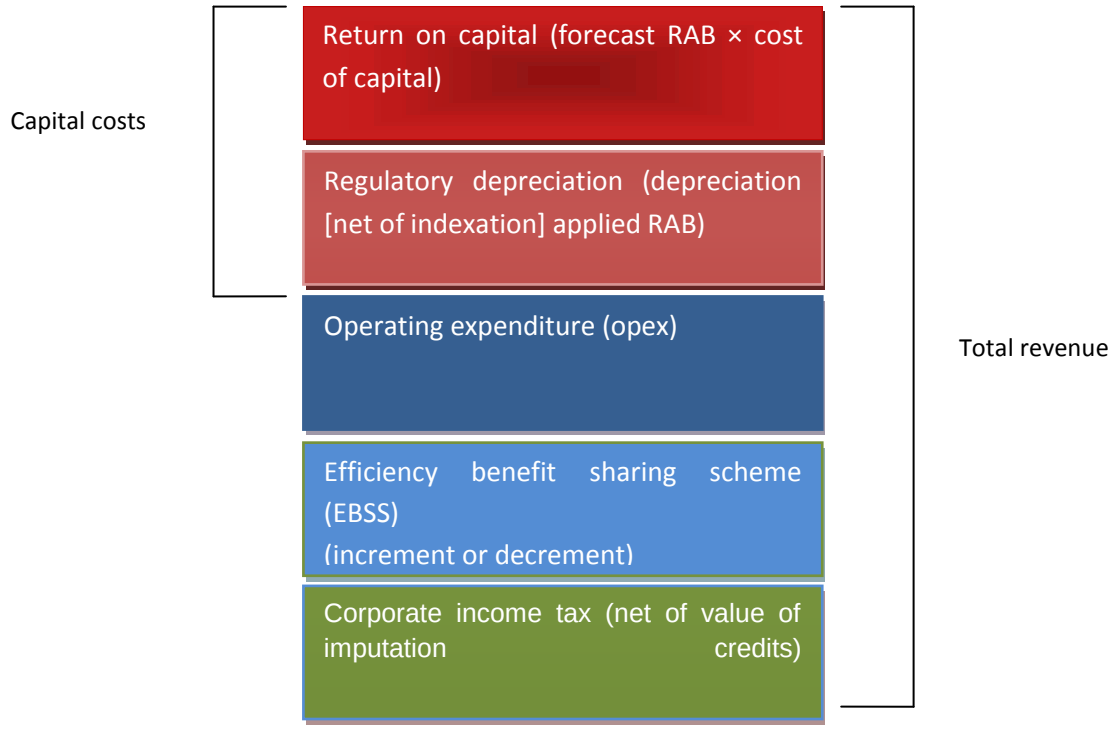
12 NER, clause 11.59.3(b).

13 The new version of the NER (version 55) permits use to exclude inefficient capex from being included in the opening RAB, where the TNSP has spent in excess of its capex allowance. See clause S6A.2.2A.

14 NER, clause 6A.5.4(a).

Our assessment of capex directly affects the size of the regulatory asset base and therefore the return on capital and return of capital building blocks.

Figure 2.1 The building block approach for determining total revenue



2.3 Victorian transmission planning arrangements

SP AusNet's revenue proposal does not include an allowance for augmentation capital expenditure (capex). Neither does it include forecast demand for prescribed transmission services. This is consistent with the Victorian transmission arrangements, which differ from other regions in the NEM.

In Victoria, the ownership and planning of the electricity transmission network is split between the transmission network providers and the Australian Energy Market Operator (AEMO). SP AusNet is the transmission network service provider that owns and operates the Victorian transmission network. AEMO, which is jointly owned by government and industry representatives, forecasts demand for transmission services and plans the network to meet that expected demand.[15]

In its planning role AEMO makes its decisions on a cost-benefit analysis.[16] In particular it assesses the impact of network limitations using probability weighted impacts of reliability events, such as transmission outages and unexpectedly high levels of demand.[17]

Once AEMO identifies an emerging constraint in the network it develops possible options. Preliminary cost estimates and likely lead times are projected for each possible option and, following this, a

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15 AEMO operates on a cost recovery basis as a corporate entity limited by guarantee under the Corporations Act. AEMO fully recovers its operating costs through fees paid by market participants. AEMO's ownership structure is split between government and industry representatives across the eastern states of Australia with membership comprising 60% Commonwealth and state government and 40% industry including generators, transmission companies, distribution businesses, resource companies and investment companies.

16 National Electricity Law, section 50F

17 AEMO, Victorian electricity planning approach, July 2012, p.1 available at: http://www.aemo.com.au/Electricity/Policies-and-Procedures/Planning/Victorian-Electricity-Planning-Approach

feasibility assessment known as the regulatory investment test for transmission (RIT-T) is conducted to identify the optimal solution.[18]

Following identification of the preferred option, AEMO can call for tenders for the construction, ownership and maintenance of the augmentation or non-network solution, and bidders have the chance of submitting other, possibly more innovative, options. Under the current Victorian transmission arrangements a total of 15 projects have gone to tender. Of these projects, SP AusNet has been awarded 13.[19]

Where the augmentation is deemed contestable and procured through a competitive tender process, the assets remain outside of SP AusNet's Regulatory Asset Base (RAB). However, assets relating to network augmentations undertaken during the 2008–14 regulatory control period, that were instigated by AEMO[20] and not undertaken on a contestable basis, or requested by the Victorian distribution network service providers,[21] are rolled into the RAB at the end of the period.

By contrast, in jurisdictions other than Victoria planning responsibility for the electricity transmission network rests with the network owner. They apply to us for an allowance over a regulatory control period to fund augmentation of the transmission network. An important input for determining augmentation expenditure requirements is the forecast demand for prescribed transmission services. As such, demand forecasts are included in their revenue proposals.

2.4 Pricing methodology and negotiating framework

SP AusNet provides prescribed transmission services and negotiated services. We set the revenue which SP AusNet can recover for providing prescribed transmission services and approve a pricing methodology that prescribes how that revenue is recovered.[22]

In light of the Victorian electricity transmission planning arrangements, SP AusNet's pricing methodology only addresses pricing matters for which SP AusNet has responsibility.[23] This is primarily the pricing of entry and exit services. AEMO have pricing responsibility for transmission use of system (TUOS) services, which includes the pricing of locational and non–locational components of electricity transmission prices.[24] The Victorian transmission pricing responsibilities of SP AusNet and AEMO are shown in Figure 2.2.

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18 AEMO, Victorian electricity planning approach, July 2012, p.5 available at: http://www.aemo.com.au/Electricity/Policies-and-Procedures/Planning/Victorian-Electricity-Planning-Approach.

19 Productivity Commission, Electricity network regulatory frameworks, October 2012 p 502 available at: http://www.pc.gov.au/projects/inquiry/electricity/draft.

20 In its capacity as the planner of the shared transmission network in Victoria.

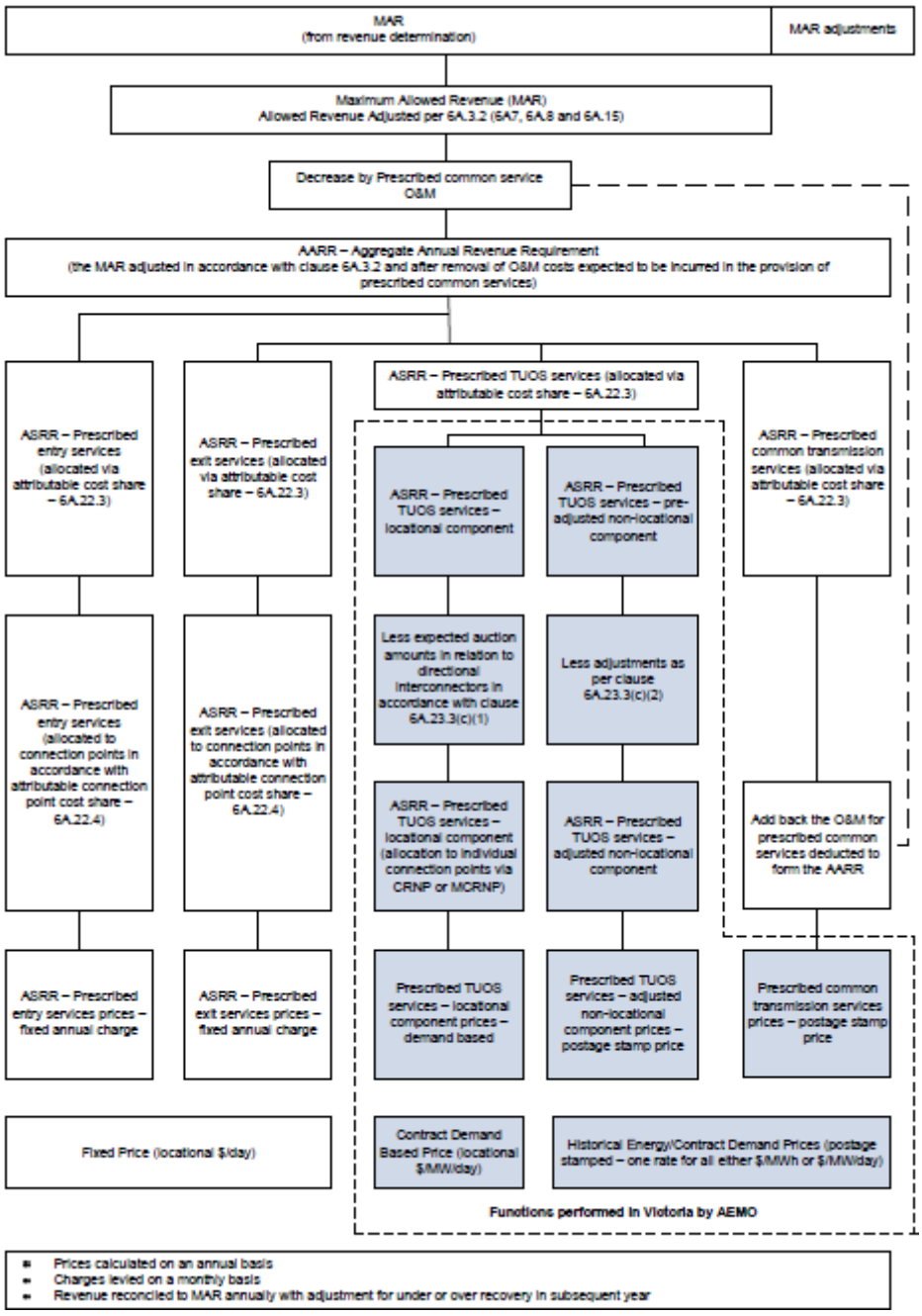
21 In their capacity as planners of the transmission connection assets that connect the transmission network with the Victorian distribution networks.

22 NER, clause 6A.24.1(b)(1) and (2).

23 SP AusNet, *Revenue proposal*, *Appendix 13A – Pricing methodology*, p.4.

24 SP AusNet, *Revenue proposal, Appendix 13A*, p. 4.

Figure 2.2 Pricing arrangements and responsibilities in Victoria



Source: SP AusNet, *Revenue proposal, Appendix 13A*, p. 17.

We have previously approved a pricing methodology and negotiating framework for AEMO which are effective to 30 June 2014. AEMO will provide us with a new pricing methodology and negotiating framework which will take effect from 1 July 2014.[25]

A pricing methodology does not apply to negotiated services. Their terms and conditions are negotiated between SP AusNet and a service applicant, or alternatively through arbitration and dispute resolution by a commercial arbitrator. To facilitate these processes we must approve a negotiating framework and determine the negotiated transmission service criteria (NTSC).

[25] NER, clause SA6A.4.2(f) (version 55).

SP AusNet has developed its negotiating framework with AEMO. SP AusNet stated that this is appropriate because given the services which AEMO manages an applicant for a negotiated service applicant must contract with both SP AusNet and AEMO.

3 Key issues

When considering the questions on which we would like feedback, it is useful to keep in mind that we must comply with requirements under the NEL and NER. The objective of the regulatory framework is to efficiently and reliably deliver services in the long term interest of consumers.[26] Under the NER, we must assess SP AusNet's expenditure forecasts to determine the efficient expenditure required to meet this objective. To meet this objective, a TNSP's capex and opex forecasts must be aimed at meeting expected demand and all applicable regulatory obligations, while maintaining the quality and reliability of supply and the safety of the transmission system.[27]

3.1 The price impact of SP AusNet's revenue proposal

From an early review of SP AusNet's revenue proposal, we consider the key issues putting upward pressure on transmission prices ($/MWh) over the 2014–2017 regulatory control period are:

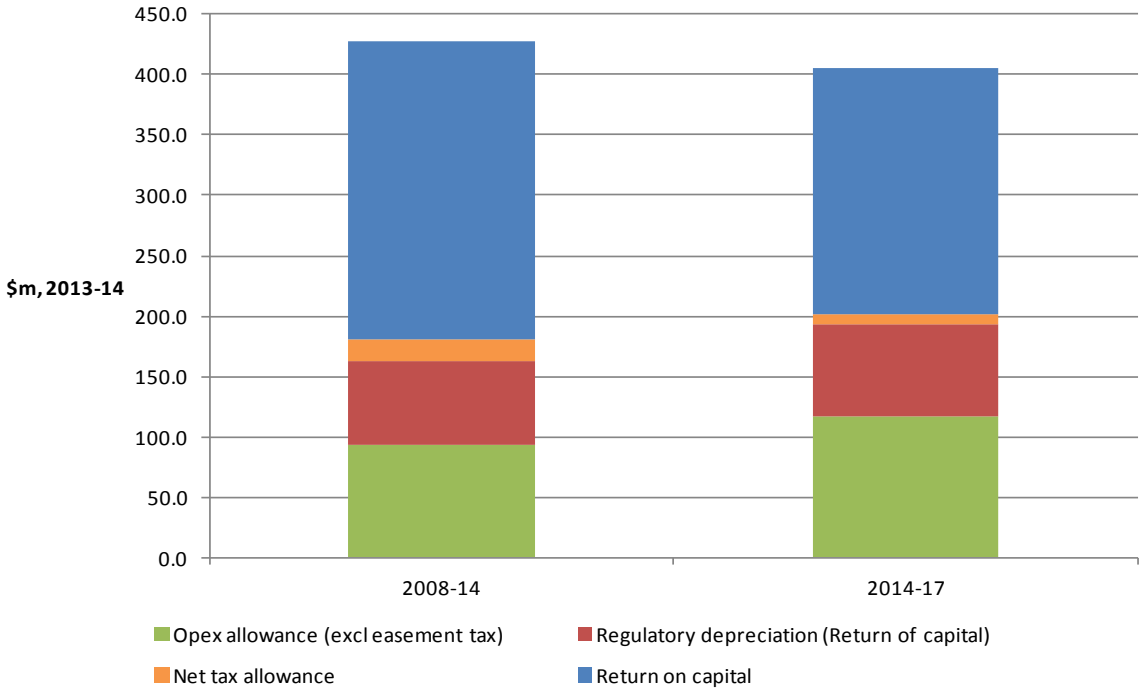
- the proposed CBD rebuild capex projects
- other capex projects (including safety and compliance capex and business IT capex)
- opex step changes and
- asset works opex.

SP AusNet's proposed weighted average cost of capital (WACC) of 7.19 per cent is lower than the WACC of 9.76 per cent that applied during the 2008–14 regulatory control period. This lower WACC has put downward pressure on transmission prices. This lower WACC is primarily a result of a lower risk free rate (which is one of the inputs for calculating the WACC). The risk free rate is derived from Australian Government bond yields, which have decreased over recent years.

The effects of these are shown in SP AusNet's proposed 2014–17 average building block revenue allowance when compared to the average allowance in the 2008–14 regulatory control period. The effect of the lower WACC has resulted in a lower proposed return on capital allowance (which is partially offset by the effect of the forecast increase in capex) while the proposed opex allowance is increasing. Figure 3.1 shows the revenue impact of these aspects.

[26] NEL, s 7.
[27] NER, clauses 6A.6.6(a) and 6A.6.7(a).

Figure 3.1 AER's 2008–14 final decision average revenue requirement and SP AusNet's proposed 2014–17 average revenue requirement ($m, 2013–14)

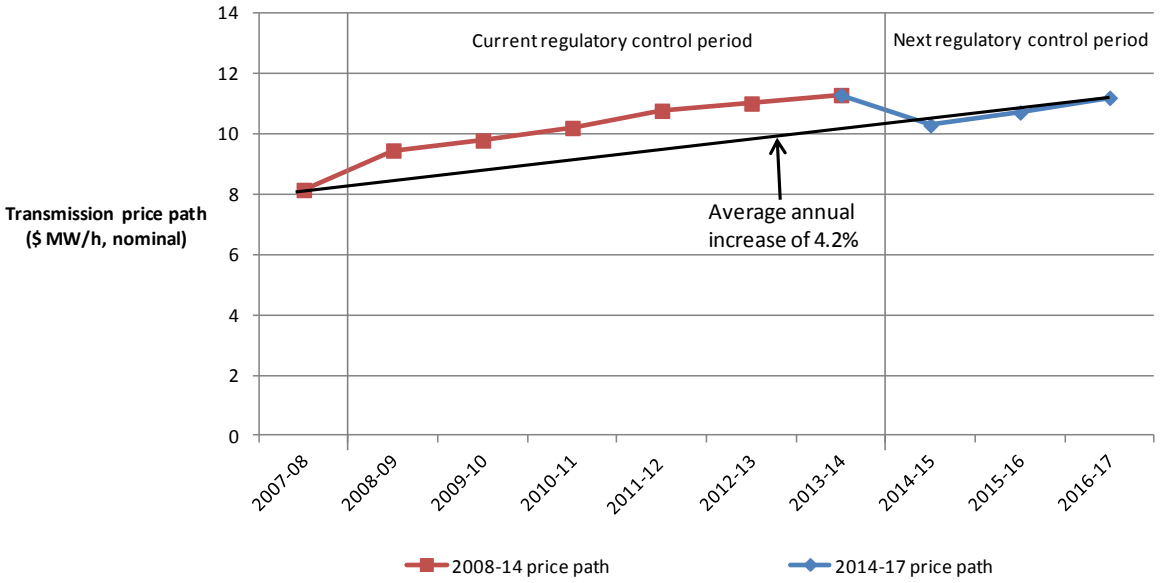


Source: AER, *Final decision, SP AusNet 2008–14 transmission determination*, January 2008, PTRM and SP AusNet, *Revenue proposal*, PTRM.
Note: the opex allowance excludes the easement tax allowance. The easement tax allowance averaged $101m ($2013-14) over 2008–14 and $102m ($2013–14) over 2014–17.

SP AusNet is seeking to recover total revenue of $1 598 million ($ nominal) from customers during the 2014–17 regulatory control period. SP AusNet is forecasting modest price decreases over the 2014–17 regulatory control period.

Figure 3.2 shows SP AusNet's price path from 2007–08. This shows an average annual price increase of 4.2 per cent (nominal) between 2007–08 and 2016–17.

Figure 3.2 SP AusNet's forecast price path ($/MWh)



Source: SP AusNet, *Revenue proposal*, PTRM; AER, *Final decision – SP AusNet transmission determination 2008–09 to 2013–14*, January 2008, PTRM.
Note: 2008–14 price path based on allowed revenue and AEMO actual and forecast energy. 2014–17 price path based on SP AusNet's proposed revenue and AEMO forecast energy.

Based on this price path, SP AusNet expects the transmission component of a typical residential bill of $1300 per annum will fall (in real terms) from 4 per cent ($52 per annum) to 3.5 per cent ($46 per annum) in 2014–15 and remain at that level over the period.

SP AusNet also provided a high level estimate of savings that commercial and industrial customers' could expect to see in their bills. This estimate is shown in Table 3.1.

Table 3.1 SP AusNet estimate of impact on commercial and industrial electricity bills

Category	Annual consumption	Annual savings if revenue proposal implemented as proposed
Small to medium commercial customers	Less than 400 MWh	$30 – $100 saving per annum
Large industrial customers	Greater than 400 MWh	$1000 – $9000 saving per annum
Largest industrial customers	12 GWh	$20 000 – $60 000 (up to $300 000) savings per annum

Source: SP AusNet, *Revenue proposal*, p. 18. Indicative figures only.

It should be noted that SP AusNet's proposed CBD rebuild capex projects may have a more significant localised pricing impact for customers that use the Richmond and West Melbourne terminal stations. As such, it is important that consumers impacted by these CBD rebuild projects engage in the review process to provide us with their views on these capex projects. This will help ensure they do not pay more than necessary for their electricity services. On the other hand, these customers are also those who are most exposed to the risks of these rebuilds not proceeding.

3.2 Capex

A revenue proposal must include the total forecast capex for the relevant regulatory control period which SP AusNet considers is required to achieve the capital expenditure objectives, which are set out in clause 6A.6.7 of the NER.

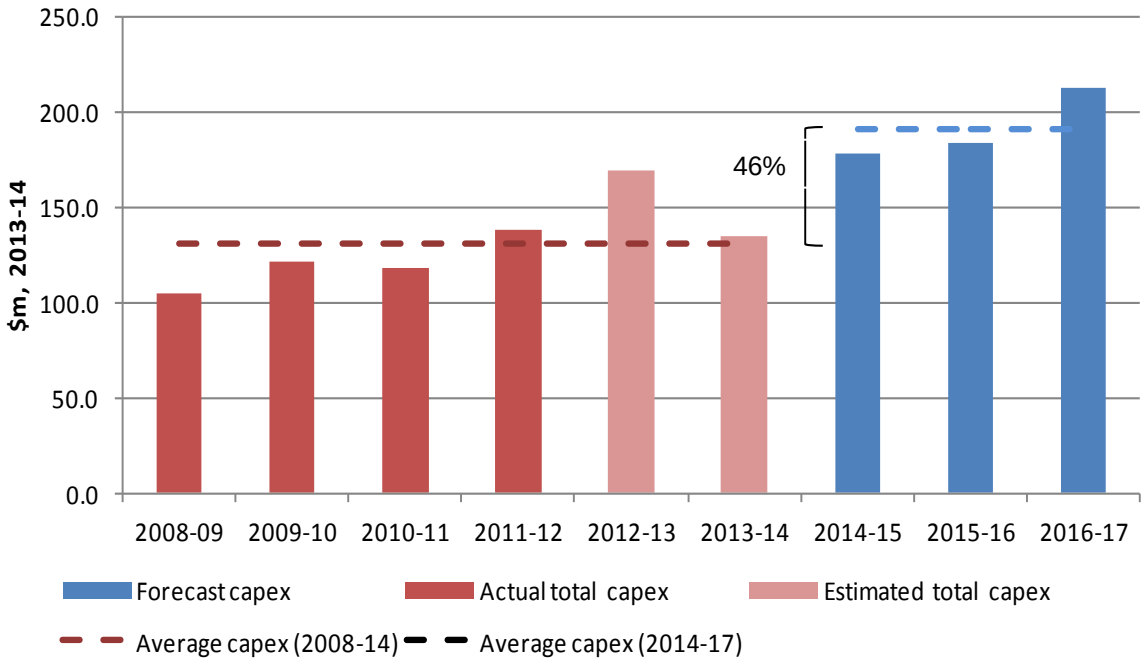
3.2.1 SP AusNet's capex proposal

SP AusNet's capex over the current regulatory period is outlined in s. 3.3 of its revenue proposal. SP AusNet's forecast capex and justification is contained in s. 4 of its revenue proposal and appendixes 2A, 2C, 3A, 4A, 4B, 4C, 4D, 4E and 4F.

Figure 3.3 compares SP AusNet's average capex for the 2008–14 regulatory control period with its average forecast capex for the 2014–17 regulatory control period.

Table 3.2 breaks down the forecast capex into categories.

Figure 3.3 Comparison of historical and forecast capex ($m, 2013–14)



Source: SP AusNet, *Revenue proposal*, p. 51 and 84.

Table 3.2 Forecast capex ($m, 2013–14)

	2014–15	2015–16	2016–17	Total
CBD rebuilds	65.7	58.3	61.9	185.8
Major stations replacement	32.8	52.5	75.3	160.7
Asset replacement	38.2	38.8	44.1	121.1
Safety and compliance	16.3	14.9	13.5	44.7
Non system	25.4	19.4	17.8	62.7
Total	178.5	183.9	212.6	575.0

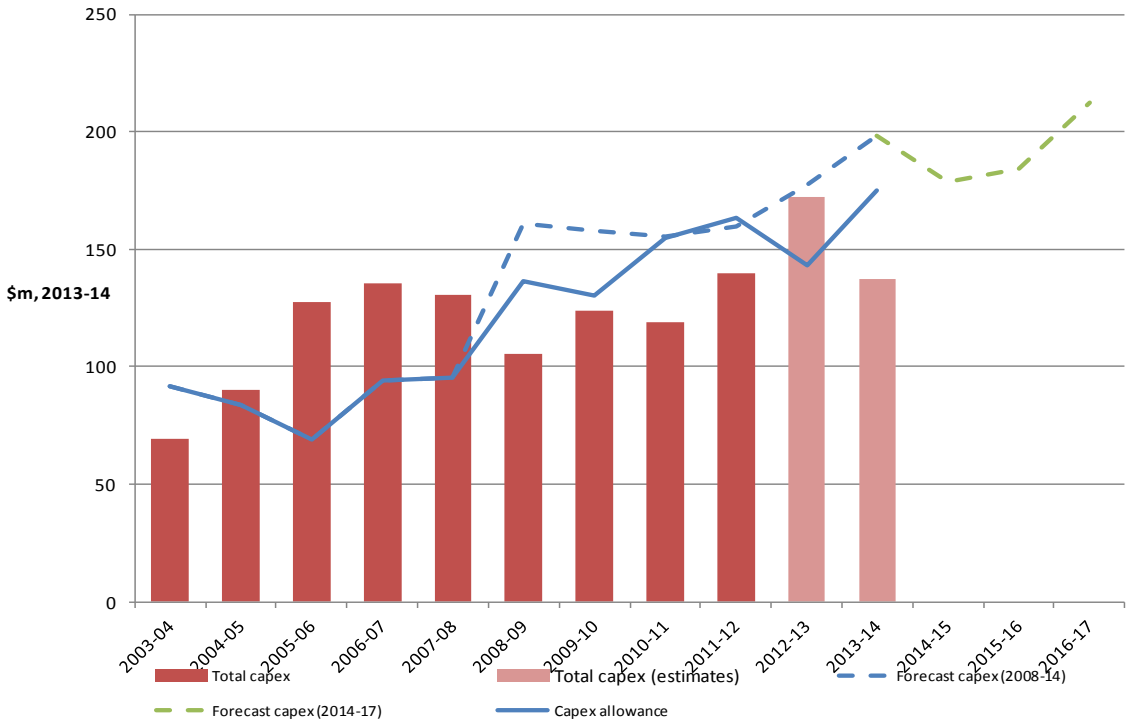
Source: SP AusNet's revenue proposal, p. 84.

A feature of SP AusNet's forecast capex is the significant expenditure on 'CBD rebuilds'. This category is dominated by the rebuilding and refurbishment of two terminal stations, Richmond, $81 million ($2013–14), and West Melbourne, $108 million ($2013–14). When 'CBD rebuilds' is included, the forecast capex is on average 46 per cent per annum higher than capex for the current regulatory control period. If 'CBD rebuilds' is excluded, the average annual increase is 7 per cent.

3.2.2 SP AusNet's historical capex

Figure 3.4 shows SP AusNet's historical capex compared with the approved capex allowance.

Figure 3.4 SP AusNet's actual capex and AER approved capex allowance



Source: SP AusNet, *Revenue proposal*, Appendix A, Cost information templates; AER analysis.

As can be seen from Figure 3.3, SP AusNet's actual and estimated capex in the current regulatory control period is less than both its forecast capex in its 2008–14 revised revenue proposal and the AER's approved capex allowance. SP AusNet underspent approved capex allowance by about $120 million ($2013–14) or 13 per cent. SP AusNet's reasons for the underspend are set out in s. 3.3.1 of its revenue proposal. They, include:

- deferral of completion of the Richmond terminal station
- staged completion of the components of some major stations
- re-prioritisation of the Hazelwood Power stations.[28]

For example deferring completion of the Richmond terminal station rebuild into the 2014–17 regulatory control period means SP AusNet will spend about half of the $96 million ($ 2007–08) we approved for that project.

Unexpected capital requirements and upward cost pressures partially offset the capex underspend.[29]

Questions for stakeholders – historical capex

Customers are paying for a return on capital and depreciation on the capex that we approved in 2007. As SP AusNet's capex is less than its approved allowance, the opening regulatory asset base for the 2014–17 regulatory control period will be lower than forecast. This accounts for some of the forecast reduction in price from July 14. 1) In assessing SP AusNet's forecast capex under the NER, we must have regard to the actual and estimated capex in the current regulatory control period.

1) What, if any, conclusions can be drawn from the current period that will assist us in assessing SP AusNet's forecast capex?

3) How well do you think SP AusNet has explained the reasons for the underspend? What aspects do you think could be explained further?

4) Has SP AusNet's capex underspend affected its ability to provide a reliable and safe supply of electricity? (Note: reliability and service standards information is provided in Appendix B).

3.2.3 Forecast capex

The relevant rules

We must assess SP AusNet's proposed capital expenditure (capex) under the provisions set out in clause 6A.6.7 of the NER. In drafting your submission, please have regard to these provisions. These provisions state, among other things, that forecast capital expenditure must reasonably reflect the efficient costs that would be incurred by a prudent operator in the circumstances.

Key issues

Key issues relating to SP AusNet's forecast capex are outlined below. Broadly, the AER will be examining the following matters and is interested in your views:

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[28] SPA AusNet, *Revenue proposal*, p. 51.
[29] SPA AusNet, *Revenue proposal*, p. 51.

- SP AusNet's asset management approach and forecasting methodology
- Capex on the rebuild of the Richmond and West Melbourne terminal stations (CBD rebuilds)
- Capex on other major stations and other replacement capex
- Capex on safety and compliance
- Non-system capex
- Assumptions and inputs

Asset management

SP AusNet's asset management approach is set out in s. 2.7 of its revenue proposal and appendix 2A. In 2008 SP AusNet became accredited to the British Standards Institution's Publically Available Specification 55 (PAS 55). SP AusNet submitted 'PAS 55 is the internationally recognised standard for the optimised management of physical infrastructure assets to achieve a desired and sustainable outcome.'[30]

PAS 55 accreditation is relevant in the context of SP AusNet's corporate governance and overall asset management framework. SP AusNet submitted that its 'prudent decision-making practices are supported by a robust project governance framework which incorporates continuous improvements to ensure projects are delivered at lowest efficient cost'.[31]

Questions for stakeholders – asset management

1) Has SP AusNet adequately demonstrated the benefits and outcomes of its asset management framework and how these are accounted for in the capex forecast?

Forecast methodology

SP AusNet's forecasting methodology is set out in s. 4.3 of its revenue proposal. SP AusNet's overall capex forecasting approach is based on a bottom up build of individual project costs to form an initial total forecast. Costs are then escalated (or de-escalated) to account for changes in input costs. The level of savings from continuous capital project management and governance improvements (capex efficiency) is then applied across the capex program to provide the final forecast.[32]

Individual projects and replacement programs are assessed using economic evaluations. The expected total cost of asset failures, which is a function of consequence and probability, are evaluated. The costs and benefits of alternative feasible options, which address the risk of asset failure, are also evaluated.[33]

Questions for stakeholders – forecasting methodology

1) Is SP AusNet's capex forecasting methodology robust?

CBD rebuilds

30 SPA AusNet, *Revenue proposal*, p. 45.
31 SPA AusNet, *Revenue proposal*, p. 71.
32 SPA AusNet, *Revenue proposal*, p. 76.
33 SPA AusNet, *Revenue proposal*, pp. 76-77.

SP AusNet is proposing to continue the rebuild of the existing Richmond terminal station to improve network switching flexibility and replace aging equipment on a difficult site. Because of the need to maintain supply until the new equipment is installed SP AusNet proposes constructing new buildings on the site to house new switchgear.[34]

The planned rebuild of the West Melbourne terminal station will replace aging assets with modern, safe and more compact equivalents. The station will also be re-designed to accommodate capacity expansion to meet future demand.[35]

SP AusNet proposes to use gas insulated switchgear (GIS) instead of air insulated switchgear (AIS) for both of these projects.[36] GIS is more costly and must be housed in an enclosed building. However, it is more compact than conventional equipment and may be appropriate in circumstances where space is extremely restricted or specific factors justify the use of this equipment.

Questions for stakeholders – CBD rebuilds

1) Is the rationale for these two projects well set out by SP AusNet and persuasive?

3) Are there alternatives which SP AusNet should have considered?

4) In particular, is the proposed conversion of the switchgear from air-insulated switchgear to more expensive gas-insulated switchgear justified? What factors justify use of this equipment?

Other major station projects

In addition to these major CBD rebuilds, SP AusNet is proposing other major rebuilding and refurbishment projects, totalling $160.7 million ($2013–14).[37] The key projects are: Yallourn Power Station circuit breaker replacement; South Morang TS transformer replacement; Heatherton Terminal Station Rebuild; Brooklyn Terminal Station CB replacement; Fisherman's Bend Terminal Station; Springvale Terminal Station Redevelopment.[38]

Asset replacement capex

SP AusNet is proposing $121.1 million ($2013–14) capex on asset replacement to maintain the resilience and reliability of the network and to address operational or asset failure risk. Proposed asset replacement capex is on average $40.4 million ($2013–14) per annum compared with $36.5 million ($2013–14) per annum for the current regulatory control period.[39]

Safety and compliance

SP AusNet is proposing $44.8 million ($2013–14) for safety, security and compliance purposes. Proposed capex is on average $14.9 million ($2013–14) per annum compared with $15.6 per annum ($2013–14) for the current regulatory control period.[40]

Non system capex

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34 SPA AusNet, *Revenue proposal*, Appendix 4A, pp. 45-47.
35 SPA AusNet, *Revenue proposal*, Appendix 4A, pp. 44-45.
36 SPA AusNet, *Revenue proposal*, p. 72.
37 SPA AusNet, *Revenue proposal*, p. 84.
38 SPA AusNet, *Revenue proposal*, pp. 94-95.
39 SPA AusNet, *Revenue proposal*, p. 97.
40 SPA AusNet, *Revenue proposal*, p. 100.

SP AusNet is proposing on average annual non-system capex of $20.9 million ($2013–14) compared with an annual average capex of $14.7 million ($2013–14) over the current regulatory control period. Total proposed non-system expenditure is $62.7 million ($2013–14), including proposed IT expenditure of $47.9 million ($2013–14).[41]

Questions for stakeholders –non CBD rebuilds capex

1) Is the rationale for these projects well set out and persuasive?

2) If not, What parts of the proposal do you consider appear unjustified and may need further support from SP AusNet or investigation by the AER?

Assumptions and inputs

The key assumptions and inputs underpinning SP AusNet's forecast capex are outlined in s. 4.4 of its revenue proposal. They fall into the following broad categories:

- demand forecasts (used in sensitivity analysis to test the robustness of project evaluations)
- supply risk (SP AusNet has relied on AEMO's Value of Customer Reliability (VCR) of $61,830/MWh)
- safety risk
- condition reports
- failure risk ratings
- project cost estimates (these form the basis of the bottom up forecast capex)
- unit rates and S-curves (S-curves are used to define the profile and timing of expenditure over the term of a major capital project)
- cost escalators for labour and materials (also relevant for forecast opex)
- capex efficiency factor of 1.44 per cent
- affordability and deliverability

Questions for stakeholders – assumptions and inputs

1) Are the assumptions and inputs appropriate?

2) Are there other assumptions and inputs that should be considered?

[41] SPA AusNet, *Revenue proposal*, p. 102.

3.3 Opex

SP AusNet's revenue proposal must include a forecast of the total opex it requires to meet the opex objectives, which are set out in clause 6A.6.6(a) of the NER. SP AusNet's opex over the current regulatory period is outlined in section 3.4 of its revenue proposal. SP AusNet's forecast opex and justification is contained in section 5 of its revenue proposal.

3.3.1 The relevant rules

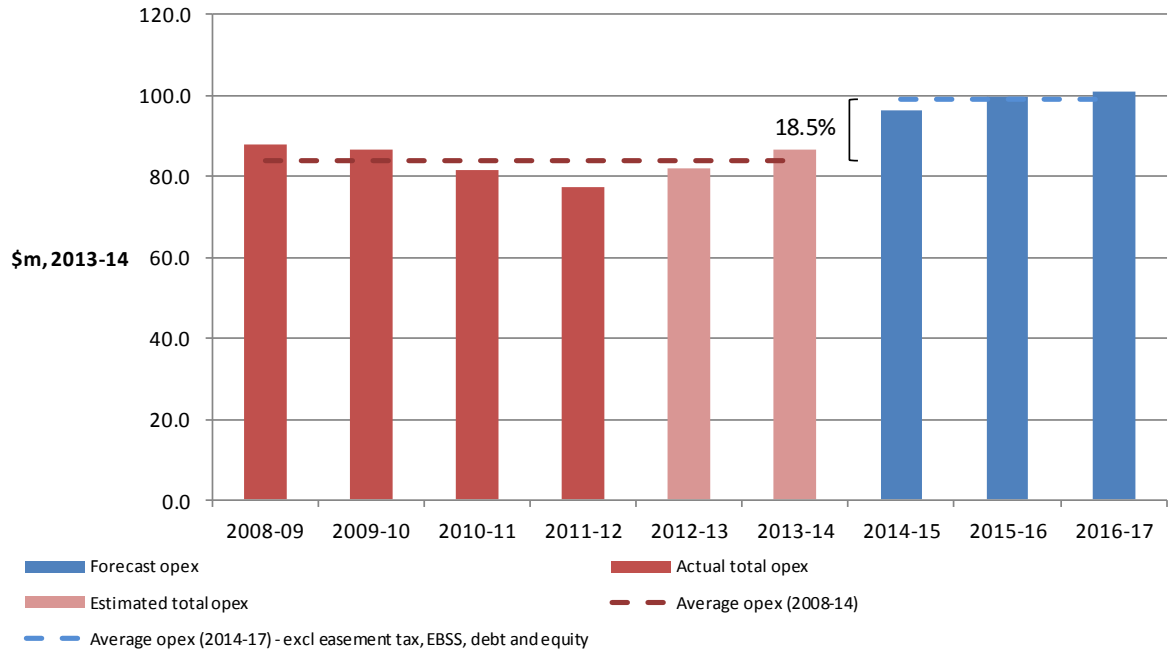
We must assess SP AusNet's forecast opex under the provisions set out in s. 6A.6.6 of the NER. In drafting your submission, please have regard to these provisions.

3.3.2 SP AusNet's proposal

Figure 3.5 compares SP AusNet's average opex for the current regulatory control period with its average forecast opex for the 2014–17 regulatory control period

Table 3.3 breaks down the forecast capex into categories.

Figure 3.5 Comparison of historical and forecast opex, excluding easement tax ($m, 2013–14)



Source: SP AusNet, Revenue proposal, p. 57 and 60.
Note: Excludes easement tax, debt and equity raising costs, EBSS payments.

Table 3.3 Forecast opex by cost category ($m, 2013–14)

		2014–15	2015–16	2016–17	2014-17	2008-14
System recurrent	Maintenance	32.5	32.9	33.3	98.6	160.6
	Asset management support	5.7	6.0	6.1	17.9	37.8
	Operations	6.5	6.6	6.7	19.8	30.4
	OH&S	2.4	2.5	2.5	7.4	4.8
	Taxes and Charges	5.4	5.4	5.4	16.8	31.1
	Insurance	5.7	6.3	7.0	19.1	23.1
	Total system recurrent	**58.2**	**59.7**	**61.0**	**178.89**	**287.7**
System non-recurrent	Asset works program	8.0	8.0	8.5	24.6	51.0
	Asset management support	1.3	1.3	1.3	3.8	6.9
	Total system non–recurrent	**9.3**	**9.3**	**9.8**	**28.4**	**57.8**
Non-system	Finance	3.7	3.7	3.8	11.2	21.7
	HR	0.5	0.5	0.5	1.5	5.5
	IT	7.0	7.0	7.0	20.9	35.2
	Other	4.2	5.6	5.6	15.4	31.1
	Management fee	6.7	6.8	6.9	20.4	39.1
	Total controllable opex	**91.15**	**94.26**	**95.58**	**280.99**	**478.2**
	Easement tax	100.9	103.4	100.9	305.3	611.7
	Other costs(incl self insurance, debt/equity raising costs)	9.8	9.8	9.1	28.6	30.6
	Total non–controllable opex	**110.7**	**113.2**	**110.0**	**333.9**	**642.3**
	Total opex	**200.2**	**205.8**	**204.6**	**610.6**	**1120.4**
	Total opex (excl easement tax and EBSS payments)	**99.3**	**102.4**	**103.7**	**305.3**	**508.8**

Source: SP AusNet's, *Revenue proposal*, Appendix A, Cost information templates. Excludes EBSS payments.

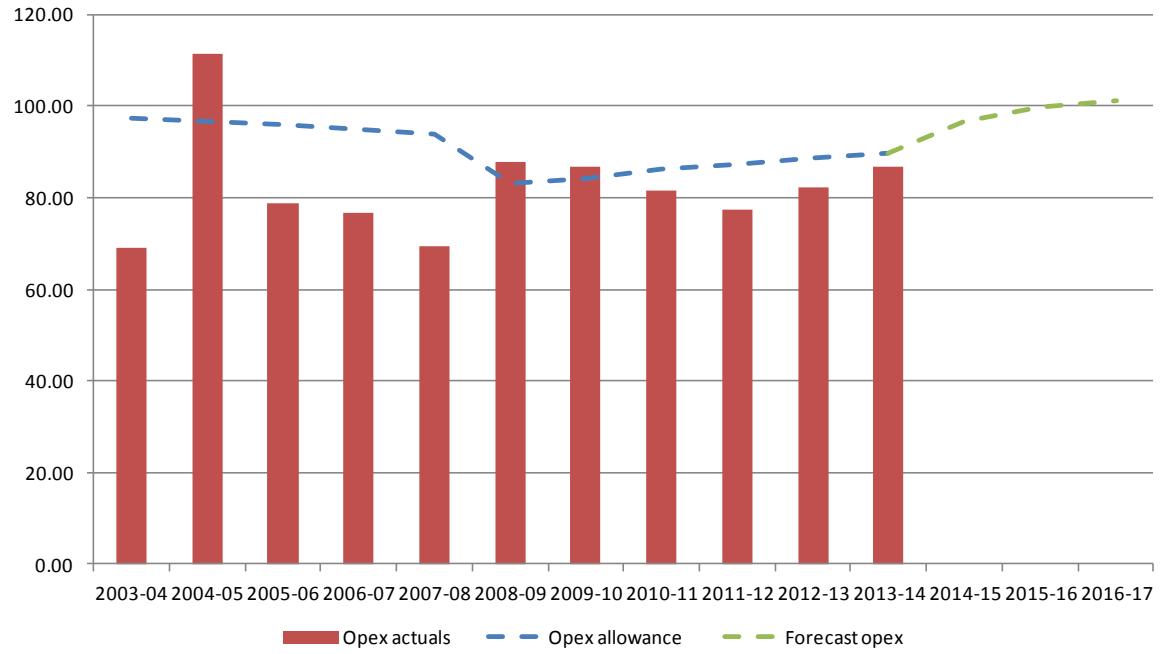
To forecast its system recurrent opex, SP AusNet has extrapolated the expenditure in the 2011–12 regulatory control year (the 'base year'). This is SP AusNet's forecast of 'business as usual' costs. SP AusNet has then added 'step changes' to reflect new functions or increased activities not captured in the base year.

To forecast its non–recurrent expenditure, SP AusNet has used a 'bottom–up' forecasting approach. This approach forecasts opex at the project level for each year. This differs from the base year approach used for recurrent expenditure as it is not an extrapolation or trend of expenditure.

3.3.3 SP AusNet's historical opex

Figure 3.6 shows SP AusNet's historical opex compared with the approved opex allowance.

Figure 3.6 SP AusNet's actual opex and AER approved opex allowance



Source: SP AusNet, *Revenue proposal*, Appendix A, Cost information templates; AER analysis.
Note: Historical opex and allowances exclude easement tax, debt and equity raising costs and the opex glidepath. Opex forecast excludes easement tax, debt and equity raising costs and EBSS payments.

SP AusNet underspent its opex allowance by $16.8 million ($2013-14, excluding easement tax), or 3.2 per cent during the 2008–14 regulatory control period.

Questions for stakeholders – historical opex

1) What should be inferred from SP AusNet's underspend during the 2008–14 regulatory control period?

2) Has SP AusNet's opex underspend affected its ability to provide a reliable and safe supply of electricity? (Note: reliability and service standards information is provided in Appendix B).

3.3.4 Key issues

The key issues in SP AusNet's opex forecast are the proposed step changes and its asset works. The proposed step changes and asset works represent $32.5 million (11.6 per cent) and $28.4 million (10.1 per cent) respectively of SP AusNet's controllable opex forecast of $281.0 million.

Opex step changes

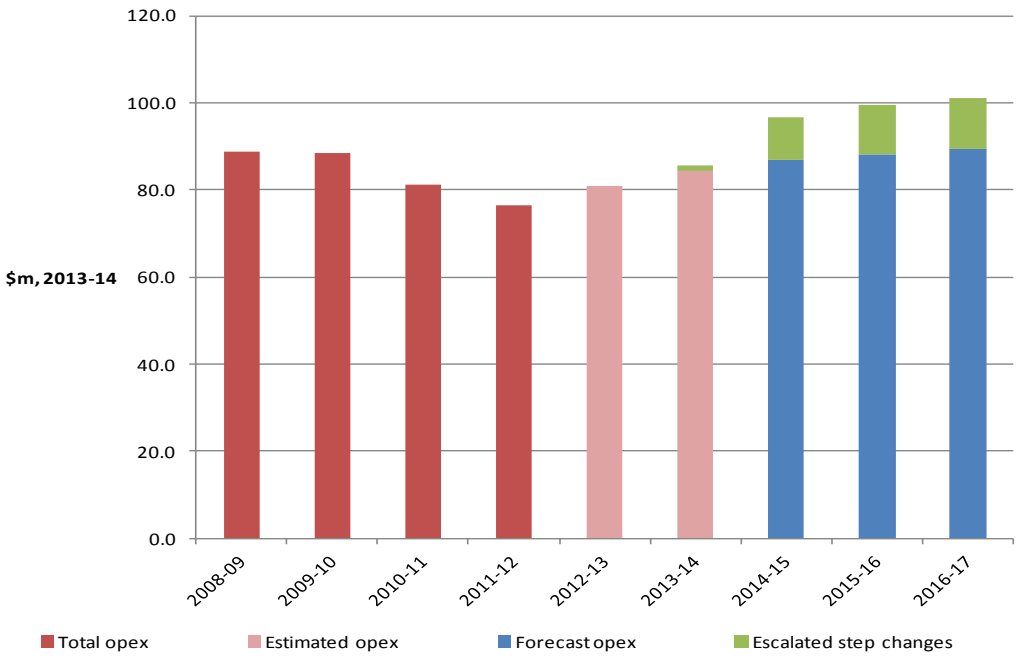
SP AusNet's average annual controllable opex in the 2014–17 regulatory control period will be 19 per cent higher than in the 2008–14 regulatory control period. A large proportion of this increase is driven by proposed 'step changes'. These step changes are additional opex to the base year extrapolated opex forecast. The opex step changes relate to:

- SP AusNet's ageing asset profile
- changed compliance obligations
- regulatory changes and Government policy
- recurrent expenditure not reflected in the base year
- IT capital works
- enhanced efficiency through technology improvements

The ageing asset profile, compliance obligations and regulatory change and Government policy step changes are the most material.

Figure 3.7 shows the materiality of the step changes on forecast opex.

Figure 3.7 SP AusNet's proposed step change opex



Source: SP AusNet, *Revenue proposal*, Opex forecast model.
Note: all figures exclude easement tax, EBSS payments, and debt and equity raising costs.

Ageing asset profile

SP AusNet states that the average age of its assets will increase over the 2014–17 regulatory control period and the number of older assets, particularly towers, will grow. The total opex step change associated with SP AusNet's ageing asset profile is $13.4 million ($2013–14). SP AusNet considers

that changes in operational practices are required to maintain the reliability, safety and security of the transmission system. These include enhanced condition assessment of overhead lines ($3.9 million) and a step change in corrosion risk management practices, such as painting towers and corrosion repairs ($9.5 million). SP AusNet considers that these practices are good industry practice. SP AusNet also states that it must carry out these works to deliver the Electricity Safety management Scheme (ESMS), which is endorsed by Energy Safe Victoria (ESV).

These increases represent a significant increase above maintenance opex trend levels. As such, they are areas which warrant further examination during the review process.

Changes in compliance obligations

SP AusNet submits that AEMO will require TNSPs to provide a monthly list of outages planned for the next 13 months that will materially affect transfer capabilities. Currently, SP AusNet does not record planned network outages more than 6 months ahead. As such, SP AusNet proposes to hire a new outage planner to undertake long term outage planning ($0.6m over the period).

SP AusNet also proposed $4.8m to meet requirements under Part 6 of Victoria's *Terrorism (Community Protection) Act* (2003). In addition, recent assessments by SP AusNet have shown that existing security measures for critical infrastructure should be improved to meet industry standards. To this end, SP AusNet proposes to increase security patrols and perimeter inspections of terminal stations, outsourcing the monitoring of security systems, increased frequency of security assessments of critical sites and an annual statutory counter terrorism exercise.

Regulatory changes and Government policy initiatives

This step change is related to:

- the introduction of the carbon price under the Australian Government's Clean Energy future Plan, which directly increases expenditure related to a levy on SF_6 – $2.5m
- the AEMC's transitional provisions for the economic regulation of network service providers, which will require SP AusNet to submit its next revenue proposal in October 2015. Given this will coincide with SP AusNet's electricity distribution regulatory proposal, SP AusNet propose to hire additional staff to deliver the transmission revenue proposal – $2.8m

Questions for stakeholders – opex step changes

1) Are the opex step changes already included in the base year?

2) Are the opex step changes necessary?

2) Are there alternatives options that SP AusNet should have considered?

3) Are SP AusNet's proposed corrosion management practices good industry practice?

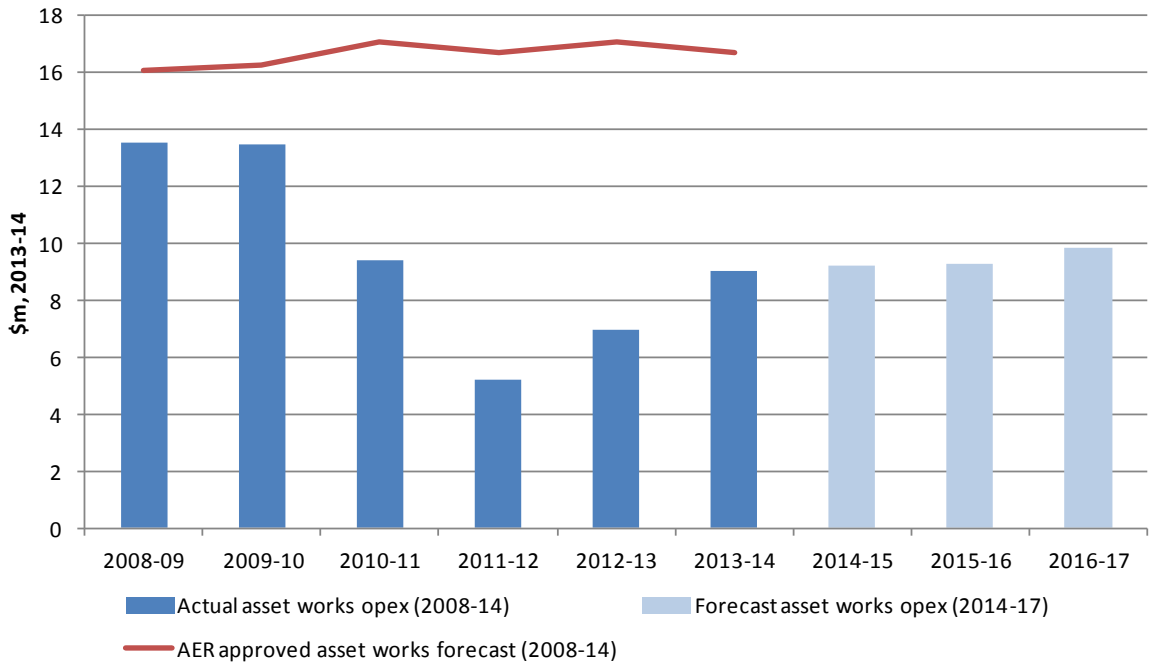
4) Is there value to consumers in increasing opex to increase security for critical infrastructure?

Asset works opex

SP AusNet's assets works program is non–recurrent expenditure that is used to manage operational risk within an acceptable band. It includes non–routine repairs and refurbishment, corrosion and

transformer condition monitoring. SP AusNet's annual average asset works opex is forecast to remain at a similar level as that during the 2008–14 regulatory control period.

Figure 3.8 SP AusNet's actual and forecast asset works opex ($m, 2013–14)



Source: SP AusNet, *Revenue proposal*, Appendix A, Cost information templates.

SP AusNet's asset works program is comprised of:

- Condition assessment, repairs, refurbishments and replacements at terminal stations – $11.8m
- Corrosion risk condition assessments and replacements of transmission line hardware and tower steelwork replacement – $6.8m
- OH&S and environmental compliance – $0.9m
- Facilities maintenance, including restoring and maintaining existing buildings – $3.5m
- Miscellaneous asset works – $0.9m

SP AusNet state that the asset works underspend during the 2008–14 regulatory control period was due to[42]:

- realised cost savings via delivering projects in–house rather than outsourcing
- a number of asset works projects being delivered as capex projects
- changed priorities as the condition of assets was not as poor as initially believed when the forecast was initially derived.

Questions for stakeholders – asset works opex

1) Has SP AusNet justified its proposed asset works opex?

[42] SP AusNet, *Revenue proposal*, Appendix A, Cost information templates – historic opex summary.

2) Is SP AusNet's categorisation of asset works expenditure as opex appropriate?

3) What conclusions should be drawn from SP AusNet's low asset works spend over the 2008–14 regulatory control period?

3.4 Cost of capital

Significant investment is required to build and augment an electricity transmission network. SP AusNet raises the funds required for this investment in two ways:

1. by borrowing money (via bank loans or bond issues). SP AusNet must pay interest to the holders of this debt.

2. by raising equity through the sale of shares. The owners of these shares expect to receive regular dividend payments.

Investors will only lend money to, or buy shares from, SP AusNet if they have a reasonable assurance they will get their money back, plus a reasonable return that compensates them for the risk of the investment. It is therefore important that SP AusNet is allowed to earn enough money to be able to pay its investors. This 'return' to investors is in the form of principal and interest repayments on debt to lenders, or dividend payments to shareholders.

In the review process, we assess the return to lenders and shareholders that SP AusNet needs to pay. This allowed rate of return is also known as the 'weighted average cost of capital' (WACC). It represents a weighted average of the cost of paying debt holders and shareholders.

Even small variations in the WACC can have a significant impact on the revenue that SP AusNet can recover from consumers. This is because network businesses like SP AusNet have raised money from lenders and shareholders in the past—which is to be expected given the capital intensive nature of their operations. SP AusNet needs to be compensated for the funding costs of these previous capital raisings as well as the finance costs of new capital raisings.

3.4.1 SP AusNet's proposed weighted average cost of capital (WACC)

SP AusNet's proposed WACC of 7.19 per cent is lower than the WACC of 9.76 per cent that applied during the 2008–14 regulatory control period. This lower WACC has put downward pressure on transmission prices. This lower WACC is primarily a result of a lower risk free rate (which is one of the inputs for calculating the WACC). The risk free rate is derived from Australian Government bond yields, which have decreased over recent years. SP AusNet's proposed WACC parameters are set out on page 172 of its revenue proposal.[43]

Given the WACC parameters are fixed for electricity transmission,[44] we do not consider the WACC to be contentious. As such, we prefer if submissions focus on the more contentious issues of capex and opex rather than the WACC.

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[43] SP AusNet, *Revenue proposal*, p. 172.

[44] AER, *Electricity transmission and distribution network service providers, Statement of revised WACC parameters (transmission)*, May 2009.

A Appendix – Benchmarking

We have undertaken benchmarking for informative purposes. This provides an indication of the relative performance of SP AusNet against its peers.

While helpful, benchmarking does have its limitations. These limitations mainly stem from variations in network characteristics such as the age, size and maturity of a transmission network and the market it serves.[45] Differences between purchasing and leasing policies, as well as different capitalisation, cost allocation and other accounting policies, also create limitations on the usefulness of benchmarking.

We compared SP AusNet's historical expenditure against other transmission network providers using ratio analysis, and normalised our results using load density (MW/km). Load density is the peak amount of electricity transmitted per kilometre of line length. We consider this to be an appropriate measure because it accounts for some of the varying circumstances of transmission network operators. It is expected that denser networks would benefit from economies of scale and would therefore appear more efficient.

We used a three year average for each metric (from 2008-09 to 2010-11) as the basis for comparison. This provides a less volatile comparison than a single year comparison, since the three year average reduces the likelihood of any single fluctuation year affecting the results.

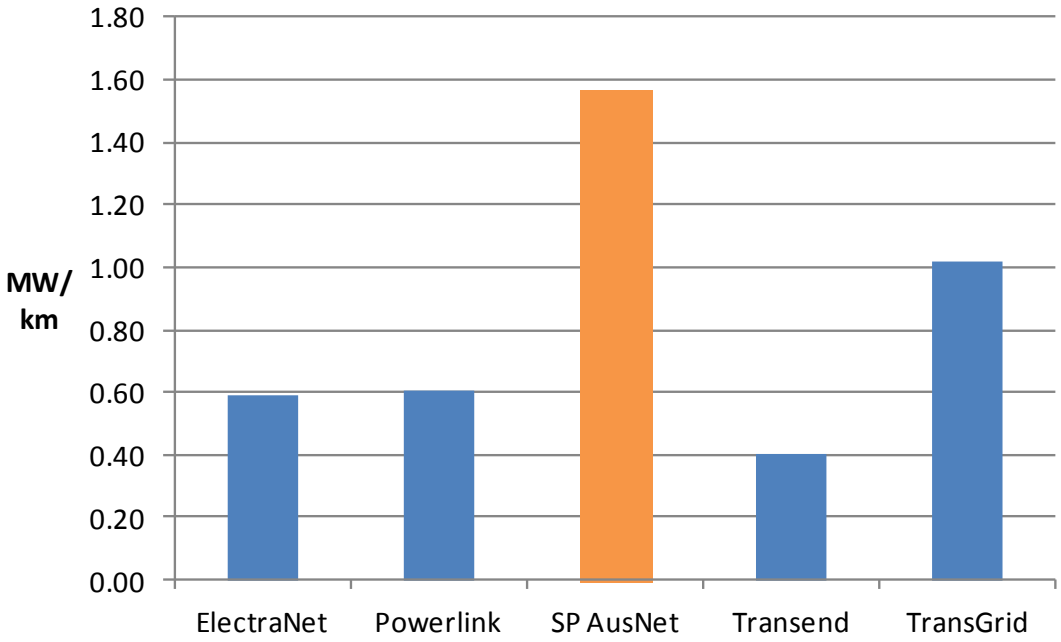
Load density

Figure A.1 shows that SP AusNet in Victoria, with 6,553 circuit kilometres has the network with the highest energy density. SP AusNet's transmission network is built around a 500 kV high voltage line running from the major generating source in the Latrobe Valley, through Melbourne and across the southern part of the state to Heywood near the South Australian border. This 500 kV backbone is reinforced by a 220 kV ring around Melbourne, other 200 kV rings in country Victoria supplying regional centres and interconnections with South Australia, New South Wales and Tasmania.[46] SP AusNet transmits the most MW per kilometre of line length at 1.5 MW per kilometre. TransGrid is the next largest at just below a MW per kilometre.

[45] AER, *Draft decision, Victorian electricity distribution network service providers: Distribution determination 2011–15*, Appendix I, pp. 78–9.

[46] SP AusNet, *Revenue proposal*, p. 36.

Figure A.1 Size of TNSP, by Load density



Source: AER analysis.

Operating expenditure

Figures A.2, A.3 and A.3 show SP AusNet's relative performance in terms of opex/line length, opex/peak demand and opex/electricity distributed, respectively. The trend line in those figures relates to all transmission network operators. Notably on all three indicators SP AusNet's performance is above the trend line, meaning that when load density is taken into account SP AusNet's opex is higher than the average of its peers.

SP AusNet is required to pay an easement tax. It is an uncontrollable cost payable to the Victorian government. None of its peers are liable to pay a similar tax so it was removed from SP AusNet's opex for benchmarking purpose.

Figure A.2 illustrates opex to line length ratios for SP AusNet and its peers. It shows that the five TNSPs' opex to line length ratios all move together closely, and is indicative of the level of opex required by the industry at large to maintain a given length of transmission circuit line.

Figure A.2 Opex/line length ($million, nominal)

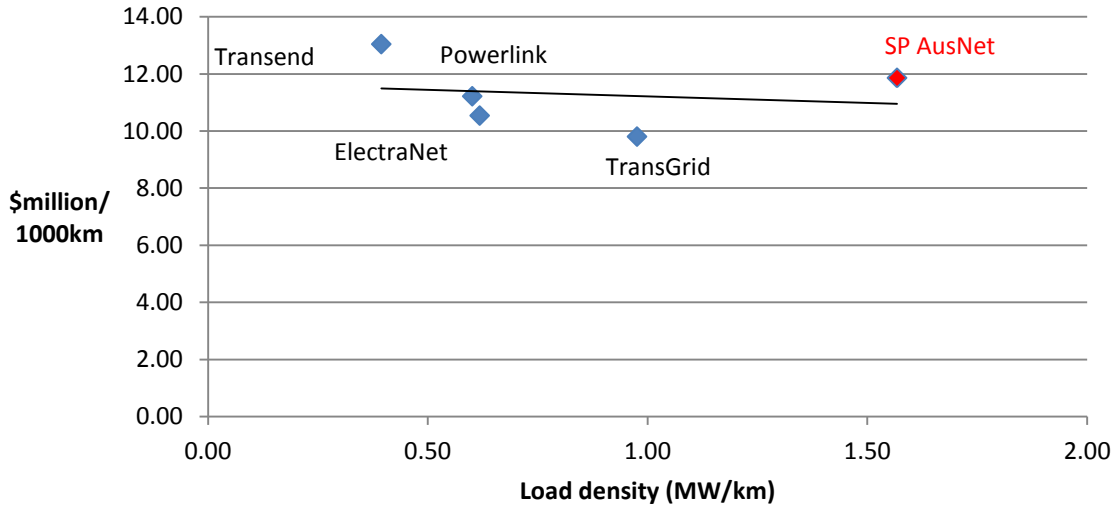


Figure A.3 illustrates opex to peak demand ratios for SP AusNet and its peers. Peak demand refers to the highest electricity usage in a transmission network. Opex includes network related expenses such as maintenance and non-network expenses such as management costs. SP AusNet has the lowest opex to peak demand ratio of all its peers. However, this is to be expected since in the NEM as load density increases, there is a tendency that a TNSP's opex to peak demand ratio will decrease.

Figure A.3 Opex/peak demand ($million, nominal)

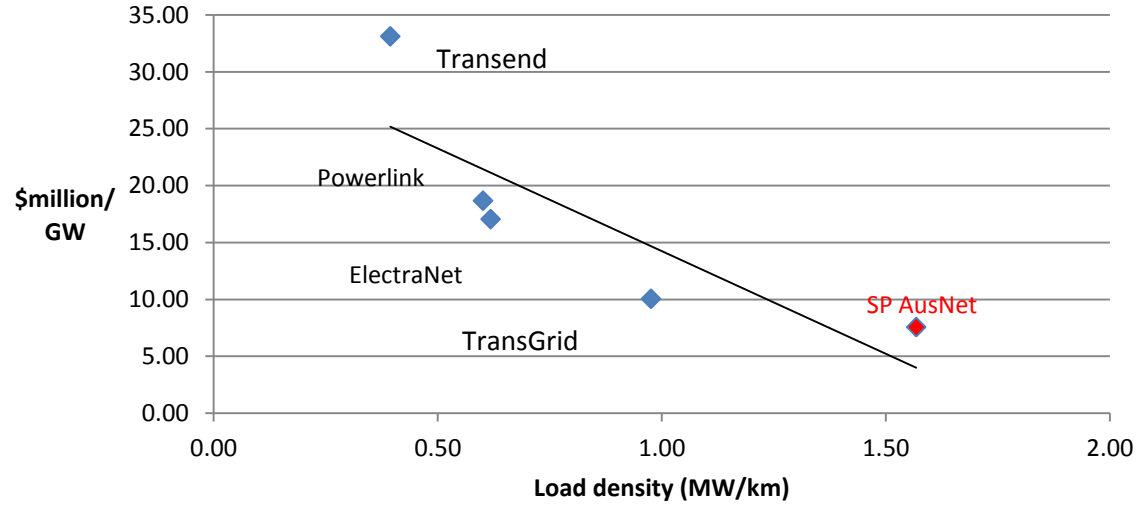
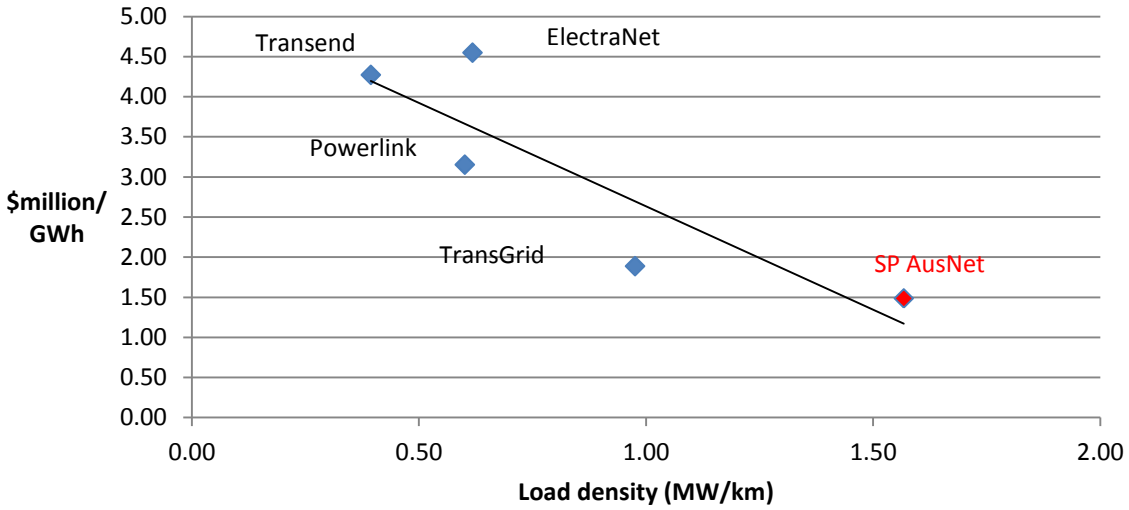


Figure A.4 illustrates opex to electricity distributed ratios for SP AusNet and its peers. Electricity distributed is an accumulative measure of the total energy sent out through a transmission network over the course of a year. In this regard it differs to peak demand which is a snapshot in time of 'peak' energy use. In the NEM as load density increases, opex to electricity distributed ratios tends to decrease. SP AusNet's opex to electricity distributed ratio largely reflects this tendency.

Figure A.4 Opex/electricity distributed ($million, nominal)



Capital expenditure

Figures A.5, A.6 and A.7 benchmark SP AusNet's historical capital expenditure (capex) against its peers. They show that SP AusNet's capex is (as with its opex) above the trend line on all three indicators. This means that SP AusNet's historical capex is, in general, higher than its peers when load density is considered.

We disregard those costs which SP AusNet's peers incur but it does not. In particular, the revenues we approve for SP AusNet do not include augmentation and connection costs (see section 2.3), whereas this is an expense for its peers. We therefore disregarded augmentation and connection costs for all transmission businesses.

Figure A.5 illustrates the non-augmentation capex to load density ratios of SP AusNet and its peers. It shows that load density is largely insensitive to the amount spent on non-augmentation capex per 1000 km of line length. More generally, after Powerlink SP AusNet's spends the most on non-augmentation capex per 1000 km of line length out of all the TNSPs in the NEM we benchmarked.

Figure A.5 Non-augmentation capex/line length ($million, nominal)

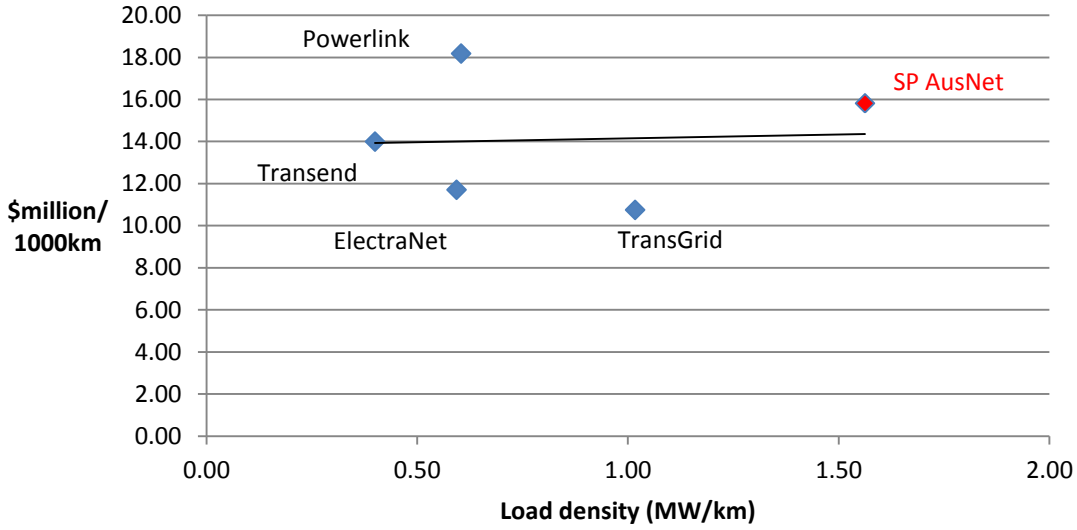


Figure A.6 illustrates the non-augmentation capex to peak demand ratios of SP AusNet and its peers. Peak demand is a significant driver of investment for transmission networks. In the NEM as load density increases, the amount spent on non-augmentation capex as a ratio of peak demand tends to decrease. SP AusNet's expenditure tends to reflect this. However, relative to the other TNSPs we benchmarked its non-augmentation capex to peak demand ratio is higher, when load density is used as a normaliser.

Figure A.6 Non-augmentation capex/peak demand

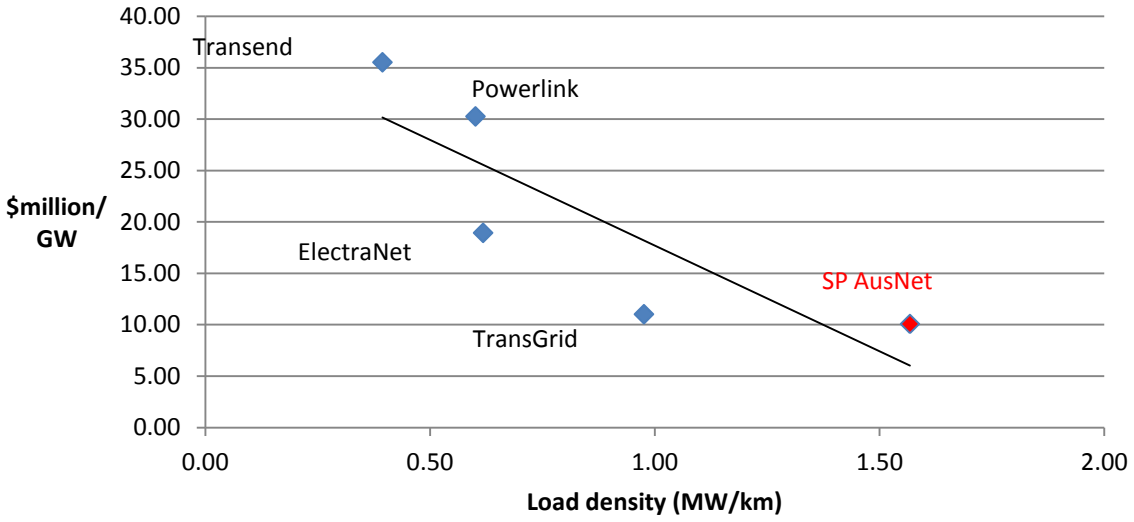
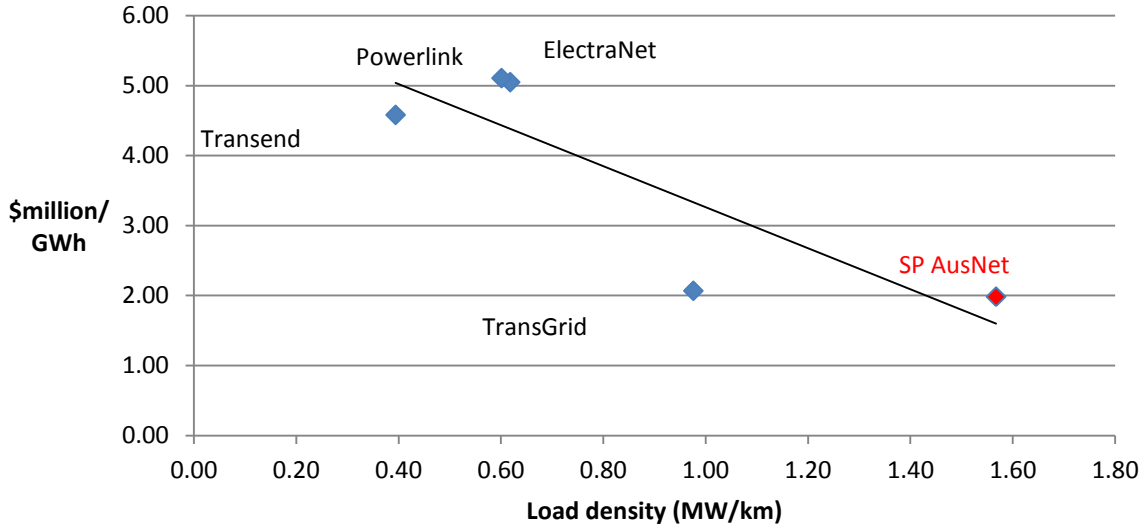


Figure A.7 illustrates the non-augmentation capex to electricity distributed ratios of SP AusNet and its peers. As load density increases, the amount spent on non-augmentation capex per electricity distributed tends to decrease. SP AusNet's expenditure largely reflects this. But compared to other TNSPs we benchmarked its expenditure ratio is marginally higher, when load density is taken into account.

Figure A.7 Non-augmentation capex/electricity distributed



B Appendix – Service standards performance

SP AusNet's historical service standards performance is shown in the figures below. A different set of parameters applied to SP AusNet during the 2008–14 regulatory control period than will apply during the 2014–17 regulatory control period. However, the below figures show SP AusNet's historical performance against the parameters that will apply in the future. Targets for the 2014–17 regulatory control period will be derived from an average of performance over the past five years.

The TNSP performance reports that can be found on our website (www.aer.gov.au) also compare SP AusNet's historical service standard performance against other TNSPs in Australia.

Figure B.1 shows SP AusNet's historical performance against the circuit availability parameter. This parameter measures the ratio of the number of outage events to the number of defined circuits (for example, lines, transformers, or reactive plant). It is expressed as a percentage for ease of reading.

It should be noted that, as this is a new parameter, SP AusNet did not have targets during the 2008–14 regulatory control period. One observation is that performance deteriorated somewhat in 2011 and 2012.

Figure B.1 SP AusNet circuit availability performance 2008–2012

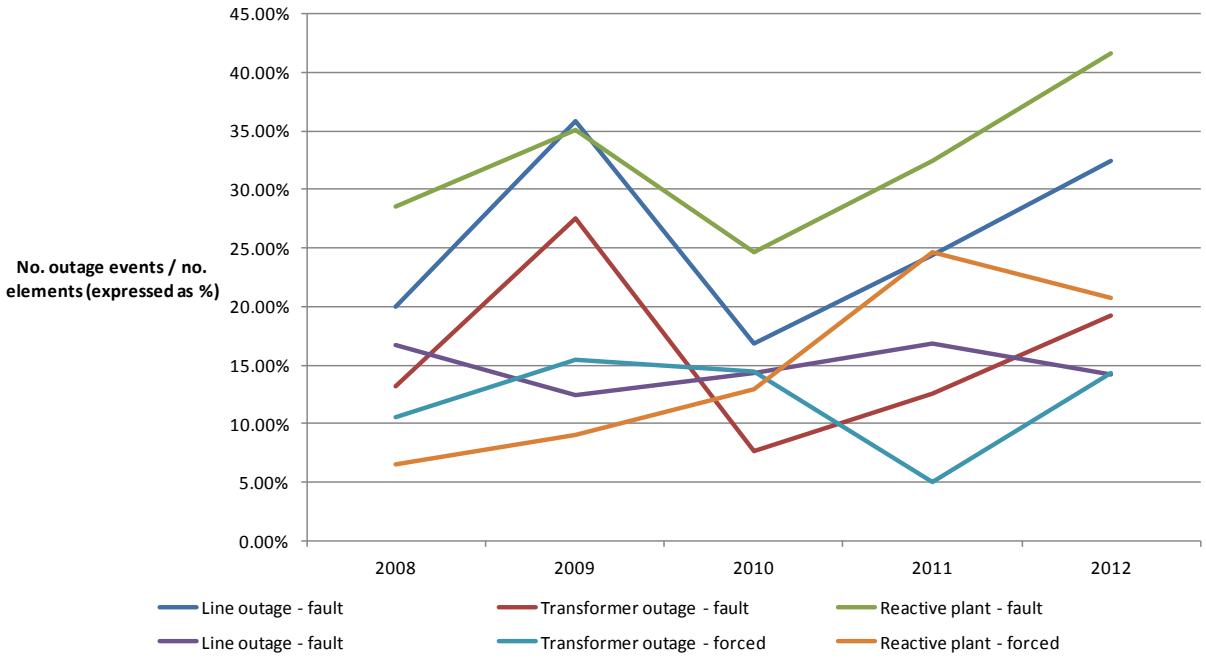


Figure B.2 shows SP AusNet's loss of supply event performance. SP AusNet was subject to this parameter in the 2008–14 regulatory control period and therefore had a performance target. It can be observed that SP AusNet's loss of supply performance has generally been better than the target.

Figure B.2 SP AusNet loss of supply event performance 2008–12

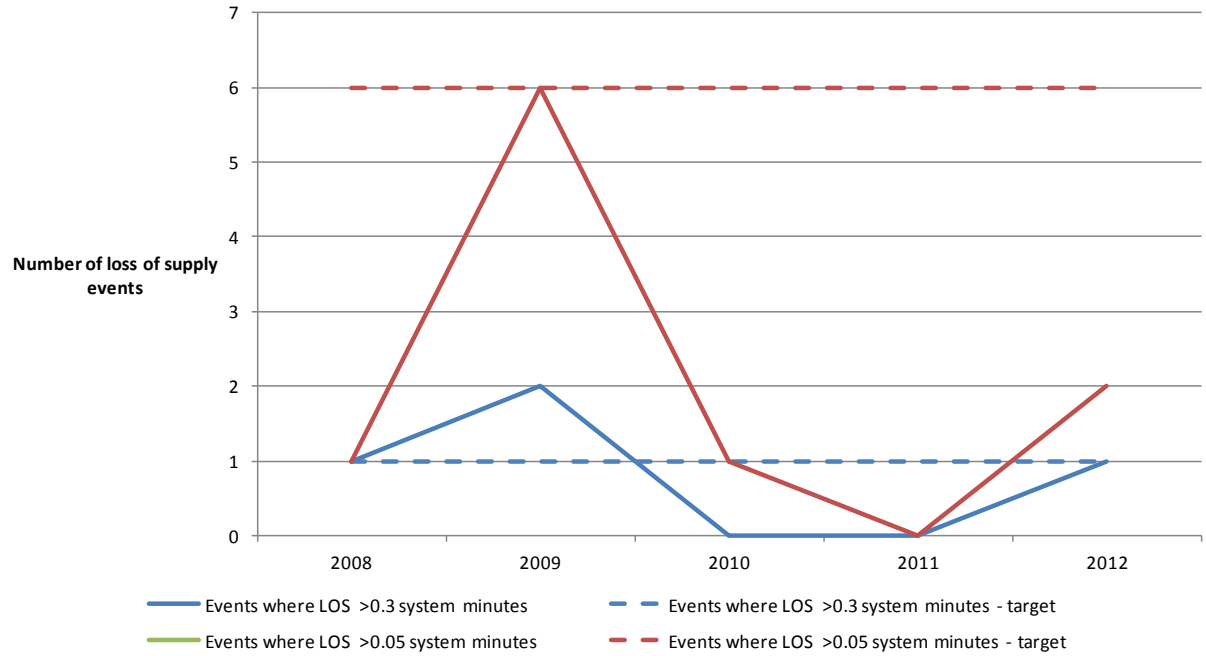
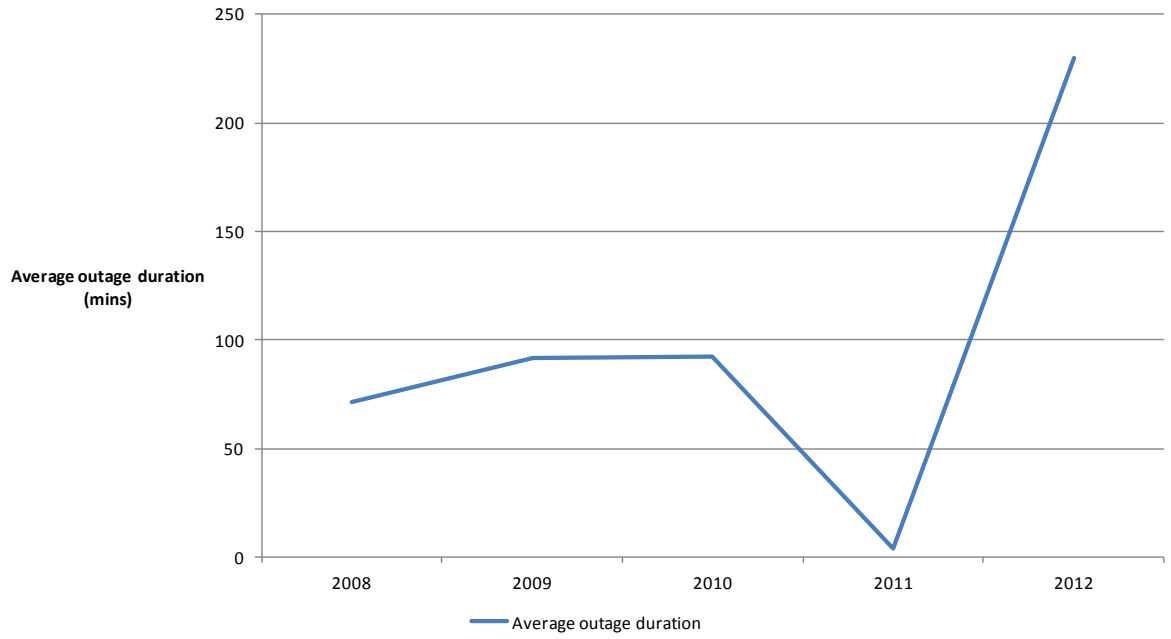


Figure B.3 shows SP AusNet's average outage duration performance. While SP AusNet was subject to an average outage duration performance parameter during the 2008–14 regulatory control period, it was broken into two sub–parameters:

- average outage duration for lines
- average outage duration for transformers.

For the 2014–17 regulatory control period SP AusNet will be subject to a single average outage duration parameter. Its historical performance against this parameter is shown in Figure B.3. This shows that its average outage duration performance has generally been good except for 2012.

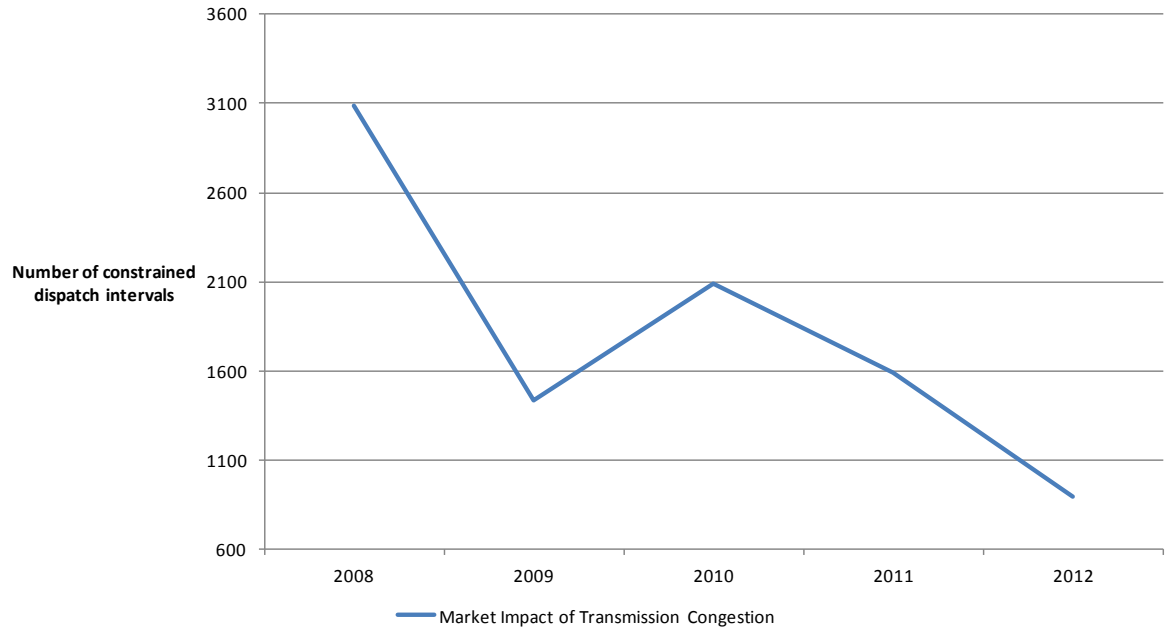
Figure B.3 SP AusNet average outage duration performance 2008–12



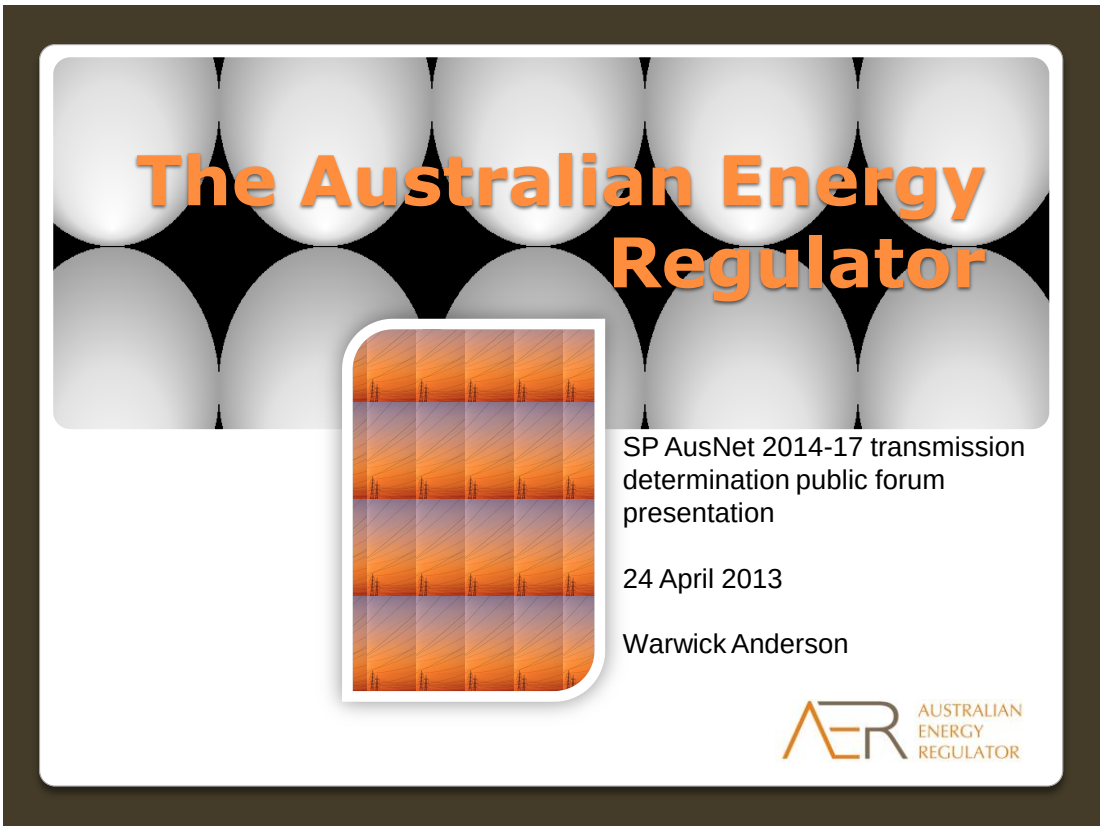
Source: AER analysis.

Figure B.4 shows SP AusNet's historical market impact component parameter performance. This parameter incentivises a TNSP to reduce planned outages that affect the wholesale electricity spot price. SP AusNet has only been subject to the market impact parameter since 2011. The chart shows that SP AusNet's performance has improved since 2011 when it became subject to the market impact parameter.

Figure B.4 SP AusNet market impact component performance 2008–12



Attachment – public forum presentation



AER approach

- For capex, we will review:
  - SP AusNet's asset management framework and corporate governance processes
  - A sample of capex projects
- For opex we will use a top down assessment method. This is the 'base-step-trend' approach.

AUSTRALIAN ENERGY REGULATOR 1

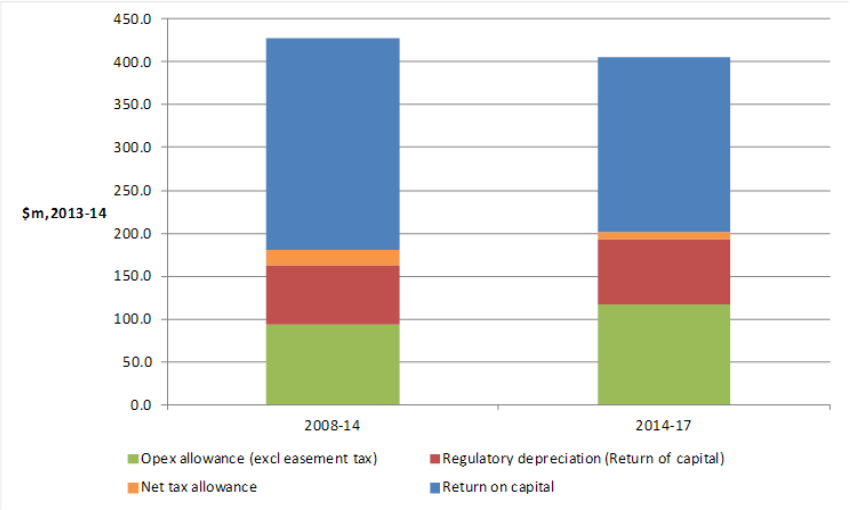
How does this affect consumers?

- SP AusNet's proposed revenue of $1 598 million ($ nominal)
- Downward pressure on prices from lower WACC.
- Upward pressure on prices from:
  - Proposed capex projects (incl. CBD rebuilds, safety and compliance and business IT)
  - Opex step changes and asset works opex

Customer	Usage	Bill impact
Residential		Trans component will fall from $51 (4%) to $46 (3.5%).
Small to medium commercial	< 400MWh	$30-$100 reduction p.a
Large industrial	> 400 MWh	$1000-$9000 reduction p.a
Largest industrial	12 GWh	$20000 - $60000 reduction p.a

AUSTRALIAN ENERGY REGULATOR 4

How does this affect consumers - revenue & price path



AUSTRALIAN ENERGY REGULATOR 5

Proposal highlights

- Average capex increasing from $131m in current period to $192m ($2013-14)
- Average opex increasing from $83.7m in current period to $99.1m ($2013-14), excluding easement tax, debt/equity raising costs and EBSS payments
- Proposed Weighted Average Cost of Capital of 7.2% (nominal, vanilla) (compared to 9.76% in the 2008-14 RCP)
- Implementation of new service standards scheme

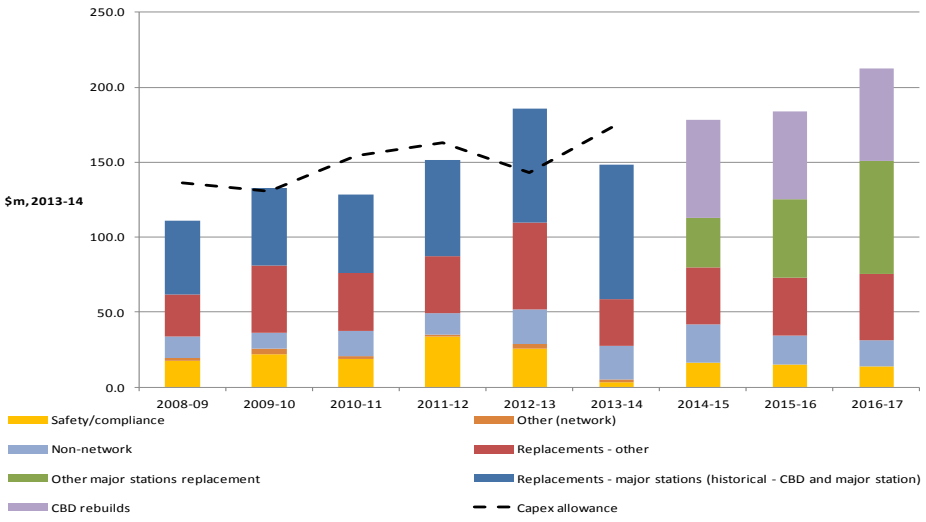
AUSTRALIAN ENERGY REGULATOR 6

Capex - issues

- CBD rebuilds – Richmond and West Melbourne terminal stations
- Significant increase in overall replacement capex
- Continued rollout of significant IT program

AUSTRALIAN ENERGY REGULATOR 7

Capex - drivers



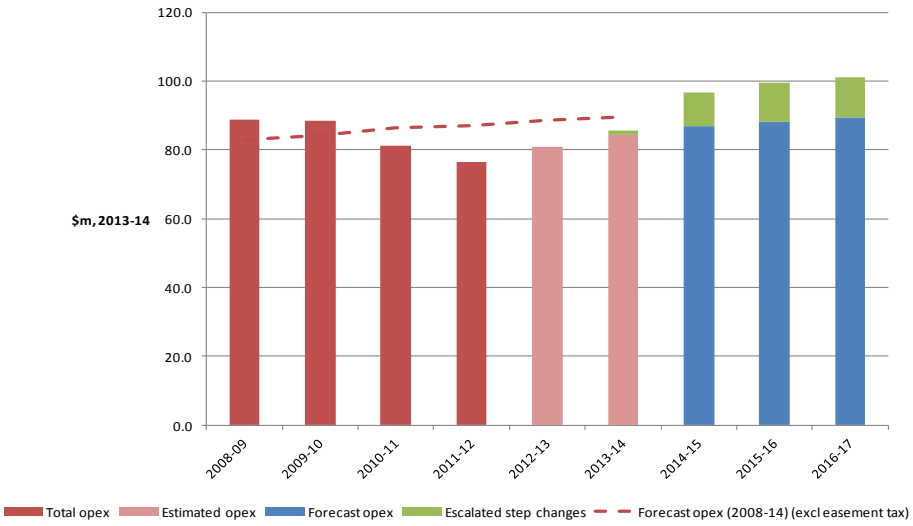
AUSTRALIAN ENERGY REGULATOR 8

Opex – issues

- Underspend of $17m (3%) in current period (excluding easement tax, opex glidepath and debt/equity raising costs)
- Increase in forecast opex due to step changes, asset works opex and other opex (incl EBSS carryover payments)

AUSTRALIAN ENERGY REGULATOR 9

Opex – step changes



AUSTRALIAN ENERGY REGULATOR 10

WACC

Parameter	2008-14	2014-17
Gearing ratio (equity)	40%	40%
Gearing ratio (debt)	60%	60%
Equity beta	1.00	0.8
Market risk premium	6.0%	6.5%
Debt risk premium	2.11%	3.28%
Nominal risk free rate	6.09%	3.14%
Expected inflation	2.59%	2.5%
Gamma	0.5	0.65
Nominal vanilla WACC	9.76%	7.19%

AUSTRALIAN ENERGY REGULATOR 11

We want your views on...

- Capex
  - We would like views on SP AusNet's asset management practices and the justification for projects.
- Opex
  - We would like views on whether SP AusNet's proposed step changes are already included in the base year and whether they are necessary.

AUSTRALIAN ENERGY REGULATOR 12