Seed Advisory

Deep Dive Workshop Three – Summary Report

AusNet Services Transmission Revenue Reset 2023 – 2027

6 October 2020

Information Technology
and Asset Replacement Program
Capital Expenditure

Contents

Disclaimer

This report is only a summary of key items discussed at the deep dive workshop held on 14 September 2020.

The information in this report is not necessarily reflective of the views of each attendee at the workshop, AusNet Services or Seed Advisory.

1. Introduction

1.1. Background

AusNet Services owns and operates the regulated Victorian electricity transmission network that transports electricity from where it is generated, through terminal stations and high-voltage transmission powerlines across the state, to Victoria's five lower-voltage distribution networks. The transmission network covers an area of approximately 227,600 square kilometres, serving a population of over 5.9 million people, or more than 2.1 million households and businesses.

Regulated electricity transmission network businesses must periodically (typically every five years) submit a Revenue Proposal which outlines their plans and proposed expenditure to the Australian Energy Regulator (AER) for assessment. AusNet Services is currently developing its Revenue Proposal for the five-year period from 1 April 2022 to 31 March 2027. AusNet Services will be submitting its Revenue Proposal to the AER by 31 October 2020.

As part of developing its Regulatory Proposal, AusNet Services is undertaking an extensive customer engagement program. One component of this engagement program is a series of 'deep dive' workshops with attendees including customer representatives, consumer advocates, AER representatives, consumer challenge panel representatives and other stakeholders. Many of these stakeholders are members of AusNet Services' Transmission Revenue Reset Customer Advisory Panel, which has been meeting regularly during the last 18 months.

The deep dive workshops are designed to:

- share information on AusNet Services' Revenue Proposal;
- consult on and enable open and frank discussion of key elements of AusNet Services' plans, with a focus on issues where customer feedback may inform the positions taken in AusNet Services' Revenue Proposal; and
- enable AusNet Services to consider the feedback and views of attendees while developing its Revenue Proposal and plans.

AusNet Services engaged Seed Advisory to assist in the preparation and facilitation of these workshops and to develop a summary report for each workshop.

At the time of publishing this report, AusNet Services aims to hold or have held the following workshops:

- Workshop One: Operating Expenditure *(held 30 June 2020)*;
- Workshop Two: Network Capital Expenditure *(held 11 August 2020);* and
- Workshop Three: Information Technology and Asset Replacement Programs Capital Expenditure *(held 14 September 2020 and the focus of this report).*

In addition to its deep dive program, AusNet Services has held or will hold the following briefing sessions that are aimed at informing stakeholders:

- Briefing Session One: Overview of AusNet Services' transmission plans and the outlook for transmission charges during the 2023-27 regulatory period, to provide stakeholders with context for the deep dive workshops *(held 26 June 2020)*; and

- Briefing Session Two: Overview of AEMO's Final 2020 ISP, including its implications for transmission costs and AusNet Services plans during the next regulatory period *(joint AusNet Services-AEMO session, held 26 August 2020)*.

There will be further workshops, briefing sessions, Customer Advisory Panel meetings and one-on-one consultations held after the Revenue Proposal is submitted on 31 October 2020.

1.2. Purpose of this report

This report summarises the key items of discussion from Workshop Three on Information Technology and Asset Replacement Programs Capital Expenditure held on 14 September 2020 via video conference using Microsoft Teams. The workshop attendees and the organisations they represent are included in Appendix A and the complete agenda for the workshop is included in Appendix B.

In brief, the workshop agenda covered four broad areas:

- A recap of the key outcomes from Deep Dive Workshop Two;
- An overview and discussion of the proposed information technology and asset replacement capital expenditure program;
- An overview and discussion of the Intelligent Network Operations program; and
- An overview and discussion on the ground wire asset replacement program

The workshop was held under "Chatham House" rules, so no comments from attendees have been attributed to any one attendee. AusNet Services' responses or comments have been noted in relation to matters raised by attendees.

1.3. Other related documents

This report should be read in conjunction with two key documents which are co-located on the same page of the AusNet Services' website that contains this report. The documents will provide important information and context when reading this report and are listed as follows:

- Pre-reading materials developed by AusNet Services for the relevant workshop – this document contains background and other information provided to workshop attendees to prepare them for their workshop attendance; and
- Presentation materials developed by AusNet Services for the relevant workshop – this document contains the material presented at the workshop.

2. Key discussion items

This section contains the key items discussed at the workshop. AusNet Services' responses or perspectives provided either during or post the workshop are included where relevant and required in the shaded text boxes.

2.1. Deep dive two workshop recap

There was a brief recap of the key discussion points and outcomes from the second Deep Dive Workshop held on 11 August 2020. Stakeholders provided positive feedback on the content and discussion from the workshop and there were no major concerns or gaps with the key points raised.

2.2. Overview of the proposed information technology and asset replacement capital expenditure program

The discussion on the proposed capital expenditure programs noted that there is an increase over the current period's actual/expected capital expenditure. This increase is reflective of higher expenditure to replace terminal stations and other assets based on their condition as well as higher technology related expenditure including cyber security investments to comply with anticipated regulatory changes. It was noted that there has been some smoothing of the proposed expenditure profile since the last Deep Dive workshop.

Further detail was provided on the composition of the overall capital expenditure program and the proportion related to information technology and asset replacement. The overview also discussed the actual and expected annual information technology capital expenditure and some examples of the benefits of actual information technology programs and investments.

The attendees were generally comfortable with the information provided, and only one main question was raised:

- Could AusNet Services provide the information technology operating expenditure for the current period versus the 2023-27 forecast? This was to assist in better understanding the shift (if any) from traditional capital expenditure to operation expenditure, via for example certain applications moving to the cloud.

AusNet Services noted the discussion and commented that:

- Ausnet Services does not have this comparison information currently available as the base-step-trend approach to forecasting operating expenditure means we have not considered bottom-up cost of information technology operating expenditure.
- However, the $5.5M outsourcing stated in the pre-reading material is an example of recurrent savings in operating expenditure which together with capital expenditure savings will have offset the higher operating expenditure involved in transitioning to cloud. AusNet Services can provide this analysis in its revenue proposal.

- In AusNet Services' proposal there are some small operating expenditure requests relating to the cloud in some programs, for example to support new software as a service requirements.

2.3. Intelligent Network Operations program

The discussion on the Intelligent Network Operations program provided a useful case study outlining an overview of the program, the options considered, the assessment approach and the key results of the cost / benefit analysis.

The general discussion and questions raised limited questions from attendees:

- A suggestion was raised to include recurrent expenditure in base case for any options analysis. The outcome and recommendation is unlikely to change, however it would likely highlight a significant increase in benefits for Options 2 and 3 relative to the base case. It would also increase the transparency of total costs of each option.
- A query was raised regarding the discount rate used for this analysis.
- Given the sophistication of the capabilities across the options, what is the potential to utilise those capabilities to generate additional value streams? Attendees appreciated this is contingent on other factors and may not be based in the values presented.

AusNet Services noted the discussion and provided the following comments:

- AusNet Services will include recurrent expenditure in base case in its proposal.
- The options analysis used a discount rate of 5%.
- AusNet Services is developing its data management system to capture the relevant information. Once this data is captured, the business can leverage that information across the network more broadly to drive further value, make the network more resilient and/or better manage our customer base. When AusNet Services submits the program brief, it will describe other benefits in addition to the quantifiable benefits addressed here.

2.4. Ground wire asset replacement program

The presentation on the ground wire asset replacement program provided an overview of the current ground wire asset base and the current condition. This was followed by an outline of the approach to quantifying the consequences of failure, a summary risk assessment and the results of the cost benefit analysis of the identified program options.

The discussion and key questions from attendees covered the following areas:

- A query was raised to provide further detail on the colour-coding (red, amber, orange and green) signify in the risk assessment matrix? To provide further understanding of the spectrum.
- Is the condition assessment based on observation or are there specific metrics? The process to assess ground wire condition can be subjective, are there other ways to conduct objective tests rather than relying on expert opinions?
- Is the discount rate expressed in nominal or real terms?
- Has AusNet Services looked at the opportunity for repair maintenance rather than replacement? How are these options balanced?

- Is it standard for optical fibre to be used? Is all optical fibre used for regulated transmission activities or is it a cost to be shared with other non-regulated transmission activities?
- Could AusNet Services show how the benefits (on slide 29) are calculated by breaking them down into their components? Sensitivity analysis regarding those benefits would also be helpful.
- With respect to the ground wire program, to what extent does this program complement the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP)?
- Is this ground wire program subject to a Regulatory Investment Test for Transmission (RIT-T), i.e. where the discounts will be reviewed as part of that process?

AusNet Services noted the discussion and provided the following comments:

- The colour coding on the risk assessment matrix highlights the different risk bands. The horizontal axis is the condition score and indicates the probability of failure. Whereas the vertical axis shows the consequence of a failure. Green indicates relatively low risk and consequence, amber a moderate risk and red a high risk.
- In relation to the question about condition assessments:
  - The condition score is assessed by qualified linesmen. The linesmen will use the Condition Guidelines to assess the line e.g. C1 – no obvious wear and tear and C5- evidence of pitting.
  - There are currently no quantifiable tests performed, however conductors in general are a growth area in terms of replacement. Based on the data, AusNet Services is only just starting to see these assets reach their end of life. The business will continue to evaluate how it assesses the condition of ground wire. In the future, AusNet Services is looking to test old conductors by taking samples and conducting tests such as strength testing.
  - To date, there is consistency between trained linesmen, however this can be further improved by Smart Aerial Imaging Patrol (SAIP) – an aerial photography inspection tool - that takes photographs of all ground wire and provides highly detailed condition data.
  - AusNet Services is still developing the algorithm to allocate a condition score. This is another area for development that will improve our condition assessment process and drive inspection cost efficiencies.
- The discount rate used is a real commercial rate, consistent with the approach we take for our RIT-T analysis.
- Repair maintenance is typically not an efficient solution to deterioration of ground-wire. However, if there is a defect for example localised issues that may have resulted from a lighting strike then this can be repaired. However, repair works for 100 metres of line is not practical.
- In relation to optical fibre:
  - Optical fibre is more expensive than steel ground wire. Therefore, AusNet Services is only proposing to replace like-for-like ground wire materials. There would need to be another business driver to replace steel with optical fibre.
  - Where we earn unregulated revenue from regulated assets such as optical fibre, our regulated revenue is discounted in the revenue reset process to reflect this, consistent with the AER's shared asset guidelines.

- We will consider our ability to provide a further break down the benefits into their components when presenting them in our proposal.
- Based on corrosivity zones, specifically the red zones shown on the map, most of the replacement associated with the ground wire program will take place in the coastal areas in south western Victoria or in the Latrobe Valley. As a result, these replacement activities will not cross over with ISP line upgrades, e.g. the Western Victorian Transmission Project.
- Yes, we would expect the RIT-T process to apply to this program.

A. Workshop attendees

Name	Organisation
Adam Petersen	Australian Energy Regulator
David Monk	Australian Energy Regulator
James Brown	Australian Energy Regulator
Jane Kelly	Australian Energy Regulator
Tennant Reed	Australian Industry Group
Bridgette Carter	BlueScope Steel
Elizabeth Carlile	CitiPower & Powercor & United Energy
Bev Hughson	Consumer Challenge Panel
David Prins	Consumer Challenge Panel
Nicholas Summers	Victorian Government (DELWP)
Prem Panickar	Victorian Government (DELWP)
Manoj Ghimire	Jemena
David Headberry	Major Energy Users
Gavin Dufty	St Vincent de Paul
Adrian Hill	AusNet Services
Alistair Parker	AusNet Services
Charlotte Eddy	AusNet Services
Danielle Erzetic-Graziani	AusNet Services
Danielle Johnstone	AusNet Services
Martin Cavanagh	AusNet Services
Peter Caccaviello	AusNet Services
Robert Ball	AusNet Services
Samantha Scanlon	AusNet Services
Stephanie Judd	AusNet Services
Stuart Dick	AusNet Services
Tom Hallam	AusNet Services
Peter Eben	Seed Advisory

B. Workshop Agenda

AusNet services

2023-27 Transmission Revenue Reset - Deep Dive #3

Objective

Deep Dive #3 will focus on key elements of our proposed ICT and asset replacement program expenditure.

The objective of the session is to **seek stakeholder views** on:

- Our proposed Intelligent Network Operations ICT program; and
- Our proposed ground-wire asset replacement program.

Agenda

MEETING DETAILS			
Workshop:	AusNet Services Deep Dive #3		
Date:	Monday 14 September	**Time:**	1:00-3:30pm
Location:	Microsoft Teams meeting	**Security:**	Public
Pre-Reading:	**Attached**		
Facilitator:	Peter Eben, Seed Advisory		
AusNet Services Presenters:	Rob Ball, Principal Economist and TRR Lead Samantha Scanlon, Technology Planning and Regulatory Lead Martin Cavanagh, Operational and Access Planning Manager Stuart Dick, Network Strategy Manager		

TIMING	ITEM	PRESENTER
1:00 (10 min)	**Welcome and introductions**	**Peter Eben**
1:10 (5 mins)	**Deep Dive 2 outcomes**	**Rob Ball**
1:15 (5 mins)	Open discussion	**All**
1:20 (5 mins)	**Overview of the capex forecast**	**Rob Ball**
1:25 (10 mins)	Open discussion	**All**
1:35 (10 mins)	**Intelligent Network Operations technology program**	**Samantha Scanlon** **Martin Cavanagh**
1:45 (35 mins)	Open discussion	**All**
2:20 (10 mins)	**Break**	
2:30 (10 mins)	**Ground-wire replacement program**	**Stuart Dick**

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TIMING	ITEM	PRESENTER
2:40 (40 mins)	Open discussion	**All**
3:20 (10 mins)	**Forward engagement plan and next steps**	**Peter Eben / Rob Ball**
3:30	**Meeting close**	

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