

4 February 2016

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Dear Chris,

AusNet Services' response to submissions on the Victorian EDPR Preliminary Decision

AusNet Services lodged its Revised Proposal to the Victorian 2016-20 Electricity Distribution Price Review (EDPR) on 6 January 2016, setting out its response to the Preliminary Decision published by the AER on 29 October 2015.

This submission responds to issues raised by stakeholders in their submissions on the Preliminary Decision, and, for matters where recent Victorian Government policy changes or other external developments have occurred, provides additional information in support of AusNet Services' Revised Proposal.

Should you have any questions regarding this submission, please contact Katie Yates, Principal Economist on (03) 9695 6622.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Tom Hallam", written in a cursive style.

Tom Hallam
Manager Regulation and Network Strategy

AusNet Services' response to submissions on the Victorian EDPR Preliminary Decision

1. Introduction and background

This submission responds to issues raised by stakeholders in their submissions on the Preliminary Decision, and, for matters where recent Victorian Government policy changes or other external developments have occurred, provides additional information in support of AusNet Services' Revised Proposal. The matters discussed in this submission are:

- Guaranteed Service Level (GSL) payments;
- Vegetation management obligations and costs;
- Labour costs and productivity forecasts;
- AMI rollout benefits;
- Customer contributions for new connections;
- Rate of return;
- VBRC Declared Areas project; and
- STPIS targets.

2. GSL payments

AusNet Services' Revised Proposal included a forecast of GSL payments (refer to section 4.6 of the Revised Proposal) based on the arrangements set out in the Essential Services' Commission of Victoria's (ESCV) draft decision for its review of the Victorian GSL scheme, which was released on 18 November 2015.

This submission updates that forecast for the ESCV's final decision, which was published on 24 December 2015, the timing of which precluded AusNet Services from reflecting the necessary changes in its Revised Proposal GSL forecast.

The final decision maintained the payments, rates and thresholds set out in the draft decision with the exception of the payment proposed by the ESCV for outages exceeding 12 hours for urban/CBD customers and 18 hours for rural customers. In the final decision, this payment was modified to apply only to customers that have experienced 20 hours or less of unplanned interruptions in the relevant year, to avoid overlap with the scheme's existing outage duration based payment.

AusNet Services' has updated its GSL forecast to reflect the ESCV's final decision, which has resulted in a reduced forecast of \$41.5 million (real 2015) over the current period, compared with the Revised Proposal's forecast of \$46.3 million.

The Revised Proposal and updated GSL payment forecasts are shown in the table below.

Table 1: Revised Proposal and updated GSL payment forecasts (\$m, 2015)

GSL payments	2016	2017	2018	2019	2020	Total
Revised Proposal forecast	9.3	9.3	9.3	9.3	9.3	46.3
Updated forecast	8.3	8.3	8.3	8.3	8.3	41.5
Difference	-1.0	-1.0	-1.0	-1.0	-1.0	-4.8

Source: AusNet Services

The inputs and calculations used to determine the updated forecast are provided in Attachment 1 "AusNet Services - Revised Proposal GSL forecast opex build-up (amended 20.1.2016).xlsx".

The table below shows AusNet Services' updated total opex forecast, taking into account the updated GSL payments forecast.

Due to the relative simplicity of the changes resulting from the GSL update, AusNet Services has not provided updated opex and PTRM models with this submission. However, should the AER require those model updates, AusNet Services would be happy to supply them.

Table 2: Revised Proposal and updated total opex forecast (\$m, 2015)

Total opex forecast	2016	2017	2018	2019	2020	Total
Revised Proposal forecast	243.1	248.1	254.3	259.4	264.7	1,269.6
Updated forecast	242.1	247.2	253.4	258.4	263.7	1,264.8
Difference	-1.0	-1.0	-1.0	-1.0	-1.0	-4.8

Source: AusNet Services

3. Vegetation management obligations and costs

A submission from the Victorian Department of Economic Development, Jobs, Transport and Resources (DEDJTR) supported the AER's Preliminary Decision with respect to the need for a negative step change for vegetation management expenditure.¹

AusNet Services' 2014 actual costs are the best base from which to forecast its future vegetation management costs, as discussed in section 4.4.2 of its Revised Proposal.

As this section explains, the reintroduction of structural branch exceptions under the Electrical Safety (Electric Line Clearance) Regulations 2015 (ELC 2015), which the AER and DEDJTR have suggested should lead to a negative step change in vegetation management expenditure, are in fact already reflected in AusNet Services' 2014 operating expenditure.

This is because AusNet Services' obtained an exemption in October 2013 from Energy Safe Victoria (ESV) for, among other things, the management of structural branches. This exemption changed AusNet Services' structural branch management obligations such that they have been substantially similar to ELC 2015 since October 2013. Accordingly, AusNet Services has effectively been managing structural limbs and branches near overhead powerlines in accordance with the 2015 regulations since that time.

This is reflected in AusNet Services' historical vegetation management costs, which decreased by around \$5 million (real 2015) in 2014, due to changed vegetation management practices as a result of the October 2013 exemption. This amount is broadly consistent with the positive opex step change approved at the 2010 EDPR for the **removal** of structural branch exceptions.

Furthermore, the DEDJTR submission has incorrectly inferred that the increase in vegetation management costs between the 2006-10 and 2011-15 regulatory control periods was solely driven by changes to the management of structural branches. In actual fact, the step changes approved for AusNet Services at that review reflected a broad range of significant changes to its vegetation management obligations as a result of ELC 2010, and encompassed activities much wider than managing structural limbs.

The remainder of this section provides further details on this issue.

¹ DEDJTR, *Submission to Victorian electricity distribution pricing review preliminary determinations – 2016 to 2020*, January 2016.

Preliminary Decision and DEDJTR's submission

The AER's Preliminary Decision considered that as a result of ELC 2015, which commenced on 28 June 2015, AusNet Services' vegetation management obligations in the 2016-20 period may be different to those in the 2011-15 period. The AER noted advice from ESV regarding amendments it had made to ELC 2015 to reintroduce exceptions for structural branches, which the AER considered would result in a cost reduction for AusNet Services during the current period. The AER stated:²

"In our determination for the 2011–15 regulatory control period, AusNet Services was provided with a step change in opex for the removal of the structural branches exceptions. Since ESV has now reversed this change, this is a symmetrical decrease in regulatory obligations from the 2010 changes so we would expect a similar decrease in costs to the increase allowed for in the 2011–15 period."

In its submission to the Preliminary Decision, DEDJTR provided comments on this matter. Specifically, DEDJTR compared AusNet Services, Powercor and United Energy's vegetation management expenditure of \$37.8 million in 2009 under ELC 2005 (which included exceptions for structural branches) with expenditure of \$110.8 million in 2013 under ELC 2010 (which did not include exceptions for structural branches).³ As exceptions for structural branches have been reintroduced in ELC 2015, DEDJTR concluded that:⁴

"...the additional costs incurred under ELC 2010 relative to under ELC 2005, with the removal of the exceptions, was \$73 million for these three DNSPs alone. If the costs associated with vegetation management decrease to the same extent with the introduction of ELC 2015, then the expected cost decreases are well in excess of the expected cost increases."

"When the ESV has issued guidance notes on how it will administer ELC 2015, the AER should be assessing a negative step change in operating expenditure for each of the DNSPs, not just those that proposed a positive step change."

The DEDJTR submission has incorrectly inferred that the increase in vegetation management costs between the 2006-10 and 2011-15 regulatory control periods was solely driven by changes between the 2005 and 2010 ELC in relation to the cessation of exceptions regarding the management of structural limbs and branches near insulated powerlines. In fact, a number of changes drove the increase to vegetation management costs between 2006-10 and 2011-15. DEDJTR has incorrectly assumed that the reintroduction of these exceptions under the 2015 regulations will result in a decrease in vegetation management costs to levels incurred under ELC 2005.

The 2011-15 EDPR

The AER's Preliminary Decision states that "in our determination for the 2011–15 regulatory control period, AusNet Services was provided with a step change in opex for the removal of the structural branches exceptions".⁵

² AER, *AusNet Services Preliminary Decision 2016-20, Attachment 7 – Operating Expenditure*, October 2015, p.44

³ DEDJTR, *Submission to Victorian electricity distribution pricing review preliminary determinations – 2016 to 2020*, January 2016, p.7

⁴ DEDJTR, *Submission to Victorian electricity distribution pricing review preliminary determinations – 2016 to 2020*, January 2016, p.7

⁵ AER, *AusNet Services Preliminary Decision 2016-20, Attachment 7 – Operating Expenditure*, October 2015, p.44

However, the step changes approved in the 2010 EDPR were for a broad range of changes to vegetation management obligations as a result of ELC 2010. These changes, for which the AER approved step changes of \$77.4 million (real 2010), are summarised in the following table, and are further detailed in AusNet Services' regulatory proposals, and Appendix L of the AER's Final Determination, for the 2011-2015 EDPR.

Table 3: Step changes approved for Electricity Safety (Electric Line Clearance) Regulations 2010, 2011-15 regulatory control period (\$m, 2010)

ELC 2010 change	Step change approved (2011-15)
Cessation of exemptions	\$29.8m
Aerial bundled cables and insulated cables	\$25.8m
Habitat trees	\$1.2m
Hazard trees	\$20.6m
Total	\$77.4m

Source: AER, *Victorian electricity distribution network service provider: distribution determination 2011-15, final decision – appendices*, October 2010, pp.277-301

The cost increases that have occurred between the 2006-10 and 2011-15 periods have therefore been the result of a number of more onerous vegetation management obligations introduced under ELC 2010.

The 'aerial bundled cables and insulated cables' step change shown above related to the removal of exceptions for the management of structural branches under ELC 2010, as opposed to the 'cessation of exemptions' step change, which related to the removal of other exceptions.

The removal of aerial bundled cable or insulated cable exceptions resulted in a step change of \$25.8 million, or approximately \$5 million per annum, being approved for AusNet Services for the 2011-15 regulatory control period. This was described by the AER as follows:⁶

“The 2005 line clearance code allowed certain branches and leaves to enter the clearance space of aerial bundled cables under certain circumstances. Specifically:

- *small tree branches with a diameter of less than 10 millimetres and leaves could enter the clearance space if, at least once a year, the branches and leaves were removed from the required clearance space*
- *branches and leaves were not required to be removed from the clearance space annually if the branches and leaves were not likely to abrade the cable before they were next removed in accordance with the code*
- *existing tree branches exceeding 130 millimetres in diameter could enter the clearance space if the branch was more than 300 millimetres from the cable and a suitably qualified arborist carried out an annual risk assessment on the tree.*

These exemptions in the 2005 line clearance code are not included in the 2010 line clearance code.”

AusNet Services' October 2013 exemption

While the structural branch exception reintroduced under ELC 2015 and referred to in the Preliminary Decision and DEDJTR's submission does relate to the management of vegetation surrounding aerial

⁶ AER, *Victorian electricity distribution network service provider: distribution determination 2011-15, final decision – appendices*, October 2010, p.283

bundled cable and insulated cable, this change will not result in a cost reduction for AusNet Services from 2014 levels.

This is because AusNet Services' obtained an exemption setting out similar exceptions in October 2013 from ESV. This exemption, which was submitted as a supporting document to AusNet Services' Revised Proposal, is reproduced below.

Figure 1: Extract from AusNet Services' exemption from ELC 2010

<p>2. EXTENT OF EXEMPTION</p> <p>TABLE 1: MINIMUM CLEARANCE SPACES SURROUNDING A POWERLINE – ALL AREAS Aerial Bundled Cable or Insulated cable</p> <p>SPI is exempted from the requirement to maintain the clearance space specified in Table 1 of the Code, for low voltage powerlines in Low Bushfire Risk Areas, provided that SPI complies with the following:</p> <ul style="list-style-type: none">2.1.1. The requirement for clearance space surrounding an aerial bundled cable or insulated cable under Clause 10 of the Regulations can be varied for small branches with a diameter of less than 10 millimetres and leaves if, and at least once a year, the branches and leaves are removed from the clearance space.2.1.2. Branches and leaves are not required to be annually removed, in accordance with section 2.1.1 of this exemption, if the branches and leaves are not likely to abrade the cable before they are next removed in accordance with the Code.2.1.3. Existing branches are not required to be removed annually, in accordance with section 2.1.1 of this exemption, if the existing branches exceed 130 millimetres in diameter and are more than 300 millimetres from the aerial bundled cable or insulated cable.2.1.4. At each annual inspection SPI completes, and maintains a record for 5 years, a risk assessment for each tree, undertaken by an inspector deemed to be suitably competent by ESV.2.1.5. The requirements of the SPI Bushfire Mitigation Plan, and the SPI Vegetation Management Plan as approved by ESV.

The granting of the exemption above has meant that AusNet Services has effectively been managing structural limbs and branches near overhead powerlines in accordance with ELC 2015 since October 2013.

Specifically, paragraph 2.1.3 exempts AusNet Services' from maintaining clearance spaces for branches exceeding 130mm in diameter (structural branches) that are more than 300mm from the aerial bundled cable or insulated cable.

Clause 2.1.3 has the same effect as regulation 4 of ELC 2015, which is as follows:⁷

“4. Exception to minimum clearance space for structural branches around insulated low voltage electric lines

(1) This clause applies to a responsible person referred to in section 84, 84C or 84D of the Act.

(2) The responsible person is not required to ensure that a particular branch of a tree for which the person has clearance responsibilities is clear of the minimum clearance space for a span of an electric line if—

(a) the electric line is—

(i) an insulated cable; and

(ii) a low voltage electric line; and

(b) the branch is wider than 130 millimetres at the point at which it enters the minimum clearance space; and

(c) the branch is more than 300 millimetres from the line; and

(d) within the last twelve months—

(i) a suitably qualified arborist has inspected the tree of which the branch is a part; and (ii) the arborist has advised the responsible person that the tree of which the branch is a part does not have any visible structural defect that could cause the branch to fail and make contact with the electric line; and

(iii) the responsible person has completed an assessment of the risks posed by the branch; and

(iv) the responsible person has implemented measures to effectively mitigate the identified risks.

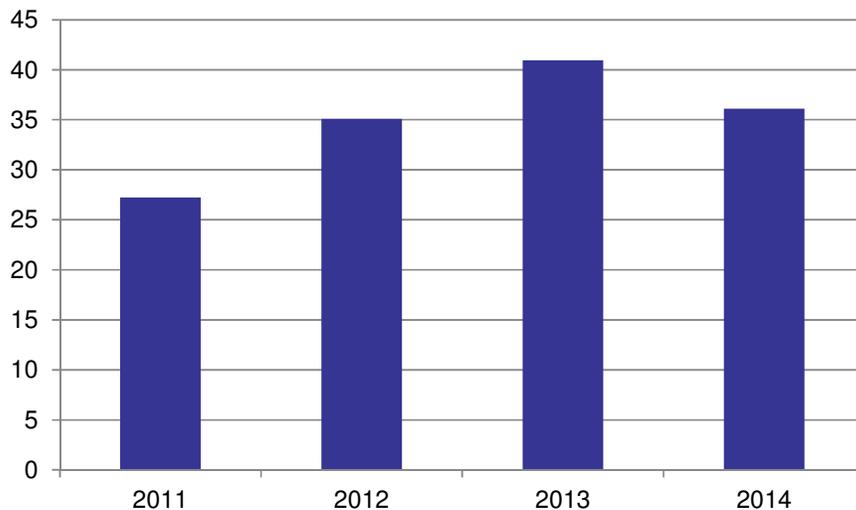
... ”

Hence, due to the exemption granted by ESV in October 2013, AusNet Services' structural branch management obligations during the base year reflected obligations that are substantially similar to those contained under regulation 4 of ELC 2015.

The figure below demonstrates that AusNet Services' vegetation management costs decreased by around \$5 million (real 2015) in 2014 due to changed vegetation management practices reflecting the October 2013 exemption.

⁷ *Electricity Safety (Electric Line Clearance) Regulations 2015 S.R. No. 67/2015, Schedule 1—Code of Practice for Electric Line Clearance, June 2015, pp. 20-21*

Figure 2: Vegetation management operating expenditure (\$m, 2015)



Source: AusNet Services' 2008-13 and 2014 Category Analysis RINs

AusNet Services' base year vegetation management costs are therefore reflective of the obligations set out in ELC 2015 that will apply during the current period, and will not decline as a result of the reintroduction of structural branch exceptions under these regulations.

In fact, as noted in its Revised Proposal, the new regulations impose an additional obligation over and above AusNet Services' current vegetation management obligations. Regulation 5(c) requires annual clearing of vegetation around insulated cables whereas paragraph 2.1.2 of the October 2013 exemption allowed vegetation to remain if abrasion of the service cable was not likely before the next inspection (i.e. potentially for a number of years). However, AusNet Services considers that its base year vegetation management expenditure will be sufficient to comply with this additional obligation, and has not proposed a step change in this regard.

4. Labour costs and productivity

The Victorian Energy Consumer and User Alliance (VECUA) submission to the Preliminary Decision expressed concern regarding, among other things, the labour price change and productivity growth forecasts applied by the AER in its rate of change calculation for the Victorian DNSPs' operating expenditure allowances.

Regarding labour price change, VECUA considered that the AER has not taken into account the following:

- *"The electricity network sector is currently in a major contraction phase – industries in contraction do not face real labour price increasing drivers*
- *The evidence that demonstrates Victorian distributors' current labour costs are excessive*
- *The interaction between labour price changes and productivity change – i.e. real labour price increases need to be compensated by offsetting productivity improvements."*⁸

VECUA also considered that the AER "has not demonstrated why it believes that the Victorian distributors' labour costs will increase at twice the rate of the South Australian distributor,"⁹ in

⁸ Victorian Energy Consumer and User Alliance (VECUA), *Submission to the AER: AER Preliminary 2016-20 Revenue Determinations for the Victorian DNSPs*, January 2016, p.68

reference to the labour price change approved in the AER's Preliminary Decision for SA Power Networks (SAPN).

Regarding productivity, VECUA considered that the AER's application of a zero per cent productivity growth forecast in the rate of change conflicts with:

- *"The AER's expectation that the distribution sector will deliver positive productivity improvements over the next period*
- *The Victorian distributors' proposals – with Jemena proposing positive productivity growth factors*
- *The AER's intention to apply real labour price increases over the next 5 years – the provision of real labour price increases without offsetting productivity improvements will result in further ongoing declines in the distributors' productivity levels."*¹⁰

AusNet Services' response to the Preliminary Decision on labour costs and productivity were set out in section 4.3.2 of the Revised Proposal. VECUA's concerns are addressed in the following sections.

The electricity network sector is growing

VECUA's assertion that the electricity industry is currently in a major contraction phase is not supported by the available evidence. Forecasts from a broad range of economic forecasters point to sector-wide growth in the utilities sector, and specific forecasts for AusNet Services' network area based on the latest available data suggest continued growth driven by population growth.

Notwithstanding the areas where AusNet Services' disagrees with the AER on its approach to setting the labour price change forecast (outlined in section 4.3 of the Revised Proposal), the expert opinions relied on by the AER agree with AusNet Services' view that the Victorian electricity sector will grow rather than contract between 2016 and 2020.

The Preliminary Decision labour price forecast reflects the views of two expert economic forecasters – Deloitte Access Economics and BIS Shrapnel – with respect to the economic drivers of wage growth in the Victorian utilities industry, including the future growth of the industry.

According to DAE, annual growth in utilities sector output will be around 1-2% over the period to March 2021.¹¹ DAE also stated that, while there are some questions over the longer term outlook:¹²

"...overall, the utilities sector is forecast to continue to recover from its recent dip, aided by strong rates of housing construction, a growing population, greater stability in electricity prices, and reduced risks to domestic gas pricing."

In terms of the specific growth outlook for AusNet Services' network, again the evidence points to growth in the coming years. The outputs measured in the AER's output growth model (customer numbers, maximum demand and circuit length), which VECUA considered to be "reflective of the change in outputs required"¹³ are forecast to increase over the 2016-20 period. For example, based

⁹ Ibid., p. 64

¹⁰ Ibid., p. 69

¹¹ Deloitte Access Economics, *Forecast growth in labour costs in the NEM regions of Australia, Report prepared for the AER*, June 2015, p.25

¹² Deloitte Access Economics, *Forecast growth in labour costs in the NEM regions of Australia, Report prepared for the AER*, June 2015, p.26

¹³ VECUA, *Submission to the AER: AER Preliminary 2016-20 Revenue Determinations for the Victorian DNSPs*, January 2016, p. 66

on the latest population forecasts from the Victorian government, AusNet Services' customer numbers are forecast to grow, on average, by 1.73% per annum from 2016-20.¹⁴

Furthermore, initiatives to improve the bushfire safety performance of the Victorian Electricity network, which have been a major driver of costs in AusNet Services' network area since 2009, will continue throughout the 2016-20 regulatory period. Together with network growth to meet a growing population, safety investment will continue to see strong demand for labour in the utility sector in Victoria.

AusNet Services' labour costs are efficient

The available evidence does not support VECUA's assertion that the Victorian DNSP's (including AusNet Services') enterprise agreements (EAs) are not efficient. The AER's benchmarking data show that the Victorian DB's are among the most efficient in the NEM. As private businesses, the Victorian DNSPs have an incentive to minimise labour costs.

VECUA's claims that the Victorian electricity distributors' current labour costs are excessive are based on its view that the distributors' EAs do not represent efficient labour costs. In making its claims, VECUA referenced its previous submission to the AER, which stated:

"VECUA does not accept that the distributors' enterprise agreement rates represent efficient labour costs, as they are typically 1.5-2% higher than the EGWWS WPI rates.

Furthermore, the distributors' enterprise agreement rates are not fully representative of their total workforce labour rates. A recent AER analysis of privately owned distributors' enterprise agreements identified that less than half of the staff of CitiPower, Powercor and AusNet Services are employed under their enterprise agreements. That analysis also identified that privately owned distributors outsource a large proportion of their opex. The distributors' enterprise agreements therefore only represent a subset of their total labour price and overall labour costs.

There is extensive evidence that the Victorian distributors' enterprise agreements are delivering wages well above the efficient level. The AER is required to only allow efficient costs. The AER must ensure that Australia's distribution networks are not allowed to continue with their previous approach of effectively treating inefficient EBA outcomes as a "pass through."¹⁵

AusNet Services strongly disagrees with the view that its labour costs are inefficient. As discussed in section 4.3 of its Revised Proposal, AusNet Services' EA outcomes are efficient and reflect the costs a prudent operator would incur. In responding to the regulatory incentives it faces, AusNet Services has strived to negotiate EAs that allow it to meet its service obligations at the lowest possible cost. In particular, as a private business with profit incentives, AusNet Services faces incentives to minimise its labour costs.

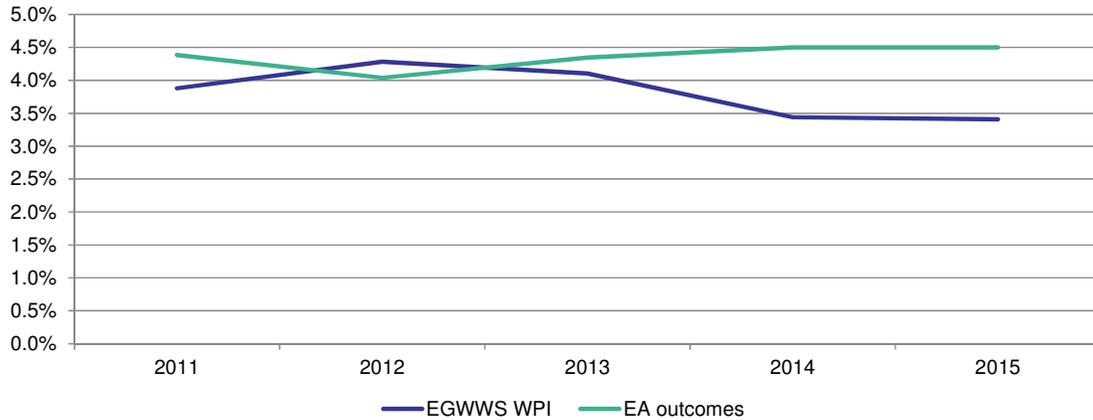
The basis for VECUA's claim that Victorian distributors' EA rates are 1.5-2% higher than the EGWWS WPI is unclear. The wage outcomes set out in AusNet Services' EAs have historically been broadly in line with EGWWS WPI growth. The figure below, which compares EGWWS WPI growth with AusNet Services' EA rates, shows that since 2011, both measures have increased at comparable rates. While EA rates have been higher than EGWWS WPI growth in recent years, on average the

¹⁴ AusNet Services, *Revised Regulatory Proposal 2016-20*, January 2016, p. 4-22

¹⁵ VECUA, *Submission to the AER: Victorian Distribution Networks' 2016-20 Revenue Proposals*, July 2015, p.43

two have moved broadly in line, with simple five-year average growth rates of 4.4% and 3.8%, respectively. This translates to a 0.6% difference rather than the 1.5-2% suggested by VECUA.

Figure 3: EGWWS WPI and AusNet Services' EA rates



Source: ABS; AusNet Services

Notes: EGWWS WPI series shows year-on-year growth in the September Quarter EGWWS WPI data; EA rate represents a weighted average of the rates set out in AusNet Services' ETU and APESMA/ASU EAs

Notwithstanding the comparison above, EGWWS WPI growth should not be treated as a precise benchmark to assess the efficiency of AusNet Services' historical EA rates. This is because the EGWWS comprises a range of organisations and industries with different labour market conditions and therefore levels of wage growth.

In particular, the waste services labour component of the EGWWS index does not reflect the labour resources used by AusNet Services, and may downwardly bias forecasts of this index below the costs AusNet Services will actually incur. This point was made by BIS Shrapnel during AusNet Services' 2014-17 transmission review:

“Using a comparison of the historical wages and employment data of EGW versus EGW and Waste Services at the national (Australian) level, annual growth in the combined EGWWS sector is 0.1 per cent less on average than the EGW sector over the period from 1998/99 to 2008/09, and 0.6 per cent less on average over the same period for AWOTE — both of which are significant and can make a material difference to an enterprise's overall labour costs, see table 4.3.”¹⁶

Furthermore, a range of other organisations are included within the electricity supply subdivision of the EGWWS, including electricity generators, market operators, electricity retailers and electricity wholesalers.

Accordingly, divergence between EGWWS WPI growth and AusNet Services' EAs is attributable to the broad composition of the WPI, rather than efficiency levels.

A more valid efficiency benchmark is the AER's economic benchmarking and category analysis. These analyses show that AusNet Services' opex, which comprises a large proportion of labour expenditure, is relatively efficient compared to its peers. The wage increases embedded in AusNet Services' EAs are an integral part of the operating practices that have enabled it to achieve an efficient level of opex compared to its peers.

¹⁶ BIS Shrapnel, *Real Labour Forecasts to 2016/17 – Australia and Victoria*, November 2012, p. 23.

While not all of AusNet Services' employees are employed under EAs, wages for employees under individual arrangements are benchmarked internally to ensure they align with market rates. Accordingly, EA rates are a proxy for wage increases for staff employed under individual arrangements.

Regarding the use of outsourced labour, AusNet Services' Revised Proposal applies its EA rates to internal labour only, with outsourced labour escalated using an EGWWS WPI forecast. This approach ensures EA rates are applied only to the relevant portion of AusNet Services' labour cost base.

Labour markets are subject to state-specific factors

VECUA expressed concern regarding the lower labour price forecast approved by the AER in its Preliminary Decision for SAPN, compared to the Preliminary Decisions for the Victorian DNSPs. As the AER's Final Decision for SAPN was published on 29 October 2015, the Final Decision labour price forecast is the relevant point of comparison, rather than the Preliminary Decision forecast.

The SAPN Final Decision forecast was based on an average of EGWWS WPI forecasts developed by DAE and BIS Shrapnel, in line with the AER's approach in its Preliminary Decisions for the Victorian DNSPs. The table below compares these two forecasts.

Table 4: AER SAPN Final Decision and Vic. DNSP Preliminary Decision EGWWS forecasts

EGWWS WPI forecasts	2016	2017	2018	2019	2020	Total
Vic. Preliminary Decisions	0.36%	0.80%	1.28%	1.48%	1.37%	5.40%
SAPN Final Decision	0.50%	0.45%	1.00%	1.25%	1.45%	4.73%
Difference	0.14%	-0.35%	-0.28%	-0.23%	0.08%	-0.67%

Source: AER

Note: SAPN Final Decision forecast is a financial year forecast (e.g. 2016 = 2015-16), while the Victorian Preliminary forecast is a calendar year forecast; total figures represent total cumulative growth from 2016-20 compared to 2015.

The AER's Final Decision for SAPN approved an EGWWS WPI forecast that is comparable to the Preliminary Decisions for the Victorian DNSPs. While the profiles of the two forecasts are slightly different, the total Victorian forecast is only marginally higher than the South Australian forecast, and is not twice as high as suggested by VECUA. These minor differences are attributable to the different projections of economic conditions made by DAE and BIS Shrapnel in their respective forecasts.

AusNet Services faces strong productivity incentives

VECUA expressed concern regarding the decline in productivity exhibited by the Victorian distribution industry from 2006-13.

As discussed in section 4.3.2 of its Revised Proposal, AusNet Services' historical decline in productivity has been largely driven by external changes in its operating environment, including changes to vegetation management obligations, increases in insurance premiums and reduced growth in outputs, which are not expected to continue in the 2016-20 period.

Accordingly, while AusNet Services agrees with VECUA that "productivity decline should be temporary,"¹⁷ external factors have the potential to materially impact productivity. For example, AusNet Services will incur significant safety expenditure in the 2016-20 period on the installation of

¹⁷ VECUA, *Submission to the AER: Victorian Distribution Networks' 2016-20 Revenue Proposals*, July 2015, p.67

REFCLs and other safety programs, increasing its inputs with no corresponding change in outputs in the AER's current productivity model.

Nonetheless, AusNet Services intends to drive productivity growth during the 2016-20 period, in line with the incentive properties of the EBSS. AusNet Services has made a significant investment in enterprise resource management and planning systems during the 2011-15 period. Once fully integrated, these systems are expected to drive operational efficiencies across the business, creating significant long-term value for AusNet Services and its customers.

While VECUA asserts that "a key reason for the distributors' productivity declines during the previous regulatory period was the AER's provision of excessive opex allowances,"¹⁸ the incentives faced by private distributors combined with the EBSS mean that, regardless of the allowances approved by the AER, there exists a strong incentive to realise productivity gains where possible.

VECUA also expressed concern regarding inconsistency between the Preliminary Decision's forecasts of zero per cent productivity growth together with real increases in labour prices.

While traditional economic theory suggests that real wage increases and productivity improvements are linked, in the short-term this condition does not necessarily hold due to shocks in economic conditions that can impact productivity without necessarily translating to wage changes. For example, the Centre for Internal Economics (CIE) considers that:

"Growth in labour productivity is the underlying driver of real wages growth. Therefore, in the long-run, real wages should grow in-line with growth in labour productivity. In the short-run, growth in labour productivity and wages can diverge, depending on labour market conditions."¹⁹

Furthermore, the AER's preference is to account for productivity growth separately in the rate of change, to avoid double counting labour productivity or economies of scale with other forms of productivity.

Finally, AusNet Services expects to incur a number of additional costs over the 2016-20 period which it has not proposed step changes for (e.g. decommissioning of zone substations), as identified in section 8.3.7 of its Initial Proposal. AusNet Services will manage these additional costs by driving efficiency savings throughout the company. Accordingly, the application of a zero productivity forecast in the rate of change should not be inferred to mean that productivity gains will not be made during the 2016-20 period.

5. AMI rollout benefits

In its submission to the Preliminary Decision, DEDJTR identified a number of categories of AMI rollout benefits that it considered could be taken into account by the AER.²⁰ This submission addresses the following benefits:

- Reduction in unserved energy due to faster detection of outages and restoration times; and
- Avoided cost of proportion of transformer failures on overload and avoided unserved energy.

¹⁸ VECUA, *Submission to the AER: Victorian Distribution Networks' 2016-20 Revenue Proposals*, July 2015, p.67

¹⁹ The CIE, *Labour price forecasts: prepared for Powercor, AusNet Services and CitiPower*, November 2015, p.28

²⁰ DEDJTR, *Submission to Victorian electricity distribution pricing review preliminary determinations – 2016 to 2020*, January 2016, p.2

DEDJTR obtained information on these benefits from a cost-benefit analysis of the AMI rollout conducted by Deloitte in 2011. However, the benefits suggested by DEDJTR are based on either incorrect assumptions with respect to the operational benefits of AMI, or have already been factored into AusNet Services' Revised Proposal.

Reduction in unserved energy due to faster detection of outages and restoration times

DEDJTR considered the rollout of AMI will have progressively improved SAIDI performance during the period (2010-14) used to set STPIS targets for the 2016-20 regulatory control period, and that AusNet Services' targets should be adjusted to reflect these improvements. DEDJTR referred to Deloitte analysis concluding that the AMI rollout will reduce AusNet Services' minutes off supply by 5%, comprising:²¹

- Low voltage network monitoring improvement benefits of 2%;
- Rural and semi-rural area notification time improvement benefits of 2%;
- Outage Management innovation benefits of 1%.

Deloitte's estimated improvement rates in SAIDI are not supported by evidence. It is not clear how the individual improvement rates above have been determined. Importantly, the rates are not supported by quantitative analysis of the impact of AMI on a network with AusNet Services' specific characteristics, and thus should not be used to adjust the STPIS targets applying to AusNet Services.

Low voltage network monitoring improvement benefits

The Deloitte analysis correctly identifies that AMI meters provide little benefit in the detection of faults and restoration of supplies following faults in Victorian high voltage and medium voltage electricity distribution networks. However, it significantly overestimates the numbers of customers connected to each low voltage circuit and hence overestimates the benefits which AMI meters provide in the detection of faults and restoration of supplies from low voltage circuits.

Seventy percent of the more than 80,000 low voltage circuits in AusNet Services' distribution network are located in rural areas and typically serve fewer than three customers. Across the entire AusNet Services network, the simple average is less than nine customers per low voltage circuit. In urban areas, transformers typically supply at least two three-phase low voltage circuits, such that a typical low voltage fault will affect approximately 15 customers rather than a "few hundred"²² customers as suggested by Deloitte.

AusNet Services detailed supply reliability data shows that low voltage circuit failures have contributed an average of 6% of the total SAIDI recorded each year between 2008 and 2014.

This data also indicates that the time between a supply interruption commencing and a customer telephoning to advise of supply problems is less than five minutes. With significant further investment, AMI systems may be programmed to automatically send a loss of supply alarm to the network control centre, reducing the interruption detection time. A five minute reduction in supply interruption time translates to a 7% reduction in the unplanned customer interruption duration index (UCAIDI) of 75 minutes.

Accordingly, a realistic estimate of the improvement in faster detection of outages and restoration times which AMI meters can provide is a 7% improvement on the 6% of USAIDI attributable to low voltage faults. This equates to approximately 0.4% of the annual USAIDI since AMI meters became functional. Hence, by suggesting that a 5% adjustment be applied to total SAIDI targets, DEDJTR

²¹ Deloitte, *Advanced metering infrastructure cost benefit analysis*, August 2011, p. 61

²² Deloitte, *Advanced metering infrastructure cost benefit analysis*, August 2011, p. 60

has significantly overstated the benefit of faster detection of outages and restoration times due to the installation of AMI meters.

Rural and semi-rural area notification time improvement benefits

The Deloitte analysis assigned a 2% improvement rate on the basis that the AMI rollout would reduce notification and travel time by repair crews in semi-rural (1%) and rural (1%) areas, which it considered constituted significant components of overall outage duration time.

However, AMI meters do not improve notification, response or restoration time for customers in semi-rural and rural areas. This is because notification of these outages is typically received through direct customer contact or SCADA system alerts, response and travel times are predominantly set by the distance between the affected circuit and the distributor's nearest resources, and the time to repair and restore supply is determined by the information provided by fault crews, customers or emergency services on the nature of the network fault and by the speed of the distributor to divert material and resources from other works to the unplanned event.

Deloitte has incorrectly inferred that information obtained from AMI meters can improve these times.

Outage Management innovation benefits

Deloitte assigned a 1% improvement rate for Outage Management System (OMS) benefits resulting from information obtained through AMI, despite acknowledging that "it is likely that given this additional information, innovative strategies will be developed over time to improve outage times. However, this additional benefit is difficult to quantify."²³

While AMI meters have the potential to create OMS and other reliability benefits going forward, investment is required to realise these benefits. The deployment of AMI has not, and does not, automatically allow these benefits to be realised. Furthermore, the 1% improvement rate has not been determined through a quantitative analysis of the impact of AMI and thus should not be used to adjust AusNet Services' STPIS targets.

Conclusion

In light of the inaccurate assumptions underpinning the Deloitte analysis, and the information provided above with respect to the minor impact of AMI on SAIDI, AusNet Services does not consider the STPIS adjustments suggested by DEDJTR are warranted. Instead, the scheme should be allowed to reflect reliability improvements attributable to AMI (where they are realised) through the target setting calculation based on a five-year average. This approach ensures that customers will receive the benefits of improved reliability where they are achieved, without penalising DNSPs for estimated reliability improvements that have not been realised nor supported by the available data.

Avoided cost of proportion of transformer failures on overload and avoided unserved energy

DEDJTR considered the AMI rollout will reduce transformer failures due to overload, referring to Deloitte analysis showing capex savings of \$4.8 million per annum (real 2015) as a result of this reduction.²⁴

AusNet Services' Initial and Revised Proposal capital expenditure forecasts incorporate the information benefits of AMI with respect to transformer replacement.

²³ Deloitte, *Advanced metering infrastructure cost benefit analysis*, August 2011, pp. 60-61

²⁴ DEDJTR, *Submission to Victorian electricity distribution pricing review preliminary determinations – 2016 to 2020*, January 2016, p.3

Over the 2011-15 regulatory period, AusNet Services has undertaken a program of replacing potentially overloaded distribution transformers with larger transformer to prevent transformer failures. This program will continue over the 2016-20 regulatory period, albeit at a reduced level due to the use of AMI data which enables better targeting of transformer replacements. This is achieved by using AMI data to aggregate customer consumption data to accurately assess which transformers are being overloaded. The reduced expenditure due to the lower forecast of transformer replacements as a result of this information is incorporated into AusNet Services capex forecasts.

6. Customer contributions for new connections

In its submission to the Victorian electricity distribution pricing review, DEDJTR has stated that the change in the regulatory framework for new connections will have no effect on the forecast customer contributions for AusNet Services. More specifically, it states that:²⁵

“The customer contributions for new connections that have been accepted by the AER are based on the Essential Service Commission’s Electricity Guideline No. 14: Provision of Services by Electricity Distributors (Guideline 14). Guideline 14 states that the incremental revenue for a new connection is calculated assuming that the X-factor in the final year of the current regulatory control period applies in subsequent years.

The Victorian Government has decided that Chapter 5A of the National Electricity Rules will apply from 2016 or 2017, to align Victoria with the national framework. The incremental revenue will be calculated in accordance with the AER’s Connection charge guidelines for electricity retail customers. Under these guidelines, the incremental revenue for a new connection is calculated assuming that the real distribution charges in the final year of the current regulatory control period apply in subsequent years.

The effect of this difference on the customer contributions will vary from DNSP to DNSP depending on the X factor for 2020.

The X-factor for AusNet Services and United Energy is 0.00 per cent for 2020. The change in the regulatory framework for new connections will have no effect on the forecast customer contributions for these DNSPs.

The X-factor for CitiPower, Jemena and Powercor is negative, indicating a real increase in revenue in 2020. The incremental revenue that will be assumed to be earned by these DNSPs’ new connections will be higher under the national regime than the state-based regime, resulting in lower customer contributions. The proportion of the cost of connection paid for by the connecting customer will decrease and the proportion of the cost paid for by other customers will increase. As the X-factors are less than 1 per cent, the difference is not expected to be material.

The Government will inform the AER when the Chapter 5A arrangements will commence.”

DEDJTR’s statement regarding the treatment of X-Factors is technically correct.

However, there are other factors that impact the calculation of customer connection charges under the Chapter 5A arrangements as compared to Guideline No 14. Most notably, the Chapter 5A arrangements and the AER’s Connection Charging Guideline introduce thresholds that would limit a business’ ability to levy an upfront charge upon connecting customers to cover the future costs of augmenting the network.

²⁵ DEDJTR, *Submission on the Victorian electricity distribution network service providers’ preliminary distribution determinations for 2016-20*, page 4

In this context, in its Initial Proposal, AusNet Services stated that it was proposing to introduce a marginal cost of reinforcement (MCR) rate to better reflect the true costs borne by AusNet Services in augmenting its network to accommodate new customers. Consistent with this, AusNet Services' initial forecast of its customer contributions - which were based on the continued application of Guideline 14 - reflected an estimate of the application of this MCR to **all future customer connections**.

However, the adoption of the national framework for customer connections set out in Chapter 5A of the Rules may affect AusNet Services' ability to apply the MCR²⁶ to some new connections that would have been eligible to be charged an MCR under Guideline 14.

In particular, the Connection Charge Guidelines supporting the introduction of Chapter 5A state that a business' connection charging policy must:²⁷

“include a threshold or thresholds (referred to here as the shared network augmentation charge threshold) below which retail customers (other than non-registered embedded generators and real estate developers) will not be required to make a capital contribution toward the cost of the augmentation (insofar as it involves more than an extension)”.

These thresholds:

- Must be based on a measure of demand and fixed for the duration of the regulatory control period.
- Can vary for each identifiably different area of its network.
- Should be generally set at levels that exclude augmentation (insofar as it involves more than an extension) charges for retail customers.

Examples of the thresholds the AER gives in their Guideline are:²⁸

- 25 kVA on single wire earth return lines (SWER); and
- The maximum capacity of a 100 Ampere 3 phase low voltage supply, elsewhere in the distribution network.

The AER also makes a number of other pertinent comments including that:²⁹

“The AER considers that the threshold should be set so that at least residential customers in an urban area would not be required to contribute towards the cost of an augmentation (insofar as it involves more than an extension)”

The latter statement represents an effective summary of what the inclusion of the threshold is designed to achieve – that is, some residential customers would not be required to contribute towards the cost of an augmentation.

²⁶ This is considered analogous to the “Incremental Cost Shared Network” that is described in the AER’s Connection Guideline.

²⁷ AER, *Connection charge guidelines for electricity retail customers under chapter 5A of the National Electricity Rules, June 2012*, page 8

²⁸ *Ibid*, page 9

²⁹ *Ibid*, page 8

In this context, the key change AusNet Services has made to its customer contributions forecast in response to the new connections framework was to remove the application of the MCR to certain types of residential customers, namely single-lot developments. This was made on the assumption that the:

- Demands of single-lot developments would be less than the threshold that is likely to be set in accordance with the Guidelines, with this assumption being informed by the example thresholds that the AER set out in its Guideline in combination with AusNet Services' analysis of its customers' historical demands, and
- Threshold does not apply to real estate developers, and a real estate development covers situations where there is a subdivision, or the construction of multiple premises, therefore single-lot developments are not excluded from the application of the threshold.

This is consistent with the new framework and reduces the level of customer contribution forecast for the 2016-20 regulatory period.

7. Rate of return

This section:

- Provides up to date information on AusNet Services' proposed third party data series used to set the regulatory cost of debt; and
- Addresses other rate of return issues raised in VECUA' submission to the Preliminary Decision.

Proposed third party data series

In its Revised Regulatory Proposal, AusNet Services again expressed concern about the application of the Bloomberg data series, due to previous observed lags between the cost of debt observed in the market place and the cost of debt estimated in the BVAL curve.³⁰ The lag is particularly problematic where short averaging periods are applied to estimate the cost of debt, as a mismatch can occur between the debt allowance and the actual cost of debt that would be incurred by a benchmark efficient entity during that averaging period.

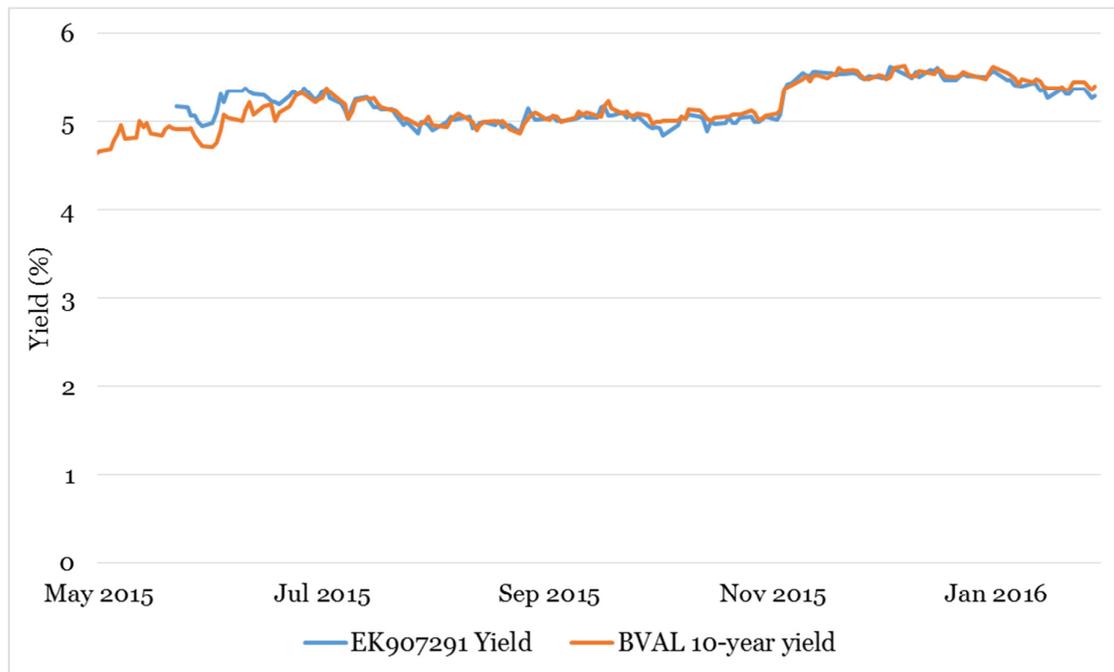
AusNet Services has also noted that the sample of bonds underpinning the BVAL curve is very limited, due to Bloomberg's restrictive bond selection criteria, and as such the curve does not reflect all available information on the cost of debt for a benchmark efficient network business³¹.

In particular, as shown in Figure 4 of CEG's report 'Criteria for assessing fair value curves' submitted with AusNet Services' Revised Regulatory Proposal on 6 January, Bloomberg's 10 year tenor curve closely tracks a single bond issuance – Asciano (EK907291). The attached memorandum from CEG 'Recent financial market conditions and the BVAL curve' contains an updated version of this chart (reproduced below).

³⁰ AusNet Services, Revised Regulatory Proposal, 6 January 2016, page 7-35. See also AusNet Services, Transmission Revenue Proposal, 30 October 2015, pp 274-276

³¹ AusNet Services, Transmission Revenue Proposal, 30 October 2015

Figure 4: Yields of the Asciano bond and the BVAL curve at 10 years



Source – CEG, Bloomberg

As explained by CEG (Attachment 2 – CEG Memorandum), the Asciano bond is the only bond used in Bloomberg’s sample with more than 6.5 years to maturity³². Because Bloomberg’s curve fitting methodology is proprietary, neither AusNet Services nor the AER is able to confirm the basis of the 10 year BVAL estimate. However, on visual inspection of the figure above it is evident that the Asciano bond has a material influence on the BVAL curve and appears to have been given a very high weighting in Bloomberg’s methodology. This is also CEG’s view (See Attachment 2 – CEG Memorandum). Correspondence between Bloomberg and AusNet Services has also confirmed that there is ‘a real dearth of market observations beyond 5-7 years in the BBB corporate curve’³³.

The predominance of a single bond in the BVAL curve renders it inappropriate for use at the current time for two reasons:

1. The BVAL curve will be heavily influenced by factors specific to Asciano. Asciano is currently the subject of rival takeover bids by two large, diversified infrastructure firms, which would be expected to suppress its bond yields.
2. The BVAL curve does not reflect the current financial market volatility.

These issues are discussed further below.

Asciano-specific factors influencing the BVAL curve

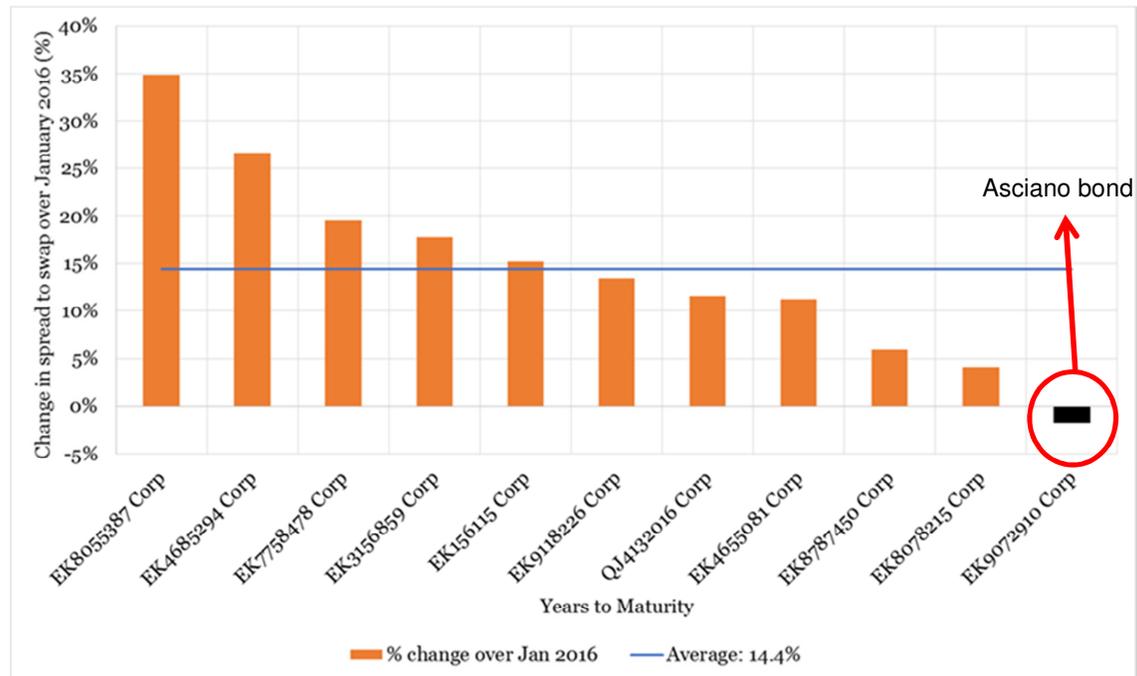
Asciano is currently the subject of rival takeover bids by Brookfields and Qube. Takeover bids by larger, diversified firms typically suppress the target company’s corporate bond yields. This is because, where a bidder is a larger, financially stronger company than its target, the corporate bonds of the company being purchased are seen as less risky, reducing yields.

³² Attachment 2 – CEG, *Memorandum: Recent financial market conditions and the BVAL curve*, 3 February 2016.

³³ Attachment 3 – Email from Bloomberg to AusNet Services, 27 January 2016

In the case of Asciano, the takeover bids have also positively impacted its share price, as reported in the Sydney Morning Herald³⁴. CEG's figure below demonstrates the reduction in Asciano bond yields between 31 December 2015 and 27 January 2016. It is particularly interesting to compare the reduction of the Asciano bond yield over this time period with the movements in yields of other BBB band rated bonds with similar maturities – which have all increased significantly, driven by the current financial market volatility (explained below).

Figure 5: Percentage Change in Spread to Swap – 31 December to 27 January 2016



Given the firm-specific factors influencing Asciano's bond yields, there is no basis to conclude that the yield of the Asciano bond currently reflects the market conditions that would be faced by a benchmark efficient entity raising funds. Further, there is no objective justification for assigning a weighting of 50% to the BVAL curve, particularly in circumstances where the curve is dominated by a single bond. It follows that the 10 year BVAL curve does not reflect the current market conditions that would be faced by a benchmark efficient entity raising funds and, as such, does not provide a better estimate of the cost of debt. As such, its inclusion in the cost of debt calculation does not contribute to the achievement of the allowed rate of return objective.

Current financial market volatility

The current financial market volatility has been widely reported.³⁵ The volatility is driven by uncertain macroeconomic conditions, including (amongst other factors) movements in the Chinese stock market, low oil prices, and the US economic outlook. The implications of this for the cost of debt have been:

- A reduction in Commonwealth Government bond yields (applied as a proxy for the risk free rate); and

³⁴ <http://www.smh.com.au/business/qube-consortium-makes-rival-9b-takeover-offer-for-asciano-20160127-gmflef.html>

³⁵ Australian Financial Review articles:
<http://www.afr.com/markets/equity-markets/mohammed-elerian-says-brace-for-more-volatility-20160107-gm1jv8>
<http://www.afr.com/personal-finance/shares/investor-sentiment-hits-record-low-20160201-gmj7b2>

- An increase in credit margins, as debt investments are perceived to be more risky by the market. This has led to increases in the yields of BBB band rated corporate bonds in Australia, as seen in Figure 2 of the attached CEG Memorandum. It is also reflected in the RBA's January 2016 estimate of 297.59 basis points (which is derived from the yields on these bonds), a significant increase compared to its December 2015 estimate of 249.34 basis points.

However, despite the high level of volatility in financial markets, the spread implied by the BVAL 10 year curve has remained flat between December 2015 and January 2016. However, the flat spread can be explained by the BVAL's heavy reliance on the Asciano bond which, as discussed above, is currently subject to firm-specific factors expected to suppress its bond yields.

Concerns with the AER's inclusion of the BVAL curve

The AER's recent practice has been to apply a simple average of the BVAL and RBA BBB 10 year curves. Given its concerns with the BVAL curve expressed above, AusNet Services considers that applying a 50:50 weighting of these two curves will not reflect the return required by debt investors in a benchmark efficient entity at present, and will not achieve the allowed rate of return objective.

Applying equal weighting to the two curves will give an excessive and unjustified weighting to the current yield of a bond which is heavily influenced by company-specific factors which do not apply to the benchmark efficient entity. The figure above demonstrates that the BVAL curve is entirely dependent on the Asciano bond. While this bond is also included in the RBA's sample, its weighting is around 4% (see Attachment – CEG Memorandum). Therefore, under the AER's approach, as much as 52% of the return on debt that will apply to AusNet Services in the 2016 regulatory year will be determined by the Asciano bond yield. Under the AER's Guideline transition, the Asciano bond yield will determine 42% of the return on debt for the 2016-20 regulatory period. As outlined above, this bond is an anomaly as it is currently subject to two takeover bids. In these circumstances, it is clearly inappropriate to give this bond (or any single bond) such an excessively high weighting in a regulatory decision without careful and objective justification.³⁶

To the extent that the Asciano bond provides relevant information about the cost of debt for a benchmark efficient network business, it is already captured in the RBA's data series. Applying additional weight (50%) to the Bloomberg curve will significantly overweight this information, which, as outlined, does not reflect the prevailing market conditions that would be experienced by a benchmark efficient entity.

AusNet Services' Proposal

AusNet Services strongly maintains its Revised Regulatory Proposal position that Bloomberg's BVAL curve is not fit-for-purpose. Instead, AusNet Services again proposes that the RBA and Reuters curves be applied with a 50:50 weighting, on the basis that unless there are specific concerns about the merits of a particular curve, a greater number of data sources is ordinarily preferable to one.

AusNet Services acknowledges that the Reuters curve has only recently been published and warrants further investigation. However, it is currently reporting yields relatively close to those estimated by the RBA, which provides an initial confirmation that the Reuters curve reflects prevailing market conditions.

If the AER is not minded to accept the use of the Reuters curve, AusNet Services considers that the RBA curve should be applied exclusively, for the reasons outlined in this submission and supporting documentation.

³⁶ Application by United Energy Distribution Pty Limited [2012] ACompT 1 at [446], [449].

Other rate of return issues

Submissions in relation to AusNet Services' rate of return proposal

VECUA sets out a number of concerns with AusNet Services' rate of return proposal and supporting submissions. AusNet Services has now provided in its Revised Proposal (on 6 January 2016) a comprehensive response to the Preliminary Decision, which addresses each of the issues raised by VECUA.

In particular:

- In response to concerns regarding the multi-model approach, AusNet Services has put forward an alternative approach to estimating the return on equity which relies on the Sharpe Lintner Capital Asset Pricing Model (SL CAPM) alone but with appropriate adjustments to account for known weaknesses in this model; and
- AusNet Services has also revised its approach to estimating the return on debt, adopting a simpler approach of transitioning immediately to the trailing average method.

AusNet Services considers that each of the concerns previously expressed by the AER and stakeholders have now been addressed in the submission and supporting evidence submitted on 6 January 2016.

VECUA's submissions on the AER's WACC determination approach

Insufficient consideration of market data and other evidence

AusNet Services agrees with VECUA that the AER has had insufficient regard to market evidence in determining the rate of return. However AusNet Services does not agree with VECUA's submission that a proper consideration of available market data and other evidence would support a lower rate of return than that determined by the AER.

On the contrary, as noted in AusNet Services' 6 January submission:³⁷

- The AER's estimate of the return on equity is below any comparable recent estimate from market practitioners, including estimates from the AER's review of recent broker reports and independent expert reports; and
- The AER's estimate of the return on equity is below that indicated by current market prices for traded equities and the AER's market-wide dividend growth model (**DGM**) analysis.

This outcome is due to the AER mechanically applying the foundation model approach developed in the Rate of Return Guidelines, without any meaningful consideration of whether such an approach leads to an estimate of the return on equity that is consistent with the allowed rate of return objective and commensurate with prevailing market conditions.

More specifically, this is the result of the AER:

- Relying solely on the output of a model that is known to produce biased estimates, without properly correcting for that bias;
- Applying this model in a way that does not reflect market practice and which results in the return on equity simply tracking movements in the risk-free rate; and
- Making errors in the interpretation of key evidence.

³⁷AusNet Services, *Revised Regulatory Proposal 2016-20*, 6 January 2015, p 7-39 to 7-40.

Further evidence provided with this submission reinforces these points. Evidence from investors indicates that the AER's proposed return on equity of 7.3% is not too high, as suggested by the VECUA submission, but rather it is too low.

A submission made by listed infrastructure fund Spark Infrastructure in relation to the AER's April 2015 preliminary determination for SA Power Networks explains that:

- The regulatory returns resulting from the AER's implementation of the SL CAPM using short term base rates and long run average market risk premium are well below the prevailing market rates,³⁸
- The AER's approach of combining short term base rates and long run average market risk premium in the SL CAPM is inconsistent with market practice in relation to estimation of hurdle rates for investment,³⁹ and
- The returns allowed in the AER's latest determinations are not sufficient to attract equity investment when compared to competing investment opportunities.⁴⁰

Spark's view has been informed by feedback from a broad range of pension funds and other ultimate suppliers of investment funds. Their feedback to Spark was that the regulatory returns currently expected for the next regulatory periods are inadequate to sustain long run decisions to invest in the sector.⁴¹

The statements made by Spark Infrastructure in its submission in relation to the AER's April 2015 determinations remain relevant in this case. In the Preliminary Decision in respect of JEN, the AER has applied the same method for estimating the return on equity as it applied in the April 2015 determinations, and the resulting return on equity estimate is very similar (7.3% compared to 7.1%).

The AER's focus on AusNet Services' proposal

AusNet Services does not agree that the AER has "inappropriately" focused on the rate of return proposals put forward by the Victorian businesses.

AusNet Services and the other Victorian businesses have provided cogent evidence as to the required return of equity and return on debt for the forthcoming regulatory period. It is entirely appropriate (and required under the NER) for the AER to have proper regard to this evidence.

AusNet Services considers that in fact the AER has not sufficiently had regard to all of the evidence it has submitted to date. In particular, the AER does not appear to take into account the estimates of the return on equity provided by Frontier Economics using the Black CAPM, the Fama French Model and DGM. Rather, the AER has solely relied on its implementation of the SL CAPM to determine the return on equity.

Implications of the recent TransGrid sale

VECUA submits that the outcome of the recent TransGrid sale process "makes a mockery" of claims made by network service providers regarding the required return on equity.⁴² VECUA appears to consider that the fact that the agreed sale price for TransGrid exceeds its regulated asset base (**RAB**) value indicates that the return on equity allowed by the AER for TransGrid (7.1%) is at least sufficient for it to meet efficient financing costs and attract equity investment.

However, there are many other reasons as to why the TransGrid sale price exceeded the RAB value. The purchase price alone does not constitute any evidence of the adequacy of the AER's allowed

³⁸ Spark Infrastructure, *Appropriate rate of return for electricity distribution businesses*, 3 July 2015, p 2.

³⁹ Spark Infrastructure, *Appropriate rate of return for electricity distribution businesses*, 3 July 2015, p 4.

⁴⁰ Spark Infrastructure, *Appropriate rate of return for electricity distribution businesses*, 3 July 2015, p 5.

⁴¹ Spark Infrastructure, *Appropriate rate of return for electricity distribution businesses*, 3 July 2015, p 2.

⁴² VECUA submission, p 14.

return on equity of 7.1% for the remaining four years of the current regulatory period. The reasons for this conclusion include:

- The sale price reflects not only the allowed return on equity of 7.1% for the next four years, but also a range of other factors, including:
 - Expected cash flows over the full 99-year lease period;
 - The extent to which the acquirer considers that it may be able to outperform regulatory benchmarks under incentive-based regulation or be eligible to receive incentive payments (e.g. its expected ability to achieve operating efficiencies);
 - The acquirer's assessment of the value attributed to non-regulated assets owned by TransGrid;
 - The potential for future growth in the earnings of the firm over the 99-year lease period, arising from: the expansion of existing non-regulated activities; the development of new non-regulated activities; and/or increasing the scale and/or efficiency of regulated activities;
 - Any synergies with the acquirer's existing business;
 - Any diversification benefits available to the acquirer;
 - Any strategic value to the acquirer (e.g. value in seeking to establish an operation in a new market or reach an efficient scale in a market where it already has some interests); and
- Since controlling interests are purchased at a material premium to ordinary equity, the prices paid for controlling interests cannot be used to infer anything about the required return on ordinary equity – even aside from the other reasons set out above.

The TransGrid equity investment prospectus published by Spark Infrastructure (referred to in the VECUA submission) confirms the above analysis. This prospectus does not indicate that the regulated return on equity allowed for TransGrid for the next four years is a driver of the agreed sale price or of the acquirer's perception of the value of TransGrid – the only comment that is made about this is that “TransGrid's current regulatory determination applies for 4 years only (to 30 June 2018) and was not appealed by its previous owners”.⁴³ Rather, the prospectus identifies other areas of value in the TransGrid business as including:⁴⁴

- Strategic benefits for Spark in increasing diversity of cashflow sources, thereby reducing overall portfolio risk;
- Scope to increase efficiency through better asset utilisation and process improvements;
- Scope for long term growth in regulated activities (and hence RAB growth), supported by macro-economic driven demand growth expectations, and change in generation mix to renewables;
- Spark's ability to leverage TransGrid's assets and apply its own expertise to develop and grow non-regulated business opportunities. The prospectus notes in particular some scope to grow a telecommunications service offering that leverages TransGrid's market positioning across NSW.

Therefore, consistent with previous conclusions of the AER⁴⁵ and its experts⁴⁶, AusNet Services considers that nothing can be inferred from the outcome of the TransGrid sale process, as to the adequacy or otherwise of the regulated return on equity for TransGrid or any other business.

⁴³ Spark Infrastructure, *Equity Investment in TransGrid and Equity Raising*, 25 November 2015, p 26.

⁴⁴ Spark Infrastructure, *Equity Investment in TransGrid and Equity Raising*, 25 November 2015, pp 9-10.

⁴⁵ AER, *Rate of Return Guideline Explanatory Statement*, December 2013, p 48.

⁴⁶ McKenzie and Partington, *Equity market risk premium*, December 2011, p 34.

VECUA's submissions on the AER's WACC determinations

Relevance of asset indexation to the AER's return on equity determination

VECUA argues that the AER has failed to consider the impact of asset indexation in its return on equity determinations. It is said that the AER's calculation of its return on equity allowances does not reflect the reality that networks apply annual asset indexation to their regulatory asset bases (**RABs**).

This is not correct. The method adopted by the AER for determining annual revenue requirements does take into account the fact that, under the NER, the RAB must be indexed each year for inflation⁴⁷ and a nominal rate of return must be applied to this indexed RAB value to determine the return on capital allowance.⁴⁸ This is accounted for by making an adjustment to the annual revenue requirement calculation for each year for indexation of the regulatory asset base, as required by the NER.⁴⁹ The adjustment that is made to the annual revenue requirement is a negative adjustment equal to the amount by which the RAB is indexed for inflation in that year.⁵⁰

Therefore, the impact of asset indexation is fully taken into account in setting allowed revenues. No further adjustment would be permitted under the NER. As explained above, the NER clearly prescribe how inflation is to be accounted for in determining the rate of return (i.e. the rate of return is to be determined on a nominal basis), rolling forward the RAB (the RAB is to be adjusted for inflation in each year) and determining revenue requirements (the annual revenue requirement is to include a negative adjustment for indexation of the regulatory asset base).

As discussed in AusNet Services' 6 January submission, this gives rise to important interrelationships between the method for forecasting inflation and other aspects of the AER's determination, particularly its determination of the allowed rate of return. Given these interrelationships, it is important that the forecast of inflation be as accurate as possible, and consistent with the implied forecast of inflation in the nominal rate of return. This issue is discussed further in AusNet Services' 6 January submission.⁵¹

Estimation of the return on equity

VECUA argues that the AER has over-estimated the return on equity, by applying a market risk premium (**MRP**) and equity beta in the SL CAPM that are too high. VECUA argues that both the MRP and equity beta should be set to the bottom of the AER's ranges for those parameters (i.e. 5% and 0.4 respectively).

VECUA's submissions on the return on equity rest on the following contentions:

- That it is appropriate to use the SL CAPM alone to estimate the return on equity, with no adjustment for any of the known weaknesses in this model;
- Best estimates of the MRP and equity beta are 5% and 0.4 respectively; and
- Using an MRP of 5% and equity beta of 0.4 in the SL CAPM will lead to a reasonable estimate of the return on equity, and one that contributes to the achievement of the allowed rate of return objective.

For reasons set out in AusNet Services' 6 January submission, the evidence before the AER does not support the first contention. The empirical evidence points to shortcomings in the design of the

⁴⁷ NER cl 6.5.1; S6.2.3(c)(4).

⁴⁸ NER, cl 6.5.2(d)(2).

⁴⁹ NER, cl 6.4.3(a)(1).

⁵⁰ NER, cl 6.4.3(b)(1).

⁵¹ AusNet Services, *Revised Regulatory Proposal 2016-20*, 6 January 2015, p 7-104

SL CAPM which mean that it will underestimate the required return on equity for businesses with a beta below one and businesses with high book-to-market ratios.⁵²

VECUA's submission as to the best estimates of the equity beta and MRP are also not supported by the evidence before the AER. No expert (including the AER's expert) concludes that the best empirical estimate of the equity beta is 0.4⁵³; rather, the expert evidence supports an SL CAPM equity beta of 0.82 (before any adjustment to account for biases in this model).⁵⁴ Similarly, the expert evidence before the AER does not support an MRP of 5%, but rather supports a much higher estimate of the prevailing MRP (Frontier Economics recommend an estimate of 7.9%⁵⁵).

Finally, VECUA's submissions do not include any consideration of whether the return on equity and overall rate of return that would result from its proposed approach is reasonable and consistent with the allowed rate of return objective. If VECUA's proposal were to be implemented, this would deliver an equity risk premium (**ERP**) of just 2% and a return on equity of approximately 4.8%. This is significantly below the ERP and return on equity ranges indicated by the reasonableness checks (or "cross-checks") referred to by the AER in the Preliminary Decision.⁵⁶ VECUA's submission would also imply a return on equity that is significantly below the prevailing return on debt.

The relevant evidence in relation to each of these issues is addressed in detail in AusNet Services' 6 January submission.

Return on debt

VECUA raises two issues in relation to estimation of the return on debt:

- 1 VECUA claims that, by using broad BBB data series for estimation of the return on debt, the AER has provided significantly higher cost of debt allowances than appropriate; and
- 2 VECUA argues that the AER should benchmark businesses' actual debt costs to inform its return on debt allowances.

The first of these issues was addressed in AusNet Services' 6 January submission. For reasons explained in that submission, continuing to use a broad BBB band data series to estimate the return on debt will not lead to an allowance that is 'too high'. Rather, given that the evidence supports a credit rating of BBB to BBB+, using a broad BBB band data series is entirely appropriate.⁵⁷

In relation to the second issue, AusNet Services submits that it would not be appropriate, and not consistent with the NER and NGL, for the return on debt allowance to be based on businesses' actual debt costs. Such an approach would be inconsistent with:

- The allowed rate of return objective, which requires the rate of return to be commensurate with the efficient financing costs of a benchmark efficient entity (not the actual financing costs of the regulated business),⁵⁸

⁵² Refer to: AusNet Services, *Revised Regulatory Proposal 2016-20*, 6 January 2015, section 7.4.3.

⁵³ VECUA refers to "Professor Henry's estimate of 0.4". Professor Henry did not recommend an estimate of 0.4. Rather, Professor Henry recommended a range of 0.3 – 0.8, based in the limited sample of domestic businesses that he was instructed to use (Olan T Henry, *Estimating β : An update*, April 2014, p 63).

⁵⁴ Frontier Economics, *Estimating the equity beta for the benchmark efficient entity*, January 2016. See also: AusNet Services, *Revised Regulatory Proposal 2016-20*, 6 January 2015, section 7.4.4(c).

⁵⁵ Frontier Economics, *The required return on equity under a foundation model approach*, January 2016, Table 5. See also: Frontier Economics, *Estimating the equity beta for the benchmark efficient entity*, January 2016. See also: AusNet Services, *Revised Regulatory Proposal 2016-20*, 6 January 2015, section 7.4.4(b).

⁵⁶ For an analysis of these cross-checks, refer to: AusNet Services, *Revised Regulatory Proposal 2016-20*, 6 January 2015, section 7.4.2.

⁵⁷ AusNet Services, *Revised Regulatory Proposal 2016-20*, 6 January 2015, pp 33-34.

⁵⁸ NER, cl 6.5.2(c).

- The revenue and pricing principles, which provide for recovery of at least the efficient costs incurred in the provision of direct control network services (not actual costs) and the provision of effective incentives to promote economic efficiency;⁵⁹
- The national electricity objective, which is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers;⁶⁰ and
- The principles of incentive-based regulation, including that service providers should be compensated for the efficient costs of service delivery (not actual costs), so that at least some of the rewards or penalties associated with over- or under-performance against the efficient cost benchmark flow to the service provider.

As has been recognised by policy-makers and the AER on numerous occasions, in order to promote efficient investment in, and efficient operation and use of, regulated services, businesses should be compensated for the efficient cost that would be incurred by the relevant benchmark efficient entity.

8. VBRC Declared Areas project

In its submission to the Preliminary Decision, DEDJTR contends that the costs associated with the new design standard for undergrounding or insulating powerlines in declared areas are immaterial.⁶¹

AusNet Services disagrees with the contentions put forward by DEDJTR and is concerned that the costs stated by DEDJTR in its submission to the AER are in stark contrast to the costs estimated in the Victorian Government's Regulatory Impact Statement (RIS) for the amendments the *Electricity Safety (Bushfire Mitigation) Regulations 2013*, released in November 2015.

Further DEDJTR has proposed a single VBRC mitigation contingent project due to the perceived uncertainty surrounding the likelihood of the expenditure associated with these regulatory amendments. AusNet Services considers this to be inappropriate due to the nature of the expenditure associated with the new design standard in declared areas.

In the following sections AusNet Services:

- Outlines the costs estimates put forward by the Victorian Government in the RIS;
- Provides details of the costs estimated by AusNet Services as presented in its Revised Proposal to the AER; and
- Considers the use of the contingent project framework to the expenditure associated with the new design standard in declared areas.

The Victorian Government intends to amend the *Electricity Safety (Bushfire Mitigation) Regulations 2013* to introduce a new regulatory obligation which requires a distributor to include in its Bushfire Mitigation Plan details about how it will ensure electric lines within a 'declared area' will be insulated or placed underground.⁶² According to the RIS released by the Victorian Government, the new obligation will impose heightened powerline construction standards which require new electric lines and electric lines being replaced or subject to significant maintenance, to be insulated or placed underground. These amendments to the regulations, and subsequently to AusNet Services' Bushfire Mitigation Plan, will require AusNet Services to incur additional capital expenditure during the 2016-20 regulatory control period.

⁵⁹ NEL, s 7A.

⁶⁰ NEL, s 7.

⁶¹ Victorian Government, *Submission to Victorian electricity distribution pricing review preliminary determinations – 2016 to 2020*, January 2016, p.9

⁶² DEDJTR, *Regulatory Impact Statement for the Bushfire Mitigation Regulations Amendment*, November 2015, p. 94.

The Victorian Government has proposed a new design standard and released draft regulations which contain the standard. The draft regulations clarify which areas (in Powercor and AusNet Services' network service area) will be declared, when declarations will be made, and the trigger to replace conductors that have reached end of life.⁶³

Estimates from Victorian Government RIS

In the RIS, the Victorian Government acknowledged that the costs associated with the proposed regulations for declared areas include the costs of putting powerlines underground or insulating conductors. The Government's analysis estimated that the cost of undergrounding or insulating conductors for polyphase powerlines will be significant, with unit rates up to \$890,716 per kilometre depending on the location and technology utilised.⁶⁴

Figure 6: Costs for replacing powerlines under the Powerline Replacement Fund

	Unit capital cost (per km)
Average of all projects	\$321,840
<i>By region</i>	
▪ Dandenongs	\$406,350
▪ Warburton	\$890,716
▪ Otways	\$258,414
<i>By technology</i>	
▪ Insulated conductor – 22kV	\$406,350
▪ Undergrounding – 22kV	\$842,005
▪ Undergrounding – SWER	\$256,669

Note: The undergrounding of SWER
Source: Department of Economic Development, Jobs, Transport and Resources

Source: DEDJTR, *RIS for the Bushfire Mitigation Regulations Amendment*, p.94

The unit rates per kilometre of polyphase line will depend on:

- The nature of the powerline design and maintenance standards to apply within a declared area;
- Whether the powerline is to be placed undergrounded or insulated;
- The location or region of the span to be replaced;
- The size and number of declared areas; and
- The specific conditions of each span to be replaced.

The volume of powerlines to be replaced is provided for in the RIS and is based on modelling of the most dangerous areas of the state (the declared areas). The RIS estimated that over 2,300 kilometres of powerlines were due to be replaced in declared areas over the next 25 years.⁶⁵

⁶³ DEDJTR, *Regulatory Impact Statement for the Bushfire Mitigation Regulations Amendment*, November 2015, Appendix D.

⁶⁴ DEDJTR, *Regulatory Impact Statement for the Bushfire Mitigation Regulations Amendment*, November 2015, p. 94.

⁶⁵ DEDJTR, *Regulatory Impact Statement for the Bushfire Mitigation Regulations Amendment*, November 2015, p. 94.

Figure 7: Length of powerlines to be replaced

Type of powerlines	Length of powerlines to be replaced (km)
Polyphase	1,473.8
SWER	830.7
Total	2,304.5

Source: Departmental modelling

Source: DEDJTR, *RIS for the Bushfire Mitigation Regulations Amendment*, p.31

Of the 2,304 kilometres of powerlines to be replaced in declared areas, 1,200 kilometres of polyphase line is located in AusNet Services' distribution area. Based on AusNet Services' modelled replacement requirement for spans within the declared areas, AusNet Services expects to replace 146 kilometres of bare open wire conductor in the declared areas in the 2016-20 regulatory control period. The conductor replacement forecast is based on fire loss consequence modelling which shows that it is economic to replace conductor that has either reached end-of-life or is approaching end-of-life.

New powerline replacement standard will lead to material incremental expenditure

In a submission to the AER, DEDJTR has stated that AusNet Services and Powercor are "highly unlikely to have incremental expenditure associated with powerline replacement".⁶⁶ DEDJTR contends that the total expenditure on powerline replacement over a 50-year period is \$408 million, or an incremental cost of only \$42 million. Based on these estimates, the DEDJTR has stated that the expected incremental cost over the regulatory control period per DNSP is \$2.1 million. Assuming that the 2,300 kilometres of identified line are to be replaced every 25 years, DEDJTR's submission contends that the incremental cost is approximately \$9,000 per kilometre. This cost estimate is unsubstantiated with limited assumptions presented in DEDJTR's submission to the AER. More importantly, these cost assumptions do not reflect the Department's own analysis for the purposes of the RIS. The incremental unit rates implied by the DEDJTR submission, \$9,000 per kilometre, are implausible and inconsistent with the total unit rates stated in the RIS. The Department's analysis for the purpose of the RIS estimates the costs will range from \$256,669 to \$890,716 per kilometre.

As was set out in the Revised Proposal, AusNet Services has undertaken cost analysis based on the total kilometres required to be replaced and the average historical cost of like-for-like replacement. AusNet Services has estimated that prior to the new design standard; the average replacement cost (like-for-like) was estimated at \$45,205 per kilometre (excluding on-costs). Due to the additional standard, the average cost on AusNet Services' network, excluding on-costs, is estimated at \$516,000 per kilometre (or an incremental cost of \$471,000 per kilometre (excluding on-costs)).

AusNet Services has forecast the expenditure based on the cost of undergrounding powerlines or insulating conductors per kilometre on its network at specific locations mandated in the regulations. Only the incremental costs have been included, as the fire loss consequence costs are already reflected in AusNet Services' replacement expenditure forecasts for 2016-20. The cost per kilometre has been calculated as follows:

- the average cost per kilometre for like-for-like replacement is based on AusNet Services' average historical cost of like-for-like replacement;
- the average cost per kilometre for like-for-different replacement is an average of completed works by AusNet Services of over 35 kilometres in declared areas.

These cost estimates do not relate to any costs associated with the installation of REFCL devices, including line balancing, network hardening or the installation of additional phases or spans.

⁶⁶ DEDJTR, *Victorian Government submission to Victorian electricity distribution pricing review preliminary determinations – 2016 to 2020*, 14 January 2016, page 5.

AusNet Services has undertaken an analysis of the estimated incremental costs associated with these additional standards including a mix of putting powerlines underground and insulating conductors using existing technology. It is estimated that the incremental costs will be \$471,000 per kilometre excluding overheads (\$2015).

Table 5: Incremental cost of undergrounding or insulating polyphase powerlines (\$m, 2015)

	Unit Cost
Direct cost per kilometre	\$471,000
On-costs and overheads (average)	12.8%
Total cost per kilometre	\$531,000

Source: AusNet Services

The Government has acknowledged that AusNet Services will be faced with these costs due to the significant realignment required and rocky terrain in its network.⁶⁷

The average cost per kilometre has been multiplied by the 146 kilometres of powerlines that AusNet Services estimates will need to be placed underground or insulated, to calculate the total expenditure required in order to comply with this new regulatory obligation.

Over the 2016-20 regulatory control period, the total (incremental) costs are estimated to be **\$77.1 million** (\$2015) including capitalised overheads.

Separate contingent projects for REFCLs and declared areas

DEDJTR has stated that the REFCL and the new standard for powerline replacement in declared areas could be considered as a single “VBRC” contingent project. AusNet Services considers this to be inappropriate for the following reasons:

- DEDJTR’s argument in support of a combined project is based on the flawed view that the new standard for powerline replacement in declared areas has immaterial or minor cost impact;
- the new design standard for declared areas and the ongoing obligation associated with it does not sit within the definition of a contingent project; and
- the installation of REFCL devices on AusNet Services’ network are a defined project with specific triggers and timeframe.

AusNet Services has forecast expenditure to meet the new obligations with respect to the powerline construction standard for declared areas as capital expenditure allowance for 2016-20 rather than creating a contingent project because the regulation will definitely be made, the obligation it creates is clear, and the costs can be forecast with relative certainty.

A contingent project is described in the Rules as an event where the occurrence of the project is probable but where the timing of the expenditure is uncertain at the time of the regulatory decision.⁶⁸

The incremental expenditure for the new design standards for declared areas is not a distinct project of works, but will be incurred as part of AusNet Services’ replacement program. As mentioned above, in total more than 1,200 kilometres of line will be undergrounded or insulated on AusNet Services’ network, of which AusNet Services plans to replace 146 kilometres during the 2016-20 regulatory control period. The timing of the expenditure is in line with AusNet Services’ forecast replacement expenditure, as accepted by the AER in its Preliminary Decision. The timing of the expenditure

⁶⁷ DEDJTR, *Powerline Bushfire Safety Program – AAP Information Paper (Project 16C)*, December 2015, p. 10.

⁶⁸ NER clause 6.6A.1(c)

related to the new standard for declared areas is therefore not uncertain at the time of the regulatory decision, and does not suit the contingent project framework.

It is noted that the new design standard applies an ongoing obligation rather than a discrete project as part of AusNet Services' replacement program⁶⁹. This means it is not suited to the contingent project framework because, unlike a project, it has no delivery timeframe.⁷⁰

If the AER chooses to set a contingent project for the new design standard, there should be separate contingent projects for the new design standard in declared areas and the installation of REFCL devices, as the triggers for the events must reflect the nature of the expenditure and scope of works. In particular, the trigger for the installation of REFCL devices should reflect the fact that the distributor will be responsible for formulating the capital project into tranches.

Further, AusNet Services expects that preparing a contingent project application for declared areas would be a more straightforward exercise in comparison to the significant complexity involved in scoping and costing REFCLS (which is likely to require the maximum allowed time). Given the replacement program for 2016-20 has already commenced, deferring the approval of capital expenditure for declared area replacements would hinder the ability for AusNet Services to immediately integrate the work into its existing replacement program and deliver the work in an optimised cost effective manner.

9. STPIS targets

The STPIS states that performance targets must be based on average performance over the last five regulatory years modified by any reliability improvements completed or planned that are expected to result in a material improvement in supply reliability.⁷¹

In a submission to the AER, DEDJTR has identified projects by the DNSPs that it believes will result in a material improvement in supply reliability. As such DEDJTR contends that the AER should modify the DNSP's STPIS performance targets for the 2016-20 regulatory control period. These projects include the installation of REFCL devices and automatic circuit reclosers.

DEDJTR's assessment of the network reliability benefits of the measures mentioned above is flawed.

REFCL Impact on Network Reliability is uncertain

The Victorian Government's RIS assumes that the installation of REFCLs will deliver significant reliability benefits on Victorian networks. However, this conclusion is based on the experience of New Zealand distribution businesses operating REFCLs in continuous compensation mode on systems that are fundamentally different in design.⁷²

It is important that estimated reliability improvements have regard to the distributor's particular circumstances, recognising that they may be materially different to other networks. In AusNet Services' case, approximately \$44 million has been invested in Distributed Feeder Automation (DFA) schemes to improve reliability. This investment places AusNet Services at a different starting point in relation to reliability performance, and reduces the potential reliability benefits from installing REFCLs.

⁶⁹ The requirements also apply to augmentation in declared areas, however, AusNet Services is not anticipating any augmentation in these areas in 2016-20.

⁷⁰ NER, cl 6.5.7(e)(9A) requires the AER to have regard to whether forecast capex should more appropriately be included as a contingent project.

⁷¹ STPIS, Clause 3.2.1(a)(1A)

⁷² AusNet Services, Response to AER Information Request #28, 29 January 2016

Furthermore, the required integration of DFA and REFCL technology on AusNet Services' network introduces an additional technical challenge which, if not properly addressed, could have a negative impact on reliability performance. We also note that the REFCL program will also require significant interruptions to customer supply – also negatively impacting on reliability – in order to undertake the required network balancing to ensure the REFCL technology operates as intended.

Given the issues noted above and the uncertainty regarding the potential impact of the program on reliability, it is inappropriate to assume any reliability benefits will be provided by the REFCL program.

Contrary to delivering reliability improvements, the REFCL installation program will cause significant interruptions to customer supply, in the short term. These interruptions will be required to undertake network hardening and balancing, which requires disconnection and reconfiguration of the network at points along the entire length of the affected power lines.

Reliability benefits of ACRs and animal proofing are not material

In a submission to the AER, DEDJTR contends that AusNet Services' STPIS performance targets be adjusted to account for the 'material' reliability benefits obtained from investments associated with the installation of ACRs and animal proofing.

DEDJTR has misunderstood the reliability impacts of the ACR upgrade program. ACRs have been upgraded on AusNet Services' network to allow remote changes to operational settings for days of high bushfire risk. Prior to this upgrade the ACRs were configured to provide optimal reliability. Contrary to the DEDJTR submission, the use of upgraded ACRs will result in lower reliability due to longer duration outages because on days of high bushfire risk the reclose function will be suppressed to limit the risk of bushfire ignition. This means that in circumstances where previously outages were automatically restored, the outage will only be restored after manual inspection.

AusNet Services expects that animal and bird proofing will result in reliability improvements and will separately provide the AER with quantitative analysis of the likely scale of the impact.