Meeting Snapshot

Investment Planning Approach Briefing

Monday 11 December 2023

Participants	
EDPR 2026-31 Panel members	**AusNet staff**
Kieran Donoghue	**Steve Neave,** Executive General Manager Network Management and Digital
Mark Grenning	**Charlotte Eddy,** General Manager Regulation (Distribution)
Gavin Dufty	**Rod Jones,** General Manager Network Strategy and Planning
Peter Eben	**Robert Ball,** Price Review Manager
Chris Harvey	**Chirag Desai,** Manager Network Planning
Prof. Luis Nando Ochoa Pizzali	**Cameron Yates,** Asset Manager Chapter Lead
Dean Lombard	**John Paul Annal,** Asset Management Product Owner
	Jenson Lai, Chapter Lead – Asset Management
Observers	**Lucy Holder,** Customer Engagement Manager
Felix Karmel, Assistant Director, Australian Energy Regulator (AER)	**Michaela Jackson,** Engagement Specialist
David Prins, AER Consumer Challenge Panel	

Key discussion points	
Agenda item	**Key discussion points**
Welcome	• Steve Neave welcomed participants, while Rob Ball provided an overview of the agenda and highlighted that today's briefing was about the approach that AusNet takes to economically justify spend, which accounts for most of its capital expenditure (capex) requirements.
	– In response to a panel member question, Rob responded by providing indicative breakdowns by expenditure category but noted that AusNet will share further details at the in-person panel meeting next March.
1. Overview of investment governance arrangements	• AusNet's Steve Neave presented on investment governance arrangements, noting a focus on those for Network Discrete – Company Initiated (unique, regulated network project) and Network Bulk – Corrective (capex for work that is repetitive and or routine) projects. Steve shared the stage gate process that governs the delivery of capital works.
	– Discussion included the timing of projects, and triggers in place for reviewing projects that are delayed or go over budget. Steve also confirmed that proposals to AER do not include contingency (management reserve); advised that for reactive replacement programs (eg. poles) a suite of technical

standards and an asset inspection manual specify what works need to occur and the timeframe; and that businesses cases always include 2 or more options. It was clarified that while this process governs the planning and delivery of projects, many of the key elements are also relevant for EDPR capex forecasting purposes (eg. identifying need, options assessment, cost estimation).

- Rod Jones explained AusNet's approach to augmentation expenditure (augex) and replacement expenditure (repex) planning (slide 10) and the Regulatory Investment Test process (slide 13). Charlotte Eddy added that AusNet has been undertaking condition and risk-based assessment and probabilistic planning for some time, that AER feedback on asset planning approaches has been quite limited historically, and that where the AER has cut expenditure at previous resets this has been due to concerns with specific projects or programs rather than forecasting approaches.

  - Responding to a question, Charlotte advised that variation can occur between project scope or spend and what was allowed. Governance mechanisms include incentives designed to minimise spends and ex-post review provisions although AusNet is not required to go back to the AER where differences between forecast and actual spending needs arise.

  - Rod Jones confirmed that it has become more difficult to estimate project costs recently as a result of external trends such as supply chain shortages. Lead times also need to be closely monitored. Rob Ball also shared that recent analysis undertaken as part of the 2023-27 Transmission Revenue Reset (TRR) and accepted by the AER demonstrated the accuracy of AusNet's P50 cost estimates, which form the basis of its Regulatory Proposal capex forecasts. There was question on the extent to which AusNet's P50/P75/P90 system is comparable to Advancement of Cost Engineering (AACE) cost estimation methods, which AusNet took on notice to clarify.

| 2. Current period capex outlook | • Rob Ball outlined the energy transition drivers behind a capex overspend in the current period, including increasing materials costs and expected demand growth. Charlotte clarified that further overspending is limited by our allowance and ex-post review constraints, which AusNet does not consider are appropriate for the transition. Rod Jones explained that augex has increased above allowance due to expected strong growth in peak demand bringing forward economic timing for projects in growth areas.

  - Responding to a participant question Rod responded that growth in CER presents challenges with minimum load. He advised that AusNet looks at solar uptake as part of its demand forecasts and is not seeing the risk of stranded assets if solar PV uptake turns out differently to forecast. |

| 3. Augmentation – investment planning approach | • Chirag Desai spoke about AusNet's approach to augmentation planning, comprising an economic assessment framework and probabilistic approach. He outlined the 5-step framework used to determine the preferred option and its economic timing (slides 23 – 27).

  • Discussion included responses to the following questions:

  - AusNet confirmed that value of customer reliability (VCR) is always used to value energy at risk (ie. there are no alternatives at present), although this may change in future.

  - Charlotte Eddy advised that AusNet is still analysing how moves toward cost reflective peak pricing are impacting peak demand forecasts.

  - Further to a suggestion that AusNet analyse network utilisation trends as a result of various tariff outcomes, Charlotte Eddy advised that AusNet is hoping to share some more holistic analysis of household energy costs as a result of the transition in March. |

- Chirag Desai explained how increased load, because of population growth, means some zone substations are at increased unserved energy risk. Later in this segment Chirag shared a case study from Baw Baw Shire.

  - Responding to a participant's question about the decision-making process for investments, AusNet advised that the focus is on economic justification, where a project becomes economic once the net present value (NPV) of the risks associated with the baseline ('do nothing' option) exceeds the annualised cost of the project. The discussion included how AusNet's probabilistic approach to model network risk will more often lead to project deferral and lower long-term costs to customers, compared to deterministic network planning approaches.

  - Another participant raised the integration of consumer energy resources into network infrastructure and emphasised the need for a comprehensive strategy considering the impact on asset investments. Chirag Desai highlighted AusNet's approach to integrating various resources into demand forecasts, with a focus on capturing the contribution of consumer energy resources. He advised that further details on the input and assumptions for demand forecasts will be discussed in the Future Networks panel deep dives in 2024.

  - AusNet confirmed that its approach has been developed over time and, based on recent price reviews, is consistent with AER views of best practice. The models are also refreshed annually to reflect external factors such as population growth as part of the forecasting process.

4. Replacement – asset management and investment planning approaches	- Rod Jones provided insight into AusNet's asset management approach, linking it to corporate objectives and emphasising risk assessment and economic analysis in decision-making.
	
	   – Discussion included a detailed overview of the calibration, models, and risk-based approach employed in asset replacement decision-making, and a commitment to continuous improvement and efficiency.
	
	 - Cameron Yates, shared information on AusNet's Asset Risk Modelling (ARM) approach and methodology. This included the importance of systematizing decision-making processes using a suite of different models to assess likelihood of failure. He highlighted the substantial amount of data that fed into the platform and continuous updating of asset and failure information to ensure robust decision-making, in contrast to more manual, spreadsheet-based approaches relied on in the past. Discussion included:
	
	   – Some sharing of models with other utilities for asset management and machine learning methods, however each network has developed its own unique approach to managing network risk.
	
	   – Whether the tools used in the current period were applied to previously approved projects, and if so, whether it would have resulted in a different mix of projects. AusNet indicated that while this is possible, retrospective analysis on applying current tools to past programs has not been a focus relative to planning future replacement activities.
	
	   – Causation factors for Black Swan events, with AusNet noting that a disproportionality factor is applied to assess safety impacts, given the potentially significant consequences asset failures can have for communities. Bushfire and safety risks were discussed, and the high priority given to safety in decision-making emphasised.
	
	 - John Paul Annal presented case studies about conductor and pole replacements, which included why these assets are replaced, consequences of failure, as well as risk calculation and the balancing act between risk and cost.
	
	   – Responding to a question about how AusNet calibrates levels of risk from time to time, Johnn Paul advised that AusNet has several models depending on asset

class. The process is similar, but the factors can vary. AusNet has both rules-based and machine learning type models.

– The three options presented as part of the case study (slide 66) generated discussion, with AusNet indicating they are leaning towards Option 3 to manage affordability concerns but is still refining this assessment. There was discussion about why Option 1 had not been selected as despite being the highest cost of the options presented, it also has the highest NPV and therefore is presumably in the long-term interests of customers. AusNet undertook to explore this further and clarify its option selection process. AusNet clarified that there hasn't been an increase in pole replacement frequency based on pole scans in localised regions and that they plan to include comparisons to the repex model in customer engagement activities next year.

| 5. Other Matters, Next Steps and Close | • A participant asked about capex governance and whether projects with positive NPV might be excluded from the proposal to lower costs, referring to some non-regulated businesses that take this approach when assessing investments. Charlotte Eddy explained that as the assessment of regulated network investments consider customer benefits, projects with positive NPV are in customers' long-term interests and therefore our default position would be to include these. |
| | • Rob Ball outlines upcoming presentations, priorities, and the team's plan to present actual numbers and details in March. Participants were thanked for their time and contribution and AusNet indicated they would share the full slide deck in the coming days. |

Action items

Action	Assigned to	Status	Due date
AusNet to share a copy of the slide deck with participants.	AusNet	Complete	n/a
AusNet to clarify how their P50/P75/P90 system compares to the Association for the AACE cost estimation methods.	AusNet	Open	31 Mar '24
AusNet to explore further and clarify its selection process regarding the case study on conductor replacement (slide 66), and in light of the comment that option 1 has the highest NPV and therefore is presumably in the long term interests of customers.	AusNet	Open	1 May '24*

* To be addressed as part of Coordination Group Repex Deep Dive