Consumer
Challenge
Panel

CCP23

Advice to the AER on AusNet Services electricity transmission revenue proposal 1 April 2022 to 31 March 2027 and AER Issues Paper

AER Consumer Challenge Panel – Sub-Panel CCP23

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Acknowledgements

CCP23 wishes to thank and acknowledge the staff from AusNet Services who have been generous with time in their responses to our questions and comments.

We also thank the AER staff for their support and guidance during this process.

Confidentiality

We wish to advise that to the best of our knowledge this Advice neither presents any confidential information nor relies on confidential information.

The Consumer Challenge Panel sub-panel CCP23

The AER established the Consumer Challenge Panel (CCP) in July 2013 as part of its Better Regulation reforms. These reforms aimed to deliver an improved regulatory framework focused on the long-term interests of consumers.

The CCP assists the AER to make better regulatory determinations by providing input on issues of importance to consumers. The expert members of the CCP bring consumer perspectives to the AER to better balance the range of views considered as part of the AER's decisions.

CCP23 is a sub-panel of the AER's Consumer Challenge Panel. The AER established the sub-panel to focus specifically on the AER's regulatory determination for two electricity transmission businesses for 2022-2027, the businesses being AusNet Services in Victoria and Powerlink in Queensland. This Advice deals with the AusNet Services proposal only.

Acknowledgement of Country

We recognise the traditional owners of the lands that are referred to as Victoria on which the AusNet Services transmission business operates. We respect the elders of these nations, past and present along with their emerging leaders.

Executive Summary

AusNet Services has proposed revenue for the 2023-27 regulatory period that is 8% below the actual and projected costs for the current period.

Consumer engagement

The main consumer engagement activities were through a dedicated Transmission Revenue Reset Consumer Advisory Panel (TRR CAP), three workshops also referred to as "deep dives," two very useful briefings, and a series of bilateral discussions, particularly with large, direct connect customers. The TRR CAP and briefings engagement activities mainly occurred in the IAP2 spectrum "Inform – Consult" range, while a much greater proportion of workshop activities tended to the "Collaborate" level.

The engagement program was slow to gain momentum after a moderately active commencement from mid-2019 and then gained considerable impetus and focus between June and September 2020. A draft plan was not prepared as part of the engagement program, in part since a request for an extension of time was not approved. The unique circumstances of the timing of this reset, particularly the uncertainty provided by COVID-19, suggest that a higher than prevailing level of post lodgement engagement will be beneficial.

AusNet Services has listened actively and responsively to consumers / customers on the topics on which they have engaged. We have identified a few topics where more proactive engagement would be helpful (including DER, connections, and depreciation).

CCP23 recognises that engagement is "work in progress", with the next steps very important to consolidate recent gains, and to ensure that the revised revenue proposal has strong consumer support.

Context

The current Victorian transmission network was established some 60 years ago. It is highly centralised, having been designed primarily to bring electricity from the La Trobe valley brown coal generation plants to Melbourne and the rest of Victoria. Initially, there was relatively limited interstate transportation capacity. However, the last 10 years have seen significant changes in the energy market, changes that will only accelerate over the next decade and will have important implications for the current transmission network. The changes include:

- The Victorian Government has set ambitious renewable energy targets for 2025 and 2030, along with its intention to develop 6 renewable energy zones (REZ) in regional Victoria.
- Consistent with the Government's targets, AEMO's 2020 Integrated System Plan (ISP) identifies six 'actionable' transmission projects, of which three are located in Victoria, with two other interstate projects having relevance to Victoria. While AusNet Services is not directly responsible for these ISP projects, the projects have consequences for the existing AusNet Services transmission network.
- The change to electricity flows on the transmission network in Victoria following the closure of the Hazelwood brown coal plant.
- Developments such as Snowy Hydro 2 and Energy Connect will place additional demands on the existing network.
- The rapid decline in minimum operational demand as a result of the growth in embedded and behind the meter (PV) generation will result in supply security, system strength and reliability issues without further action.

- There is a pressing need to upgrade management and operational ICT systems to support the changing transmission network and in response to cyber security threats.
- AusNet Services also faces near term challenges such as the impact of COVID-19 and the ageing of some key assets in its network.

Forecasts

The business sought (but did not get) a three-month extension to lodge its Revenue Proposal – to allow for forecasts to take better account of COVID-19.

While the AER decided to proceed along the existing review timelines, it acknowledged that adjustments to AusNet's plans to address COVID-19 impacts may be needed following lodgement of the revenue proposal.

AusNet has said that it will:

- Continue to engage with its customers throughout the regulatory process to seek their views on the pandemic's effects, as these become clearer.
- Reflect any new information, including AEMO's latest demand forecasts, in its Revised Proposal.

We support this way forward.

Depreciation and RAB

CCP23 accepts the AusNet Services proposal to adopt the year-by year depreciation model. However, we remain concerned with AusNet's proposed changes to remove two asset groups (insulators and instrument transformers) from their current parent asset class.

There are issues of both principle and practice with AusNet Services' approach. As matters of principle, we are concerned with the practice of creating new asset classes, and even more so with the precedence of fully depreciating assets that are either decommissioned or planned to be decommissioned in the 2023-27 regulatory control period (RCP). We request the AER to review these matters, taking account of the precedents that the AER's decision might create. In addition, AusNet Services does not appear to have consulted with its customer forums on this matter, and we recommend that AusNet Services do so prior to the Revised Regulatory Proposal.

System capital investment (system capex)

Given the unique circumstances in the Victorian transmission arrangements, AusNet Services capex is dominated by investment in large scale upgrading of the network. Some 53% of the total capex proposal relates to 'major projects', spread almost equally between replacement and refurbishment of connection stations and switching stations. CCP23 supports expenditure in these two areas in principle, particularly investments in upgrading switching station projects that are required to support AEMO's ISP program. However, our support is subject to the outcomes of the AER's assessment of the efficiency and prudency of individual projects and the outcomes of the regulatory investment test (RIT-T) process for each of these major projects.

27% of the AusNet Services total capex is for general BAU replacement programs. CCCP23 considers that AusNet Services demonstrates a mature condition and risk based planning approach, supported by a relatively strong governance framework. We support the AusNet Services replacement capex proposal, subject to the AER's review of prudency and efficiency (we have some concern with the proposed labour costs), and further investigation of the approach to assessing the expected life and remaining life of the two new asset classes (insulators and instrument transformers).

Non-system capex

AusNet Services non-system capex proposal is 17% above the expected non-system capex in the current RCP. In part, this increase reflects AusNet Services' capitalisation of leases for property and vehicles, and we seek further investigation of this approach.

The largest component of the non-system capex is ICT expenditure. Overall, CCP23 supports the proposed investment in ICT.

AusNet Services has linked its proposed opex productivity of 0.31% per annum to its ICT program, although the 0.31% is in practice based on an industry average rather than AusNet Services efficiency programs. CCP23 suggests that AusNet Services provides more detail on this, demonstrating how much each major ICT project is expected to contribute to productivity improvements, and to identify other non-ICT areas of improvement. Overall, it is more useful to consumers for AusNet Services to demonstrate its own productivity targets, rather than fall back on industry averages.

Opex

The 30% increase in proposed 'controllable opex' for the 2022/23 – 2026/27 period would appear to belie the apparent operating efficiency of the business.

Consideration of the changes in "controllable opex" reveals that 80% of the increase is due to step changes, and two thirds of the proposed step change increase is due to expected increases in council rates, which is not a 'controllable cost', as AusNet Services has no choice in whether to pay these rates. The second highest step change is cyber security which is about 25% of the proposed step change costs. While there is some control over how cyber security costs are met, it is not an optional expenditure item.

Assuming that the costs proposed are efficient, all step changes except the $2.3m opex / capex trade-off for cloud-based ICT are responses to external requirements, and so not fully within the control of AusNet Services.

Conditional on the opex expenditure increases satisfying efficiency criteria established by AER modelling and review and appropriate separation of similar costs between distribution and transmission businesses, our current view is that the AusNet Services forecast opex reasonably reflects the efficient costs of a prudent operator.

Productivity (capex and opex)

AusNet Services, like most of the transmission companies has seen a decline in productivity from 2006 to 20019, as measured by the AER's economic benchmarking, although this decline rate has reduced in more recent years (with the exception of 2019 where the results were affected by a major outage). While AusNet Services scored relatively poorly overall on the economic benchmarking assessment, the business scored highly on key partial measures such as opex and RAB per customer.

More generally, the assessment economic productivity assessment of efficiency for transmission may need review in light of the high level of investment required in the ISP process. While this is likely to lead to a decline in the capex productivity measure, this decline is expected to be offset by significant overall market benefits. The 0.31% annual productivity improvement commitment is welcome

Incentive schemes

At a public forum held on 16 October 2020 as a Predetermination Conference on the Victorian Electricity Distributors' proposals for the Regulatory Determination 2021-26, the AER stated that it was scoping a review of the various incentive schemes, and would advise stakeholders when this has progressed further. Given the potential for efficiency schemes to give distribution and transmission businesses rewards that are not in the long-term interests of consumers, we strongly support the AER undertaking

the review in regard to both distribution and transmission businesses, and we urge the AER to assign a high priority to this work program in 2021.

Our comments in this advice are predicated on the current schemes continuing to apply, as we cannot at this stage anticipate any changes to the schemes that may be proposed pursuant to the AER's review of incentive schemes. Our advice can be summarised as supporting the positions on incentive schemes that the AER took in its Framework & Approach document.

1 Overview and context

1.1 Context

This regulatory proposal from AusNet Services has been submitted at a time of some significant changes and uncertainty. These include:

- Industry-wide focus on distributed energy resources (DER) and the decarbonisation of energy markets both for electricity and also for gas. A part of this trend has been the development by the Australian energy market operator of an Integrated System Plan (ISP) which seeks to bring greater planning and certainty for transmission network development.
- AEMO's 2020 ISP identifies that three of its six 'actionable' transmission projects are in Victoria, while two other interstate projects are also relevant to Victoria.
- A growing expectation for all parts of the energy supply chain, including transmission businesses, to be actively engaging with customers and for consumer input to inform regulatory proposals.
- COVID-19 impacting the Australian communities from March 2019, with significant periods of 'lockdown' in Victoria, leading to both some difficulty in engaging directly with customers and uncertainty about future energy demand for residential and business sectors.

In short, uncertainty is a significant context in which AusNet Services has developed its regulatory proposal. Other network businesses both in Australia and overseas have also had to grapple with a range of uncertainties. It remains an important context for the development of this regulator proposal.

1.2 Responding to uncertainty

CCP subpanels have all expressed the view that while COVID-19 has made face-to-face engagement more difficult, necessitating change in the methodology of engagement, but not a pull-back on engagement. Rather, engagement becomes more important in periods of higher uncertainty.

1.2.1 Timing

During 2019, AusNet Services was exploring the possibilities of extending its lodgement date by fifteen months, the argument being that this would bring the timing of its proposal in line with most other electricity transmission businesses in Australia. In the United Kingdom, the regulator Ofgem considers regulatory proposals from all electricity transmission businesses at the same time.

The November 2019 Transmission Revenue Reset Consumer Advisory Panel (TRR CAP) meeting was given three principles for suggesting an extension:[1]

1. Customer impact, customers should be left no worse off as a result of the deferral
2. Price stability
3. Transparency

Having actively sounded out the possibility of a fifteen-month extension, no formal request for this extension was made.

[1] The role of the TRR CAP is discussed in section 2.2.1 below.

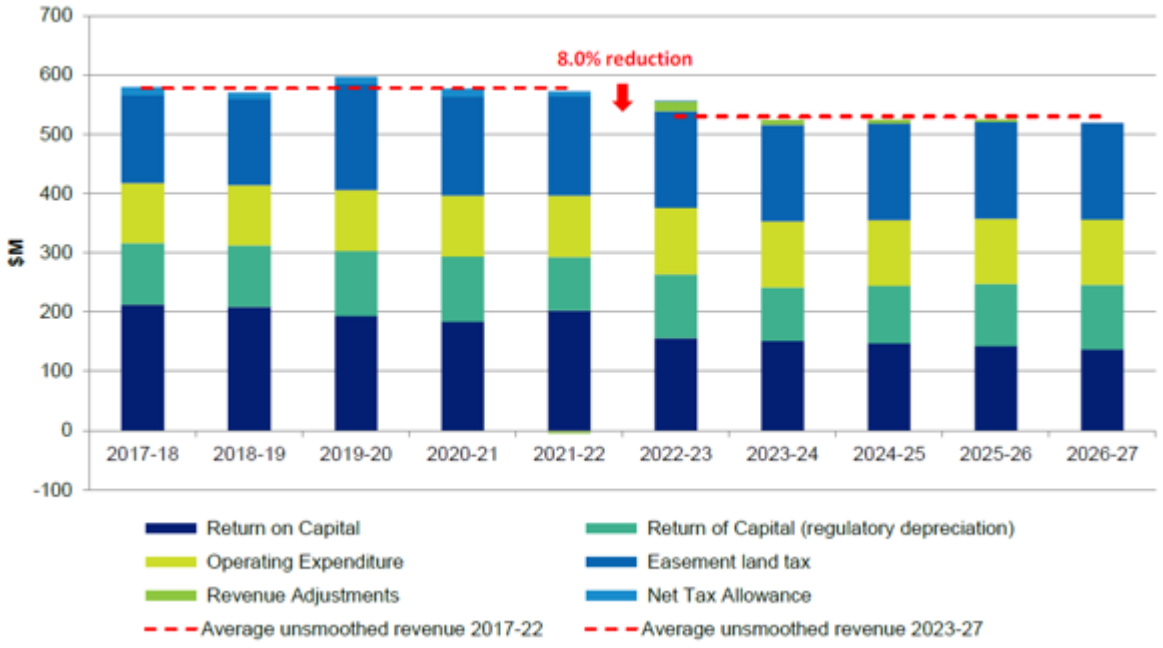
1.2.2 COVID-19 and uncertainty

On 20 May 2020, a three-month delay in lodgement was sought through a regulatory proposal – request to delay."[2] The uncertainty of COVID and related isolation policies were cited as a main reason for the proposed extension. The business also argued that they could provide better outcomes for customers with a three-month extension.

This request was rejected by the AER, with a clear understanding that the proposed draft plan and associated pre-lodgement engagement would not be occurring, so some aspects of the regulatory proposal will not be as well-developed as they otherwise would be. However, there was an understanding that there would be further engagement after the regulatory proposal was lodged and this would inform a revised revenue proposal. It was hoped that this timing would allow for some of the uncertainty due to COVID to recede, a circumstance which has meant that the rare situation has occurred where post-lodgement engagement may be more helpful than more extensive "front-loaded" pre-lodgement engagement, which we still regard as a part of best practice engagement for all but rare circumstances.

The regulatory proposal is lodged with an 8% reduction, on average over the 2023-27 period, compared to the current 2018-22 regulatory period.

Figure 1.1: Actual, expected and proposed revenue, $million real 2021-22



Source: AusNet Services regulatory proposal 2020

[2] https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ausnet-services-determination-2022-27/initiation

2 Consumer and Stakeholder engagement

The AER issues paper asks five questions of consumer groups who are responding to the AusNet Services regulatory proposal, these questions are considered at the end of this section.

Most of this section details the consumer engagement that CCP23 was able to observe and the key issues that were discussed or presented at each of the engagement activities,

2.1 AER engagement assessment table

In its draft determinations for the Victorian electricity distribution business proposals, the AER provided a table as a framework for its assessment of the effectiveness of consumer engagement with respect to a regulatory proposal. This table was presented as "Table 7" in the draft determinations. We therefore refer to it as "Table 7" in this document. The table identified four elements of engagement and then provided examples of assessment for each of the four elements, these elements being:

1. Nature of engagement
2. Breadth and depth
3. Clearly evidenced impact
4. Proof point.

Figure 2.1: AER framework for considering Consumer Engagement

Element	Examples of how this could be assessed
Nature of engagement	• Consumers partner in forming the proposal rather than asked for feedback on distributor's proposal • Relevant skills and experience of the consumers, representatives, and advocates • Consumers provided with impartial support to engage with energy sector issues • Sincerity of engagement with consumers • Independence of consumers and their funding • Multiple channels used to engage with a range of consumers across a distributor's consumer base
Breadth and depth	• Clear identification of topics for engagement and how these will feed into the regulatory proposal • Consumers consulted on broad range of topics • Consumers able to influence topics for engagement • Consumers encouraged to test the assumptions and strategies underpinning the proposal • Consumers were able to access and resource independent research and engagement
Clearly evidenced impact	• Proposal clearly tied to expressed views of consumers • High level of business engagement, e.g. consumers given access to the distributor's CEO and/or board • Distributors responding to consumer views rather than just recording them • Impact of engagement can be clearly identified • Submissions on proposal show consumers feel the impact is consistent with their expectations
Proof point	• Reasonable opex and capex allowances proposed o In line with, or lower than, historical expenditure o In line with, or lower than, our top down analysis of appropriate expenditure o If not in line with top down, can be explained through bottom up category analysis

Source: AER Victorian electricity distribution draft determinations 2020

CCP17 used this framework in responding to the five Victorian distribution regulatory proposals, including the proposal from AusNet Services distribution. In considering this transmission regulatory proposal, we consider application of this table, and the four elements that it proposes.

2.2 Engagement so far

The introduction to this statement of advice provides some background comments, including discussion about two periods of consideration by AusNet Services to delay lodgement of this proposal, the arrival of COVID-19, and the associated isolation from March 2020.

The AER decided not to grant approval for deferral of lodgement of this regulatory proposal. We recognise that an implication of this was that it would have been difficult for AusNet Services to develop a draft proposal for consultation prior to lodgement in October 2020, even though this had been part of the business' original plan. As a result, engagement associated with this regulatory process will involve higher levels of engagement than was initially anticipated by AusNet Services between the period of lodgement of the original proposal and development of a revised review proposal, which will also be informed by the AER draft determination. In other words, not all the intended up-front engagement was possible, meaning more post-lodgement engagement will occur than might otherwise have been expected. In general, CCP has a strong preference for engagement to be business as usual and 'front-ended' for regulatory proposal development. However, we see advantages in later engagement in this instance, as it gives a little more time for all parties to understand and respond to the unique circumstances of COVID-19 impacts.

Consequently, we regard the engagement that we describe below as 'work in progress', and we look forward to additional engagement activity before the revised review proposal is lodged.

The revenue proposal provides the following consumer engagement timeline is an overview of the engagement undertaken by AusNet Services.

Figure 2.2: Customer engagement timeline

Source: AusNet Services regulatory proposal 2020

We confirm that from our observations this is an accurate reflection of the engagement activities that occurred.

1. **Nature of Engagement (from Table 7)**
2. **Breadth and Depth (from Table 7)**

We are considering the first two elements from table 7 together, as description of engagement that has been undertaken by AusNet Services so far.

2.2.1 Transmission Revenue Reset Consumer Advisory Panel (TRR CAP)

In early 2019, AusNet Services established a Transmission Revenue Reset Consumer Advisory Panel to guide engagement and thinking relating to the transition revenue proposal. AusNet Services described this group as follows:

TRR CAP

- *The panel was formed in May 2019 and meets through a combination of online and face-to-face meetings.*
- *We plan to meet with the panel twice during our post lodgement engagement activities. We will also hold bilateral meetings with individual panel members on an as-needs basis*
- *The purposed of the panel is to:*
    - *Provide feedback on the design of our customer research and engagement program, and comment on findings and insights from this program;*
    - *Represent electricity customers' needs, issues, and services and provide advice on how these should be addressed or incorporated in our plans; and*
    - *Provide feedback on our draft plans, to ensure that they adequately reflect customer views and preferences.*

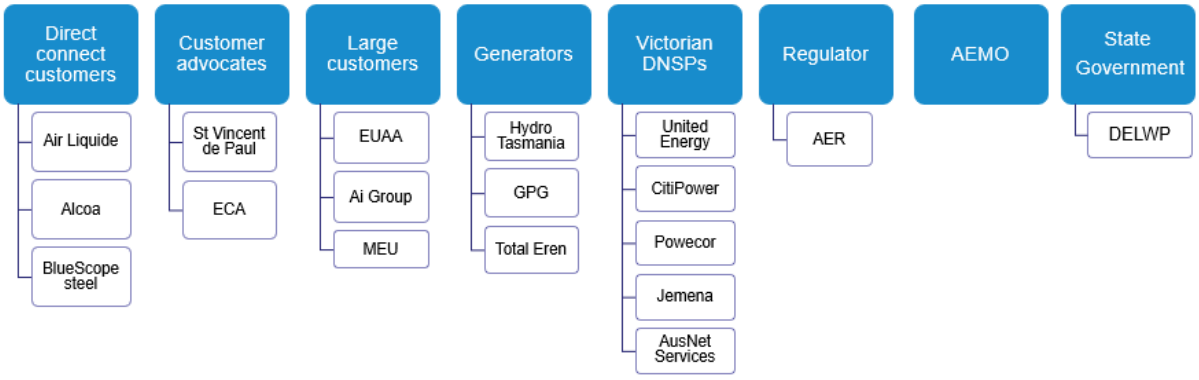
The organisations represented on the TRR CAP are:

- Energy Users Association of Australia'
- Ai Group
- St Vincent de Paul Society
- Energy Consumers Australia
- Air Liquide
- BlueScope Steel
- Alcoa
- Hydro Tasmania[3]
- United Energy
- Jemena
- CitiPower / Powercor

The TRR CAP reflects a broader stakeholder group identified by AusNet Services in the following diagram.

[3] The Hydro Tasmania representative left the TRR CAP in August 2020

Figure 2.3: AusNet Services Transmission stakeholders



Source: AusNet Services briefings presentation

2.2.2 Key elements of the engagement strategy

The key elements of the engagement strategy to inform the development of this regulatory proposal continue to be:

- TRR CAP, the Transmission Revenue Reset Consumer Advisory Panel
- Deep Dives
- Briefings for stakeholders
- Bilateral discussions with commercial and industrial customers and consumer groups EUAA, ECA and St Vincent de Paul Society.

The AusNet Services distribution business appointed a Customer Forum through the "NewReg" trial. The Customer Forum negotiated directly with the business to reach agreements that were included in the regulatory proposal. This approach was not extended into developing the transmission business regulatory proposal.

In considering the nature of engagement, we commence by reviewing the meetings of the TRR CAP that have occurred so far.

CCP23 was appointed after the first two TRR CAP meetings. Therefore, we report on these on the basis of having read about them and discussed them with AusNet Services and some of the consumer group members involved.

2.2.3 Transmission Revenue Reset Consumer Advisory Panel (TRR CAP) meetings

TRR CAP meeting 1 – May 2019

Topics covered

- Purpose of the TRR CAP
- Historical performance of AusNet Services Transmission
- Regulatory process
- Summary of consumer research

IAP2 spectrum engagement elements would appear to have been at the "inform" and "consult" levels.

TRR CAP meeting 2 – August 2019

Topics covered

- System Strength
- AEMO 2020 ISP, draft

IAP2 spectrum engagement elements would appear to have been at the "inform" and "consult" levels.

The following engagement activities have all included at least one CCP23 member as an observer.

TRR CAP meeting 3 – November 2019

Topics covered

- Ageing assets
- Repex
    - Towers, none replaced, some near coast close to needing to be replaced, but other towers still in good condition for their age.
    - Capex, many assets constructed more than 50 years ago. Less Transmission growth in Victoria than other states, so ISP (Integrated System Plan) likely to impact heavily on Victoria
    - Next period, no major conductor replacement program is likely, though more focus on insulators is likely. About 8% of insulators and 23% conductors will reach 60 years during the next regulatory period.

AusNet summarised its expected capex position by saying "In short, no bow wave yet."

Other matters discussed were:

- 15 month extension discussed
- AusNet Services / AEMO relationship, NB AEMO sets augex
- Opex step changes about $58m indicated
    - Cyber security
    - 5 minute settlement
    - Superannuation increases
    - EPA, increased its testing and maybe remediation requirements through legislation in 2018

IAP2 "consult" and "involve."

Some concern was raised by CAP members about how a robust consumer engagement approach can apply to the unique augex situation in Victoria where the TNSP (AusNet Services) does the network management but not the planning. They identified the risk that AEMO and AusNet Services engagement approaches could be quite different, potentially with lower levels of consumer engagement regarding augex, which can be a significant cost for consumers. There was also a suggestion to ask for a briefing from AEMO, which occurred in August 2020.

CCP23 observed active interaction with considerable interest from CAP in all matters discussed.

TRR CAP meeting 4 – May 2020

Topics covered

- Possible extension of lodgement timing (from October 2020 to January 2021)
- Consumer engagement plans

IAP2: "Involve"

We did not observe any strong views about the extension question from members of the TRR CAP. A couple of groups indicated support, the others seemed neutral. The clear feedback was that engagement was important and that AusNet Services needed to take every opportunity, whether there was an extension or not. There was no clear opposition to seeking the extension.

We had earlier expressed our concerns with AusNet Services about the lengthy gap between the third and fourth CAP meetings. While being fully aware that the arrival of COVID-19 eliminated opportunities for face-to-face meetings we recognised that alternative meeting and engagement approaches existed and were appropriate.

TRR CAP meeting 5 – September 2020

Topics covered

Main purpose of meeting to seek agreement about how to reflect Deep Dive discussion and outcomes in revenue proposal

- Summary presentation on the discussion and outcomes from the preceding deep dives and briefings
- Feedback re opex and capex adjustments, in response to feedback
- Summary of outcomes and AusNet Services responses to deep dives and briefings

IAP2, Mainly "inform", some "Involve"

This meeting provided an update on the deep dives and briefings that had occurred between meetings four and five.

TRR CAP meeting – 6 October 2020

Topics covered

- Overview of Revenue Proposal
- How customer input shaped the regulatory proposal
- Post lodgement engagement plans

IAP2: "Inform"

This meeting was primarily a 'close the loop' session with AusNet Services providing TRR- CAP members with an overview of the regulatory proposal that was finalised by this stage though had not been formally lodged. A key focus was on reporting back to members about the aspects of the proposal that had been influenced by consumer input.

2.2.4 Deep dives

AusNet Services planned a series of "deep dive" forums to involve stakeholders in exploring some of the "trickier" issues that the business was considering in finalising its regulatory proposal.

Seed Advisory was engaged to lead three "deep dive" engagement processes. CCP23 did not regard these sessions as "deep dives" to the extent that some such sessions can be. The sessions certainly considered topics in adequate detail. To be methodologically pedantic, they did not have the depth and complexity of topic consideration that we expect in a "deep dive." However, because this is the description that AusNet Services uses, we will also refer to these three sessions (and similar post lodgement sessions) as "deep dives" for language consistency.

The Seed Advisory reports summarise the purpose and scope of this key part of the AusNet Services engagement process as follows

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 and respond accordingly.*

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 will be aiming to hold or have held the following workshops:

- *Workshop 1: Operating Expenditure (held 30 June 2020 and the focus of this report);*
- *Workshop 2: Network Capital Expenditure (scheduled 11 August 2020); and*
- *Workshop 3: Information Technology and Lines Programs Capital Expenditure (scheduled early September 2020).*

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 1: 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 Deep Dive Workshop One – Summary Report 3*
- *Briefing Session 2: 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, scheduled 26 August 2020).*

There are likely to be further workshops and briefing sessions held after the Revenue Proposal is submitted on 31 October 2020.

This commentary is consistent with CCP23 observations.

Deep Dive 1 – 30 June 2020

This event involved a significant number of people with 15 non AusNet Services and non AER/CCP participants, as well as AusNet Services staff and AER/CCP observers.

The workshop was undertaken over 2½ hours, with the process being an introduction to the topic by an AusNet Services staff member, normally for about 10 minutes, then discussion from participants before moving onto the next topic. The deep dives considered 2 to 4 topics in each session.

IAP2: "Inform", "Involve" and "Collaborate"

The Seed Advisory report for the first of the deep dives provides the following overview:[4]

Key questions and comments from attendees on the overall operating expenditure proposal included:

- *Do the growth assets related forecasts include any assumptions about future AEMO Integrated System Plan (ISP) projects?*
- *If ISP projects are included under a 'contingent project application' what impact will that have on the forecast operating expenditure?*
- *What has driven the increase in council rates?*
- *Has the impact of COVID-19 been included in the forecasts?*

AusNet Services noted the comments from stakeholders and discussed that:

- *In relation to the ISP questions:*
  - *The specifics of the transmission planning regulatory arrangements in Victoria mean ISP related projects are procured through AEMO's planning process and are therefore not within the scope of the reset.*
  - *The current growth asset related operating expenditure relates to non-contestable augmentations that were delivered in the previous and current periods.*
  - *If there are future non-contestable ISP projects they will be included into the asset base in the subsequent regulatory period (i.e. 2028-32) and at the next transmission revenue reset the incremental operating expenditure for those new projects will be included in the future operating revenue forecasts.*
- *The council rates increases are driven by an anticipated change in the application of the valuation methodology that is expected to now include the value of the capital improvements at each site (i.e. the electricity assets) as opposed to just the land value. The current forecasts are based on an AusNet Services estimate only, these will be confirmed and updated in the next few months when council rate notices are issued during July and August 2020.*

For further information refer to Seed Advisory Reports, submitted with the regulatory proposal as providing excellent summaries of the key issues raised and documenting AusNet Services' comments and commitments.

The following summarises deep dive 1 topics and outcomes:

1. Choice of base year. AusNet Services intends to remain revenue neutral regarding the choice of base year due to the functions of the Efficiency Benefit Sharing Scheme, however they identified financial year 2021 is preferable to FY20, as this will be the latest year for which actual results are available. There was discussion about possible COVID-19 impacts and AusNet Services committed to the revenue proposal including updated forecasts for FY21 opex, COVID-19 impacts, and further engagement plans. The outcome was acceptance of FY21 as the base year.
2. Cyber security step change. There was clear recognition of the necessity of essential service networks developing and improving their cyber security capabilities, with participants also saying there needed to be a clear narrative explaining how customers will benefit. Participants were reticent to comment on the reasonableness of proposed expenditure given the extent of background information that would be needed for a fully informed view. There were also

[4] https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Appendix%203B%20Deep%20Dive%20Summary%20Report%201%20-%2029%20October%202020.pdf

questions about whether cyber security should be regarded as a part of business as usual? AusNet Services committed to address issues and questions raised by stakeholders in its revenue proposal.

3. Transformer oil step change. Participants discussed the extent to which costs and risks should be allocated between customers and the business and whether the costs of replacing the oil could be recouped from the supplier or through insurance? There was extensive discussion about this topic and AusNet Services agreed to absorb these costs, in part to address affordability concerns.

Deep dive 2 – 11 August 2020

Facilitated by Peter Eben, 3 hours duration, 8 non AusNet Services, AER or CCP participants

IAP2: Mainly "involve" and "collaborate"

Topics covered

- Capex forecast overview from AusNet Services
- Major substation projects
- Economic Assessment Framework for Major Station Projects
- Case Studies: Red Cliffs Terminal Station and Keilor Terminal station
- Capex profile and deliverability

The main comments and questions from attendees included:

- With each substation rebuild, is AusNet Services focusing on critical replacements or entire rebuilds?
- What are the implications, if any, of the recent Australia Energy Market Operator (AEMO) Integrated System Plan (ISP) on major station projects? Noting also that the two presented case studies are integral to the ISP.
- In relation to the Western Victoria transmission network upgrade, to what extent does AusNet Services assess upgrade timing and any inter-relationships and delay risks?
- Given the rapid rate of change in the energy sector and lengthy asset life (40+ years), how does AusNet Services incorporate potential changes to the system in its plans?

As with deep dive 1, further detail is available in the Seed Advisory report of this Deep Dive.[5]

This session covered a broad range of important topics. AusNet Services has summarised the outcomes with the following two slides.

[5] https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Appendix%203C%20Deep%20Dive%20Summary%20Report%202%20-%2029%20October%202020.pdf

Figure 2.4: Summary of key deep dive 2 outcomes

Summary of key Deep Dive 2 outcomes (1/2)

Section	Observations	Outcome
Overview of indicative capex forecast and proposed major station projects	• Attendees queried the scope of major station projects and whether they involve targeted replacements or entire rebuilds. • Attendees keen to understand interactions between Integrated System Plan projects and AusNet Services' major station replacement projects • Stakeholders questioned how AusNet Services accounts for uncertainty in its investment planning, given the rapid rate of change in the energy sector and lengthy asset life (40+ years)	• Confirmation that the economic assessment framework ensures the most efficient option is progressed, most projects are staged replacements, and sensitivity analysis is conducted to manage uncertainty of key inputs. • To explore ISP interactions at AST/AEMO Briefing Session
Economic assessment framework for major station projects	• Attendees sought clarification and detailed information on baseline risk and data/evidence supporting key assumptions. • Stakeholders queried whether AEMO's Reliability Standard, the value of DER and reputational risk are inputs into AusNet Services' economic assessment. • Attendees engaged in meaningful discussion on non-network options. • Strong interest in refinements made recently by AusNet Services to its safety risk quantification approach • Acknowledgement from some stakeholders that ageing/poor condition assets must be replaced eventually and AusNet Services' approach to deciding this timing appears reasonable	• Clarification of which inputs are considered within the economic assessment framework (e.g. VCR, DER (through demand forecasts), safety risks) and which are not (e.g. Reliability Standard, reputational risk) • Confirmation that the Revenue Proposal and supporting documents will provide detailed information on key assumptions and inputs, including changes made to safety risk approach.

Section	Observations	Outcome
Major station project case studies	• General comment from stakeholders regarding the need for meaningful discussion on non-network options. • Strong interest in understanding interactions with ISP projects (e.g. impact of project 'Energy Connect' specifically with Red Cliffs project) • Some queried the trade-off between lowest cost overall and the extent to which costs can be spread out? For example, Option 1 and Option 2 for KTS, how does their timing feed into the optimisation strategy • Further detailed queries in relation to the analysis and assumptions, e.g. discount rates, failure rates	• Confirmation that AST is required to explore non-network options as part of RIT-T process and is investigating (with UED) whether demand management can be used to defer significant upgrades of the Cranbourne Terminal Station • ISP interactions would be explored at AST/AEMO Briefing Session, e.g. Sydenham Terminal Station project interaction with Western Vic augmentation • Confirmation that the lowest NPV option is generally selected as the preferred solution, regardless of timing of expenditure, to minimise long-term costs to customers • Confirmation that the Revenue Proposal and supporting documents will provide detailed information on key assumptions and inputs
Capex profile and deliverability considerations	• Stakeholders generally acknowledged that some smoothing may be required and the need to consider the trade-offs involved, including which locations and customers could be impacted by deferrals • Ranking projects based on NPV of each project was raised as a possible way to smooth the forecast • Further information was sought on the precise risk impacts, e.g. where and who would they experienced by, what is the baseline risk • One larger user noted it is easier to respond to a high price signal than an unplanned outage that could trip lines and possibly cause damage • Clarify was sought on what deliverability risk actually means in practice for customers	• Clarified that baseline risk is very close to zero as transmission supply interruptions are rare and the minutes off supply are probably-weighted values • Confirmation that any smoothing adjustment could consider a combination of network wide and location specific deferrals. • Noted that some projects and programs can be driven by both market and supply risk, though one risk can be a stronger driver than the other • Smoothing approaches to be explored, having regard to feedback around price and reliability preferences and relative NPVs of various projects

Source AusNet Services CAP briefing

Deep Dive 3 – 14 September 2020

Facilitated by Peter Eben, 2½ hours duration, 8 non AusNet Services, AER or CCP participants

Main topics

- Capex forecast overview

- ICT, including cyber security
- Intelligent network operations technology program
- Ground wire replacement program

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 operational expenditure, via for example certain applications moving to the cloud?*

This third deep dive also served to conclude the series, and had less active discussion than the previous two.

2.2.5 Briefings

AusNet Services provided briefings in June and August. The first of the briefings provided a catch up for stakeholders given that there had been little information from AusNet Services between the November 2019 meeting and the June 2020 meeting, in part explained by COVID-19. There was also discussion about AusNet Services seeking an extension for lodging its proposal.

The August briefing was encouraged by stakeholders and included AEMO to discuss both the ISP and the AEMO - AusNet Services working arrangements, which are unique to Victoria.

IAP2 Spectrum: Inform.

CCP23 observes that both briefings were timely and very helpful for the process particularly enabling the deep dives to be conducted with good levels of information. These briefings were clear examples of the "inform" level of the IAP2 Spectrum being highly constructive and appropriate in enabling higher levels of participation in other elements of the engagement strategy.

Briefing session 1 – 26 June 2020

Topics covered

- Update on TRR proposal development
- Consumer preferences
- Current AusNet Services performance
- Role of transmission in the Energy system
- Plans for transmission charged
- Consumer engagement plans

Briefing session 2 – 27 August 2020

Topics covered

A joint session with AEMO to:

- How the relationship between AEMO and AusNet Services works in practice
- ISP for 2020, highlighting changes since the release of the draft ISP
- Implications for Victorian transmission customers.

- Customer bill impacts of ISP projects.

We observed that participants found this session to be particularly helpful

2.2.6 Customer Satisfaction Interviews Summary Report

While CCP23 did not observe any engagement between AusNet Services and its directly connected customers, we have been informed that there is frequent discussion between these businesses and AusNet Services. Our understanding is in part through these customers, and their participation in the TRR CAP and deep dive activities, as well as from documented reporting of discussions.

A Customer Satisfaction Interviews Summary Report[6] is included with the regulatory proposal documents and summarises this aspect of engagement.

AusNet Services write in this report:

> *The 2020 iteration of our annual transmission customer satisfaction qualitative interviews ran between June and August 2020. These interviews were conducted online (an artefact of Covid-19 restrictions at the time) and were undertaken by our Customer Research Manager. A senior member of the regulatory team attended all interviews to ensure any technical questions relating to the transmission revenue reset could be answered. Where necessary, another senior manager also attended. In total, we spoke with 13 customer and stakeholder groups, including:*
>
> - *3 directly connected customers;*
> - *2 renewable generators recently connected into the transmission network;*
> - *3 Victorian DNSPs;*
> - *4 consumer and industry advocate organisations (representing large, vulnerable and general customers); and*
> - *Australian Energy Market Operator (AEMO).*

AusNet Services reporting on this engagement included the following discussion of key issues.

> *Energy Affordability and pricing*
>
> *Total energy prices have risen considerably in the last 5 years with significant impacts across all customer and stakeholder groups. In particular, these increased costs can affect the viability of many large businesses. …*
>
> *Feedback indicated that demand drop for products and services as a result of Covid-19 have further increased price sensitivity and uncertainty. …*
>
> *Customers and stakeholders voiced that the costs provided by AusNet Services for this work are often significantly higher than the market rate. To build greater trust, participants encourage AusNet Services to take a more collaborative approach to the design and costing of non-contestable work.*
>
> *There was general agreement that over the past two years there has been an 'opening up' at AusNet Services around cost transparency.*
>
> *Customers also voiced dissatisfaction with the transparency of costs associated with AEMO activities. They encouraged both AusNet Services and AEMO to continue to improve transparency around costs.*

[6] https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Appendix%203A%20Customer%20Satisfaction%20Interviews%20Summary%20Report%20-%2029%20October%202020.pdf

Reliability

Customers have told us they are generally satisfied with current reliability levels. However, they have also said that failures in reliability can lead to significant production losses and equipment damage, demonstrating the importance of reliable transmission services in the next regulatory period.

Network stability is presenting as an emerging concern for many directly connected customers …

Specifically, customers expect that we would contact them following an incident and explain what happened and what we are doing to prevent such events from occurring again.

In addition, customers would also like to understand what we are doing to safeguard the security of the network in the future. Moving to more bespoke account management service approach would be well-received by these large customers.

Service delivery pain points

Customers' experience of our services is improving. Customers and stakeholders have told us that it has become easier to contact us for both operational and strategic advice and guidance. There are, however, some areas where they would like to see further improvement:

(i) Greater willingness to negotiate on elements of the contract. While it was acknowledged that improvements in contract negotiation have been made in recent years, targeted feedback from generators, stressed the importance of continued improvement in this space. They would like to see us adopt more commercial mindset when it comes to contract negotiation.

(ii) Providing more accurate cost estimates. It was sometimes noted that the difference between the cost estimates provided at the outset of a connection process significantly differed to the actual costs incurred. This 'bill shock' was particularly frustrating as it upset project budgets and required generators to go back to their respective organisations and seek additional funding.

(iii) More regular communication throughout the connections process. From a project management perspective customers would like more regular and timely communication with AusNet Services during the planning, build and commissioning of a connections project.

The conclusions that AusNet Services has drawn from the interviews and discussions with its direct connect customers include:

- *Total energy prices have risen considerably in the last 5 years with significant impacts across all customer and stakeholder groups. Improved price transparency will build trust with customers and stakeholders.*
- *Overall satisfaction with reliability is high but uncertainty around system security and the quality of supply is increasing particularly among direct connect customers.*
- *Our strong reputation in the sector is underpinned by the perception of improved engagement with customers and stakeholders in the past few years. There is an appetite to see more of this engagement.*
- *From a service delivery perspective we have become a little easier to deal with. However, customers would like to see a focus on more open contract negotiation, more accurate cost estimates and improved communication going forward.*

- *There is a need to invest in understanding customers' current and future needs, including building the network to ensure there is sufficient capacity to host renewable generation.*
- *We need to better promote the important role that the transmission network will play in the transformation of the energy sector that is currently underway.*

2.2.7 CCP23 observations about "Nature of Engagement" and "Breadth and Depth"

The nature of engagement that we observed was appropriate for the work of AusNet Services Transmission.

The considerable gap in engagement between November 2019 and June 2020 is only partially explained by COVID-19. The TRR CAP is an active, informed and engaged group. While it has served AusNet Services well, it could have been engaged more usefully over the period.

The high level of activity from late June through to September 2020 included three deep dive sessions and two briefings which we observed to be very effective.

In regard to breadth and depth, we observed that the topics covered were considered in adequate depth. Regarding breadth of engagement, there was perhaps an under-representation of community service organisations, particularly given the strength of this sector in Victoria and the extent of engagement in energy issues from various organisations. While commercial and industrial customers are well represented, smaller business perspectives are not obvious to us. Given the importance of renewable generation and distributed energy resources these perspectives do not appear to have been actively sought, beyond the input from a couple of 'renewable' generators. These possible gaps suggest some capacity for expansion of breadth of engagement.

We appreciated the honesty of AusNet Services reporting of the feedback from its large customers. We recognise that the business is actively working to improve these relationships and to take the more regular and bespoke approaches to communication and negotiations that these businesses are seeking.

3. Clearly evidenced impact (From "table 7")

AusNet Services has reflected in its regulatory proposal the input it received from customers, and from feedback and discussion with stakeholders, particularly the TRR CAP. Important aspects of the business' understanding of customer preferences and expectations regarding its regulatory proposal include the following:

I. Affordability

AusNet Services reports that transmission prices have declined in real terms over recent years and that its regulatory proposal proposes a further significant reduction in the costs which customers will pay.

The business says:

> *… to further address our customers affordability concerns, we have also taken several specific actions in our plans including*
>
> - *absorbing several operating expenditure step changes*
> - *including a forecast of productivity improvement in our operating expenditure forecast."*

Improving affordability means that every element of the electricity supply chain needs to reduce costs wherever they can, and constantly to be vigilant in seeking savings opportunities. So the proposed reduction in total revenue is a reflection of the business understanding the affordability concerns of its customers.

II. Reliability

It is recognised that the AusNet Services transmission network is generally reliable, but at the same time any outage has significant implications for customers and in particular for businesses that face potential of equipment damage and substantial production loss. There is a continuing need for improved communication, particularly for large business customers, especially when outages do occur.

AusNet Services states:

> *Our expenditure forecasts have been developed to maintain the strong performance and high reliability that our customers expect of the Victorian transmission network, in line with the updated value of customer reliability values released by the AER in December 2019. We are also investing to improve the communication and management of planned and unplanned outages. While transmission outages are rare, this is a relatively low-cost way to improve a transmission customer's experience.*

III. Customer relationships

AusNet Services states:

> *We have established a team of dedicated customer relationship managers to provide a direct contact point for large users and proactively address customer concerns and issues. Regular meetings are now held.*

AusNet Services is being proactive in seeking maintain and extend strong customer relationships.

IV. Customer satisfaction

AusNet Services states:

> *We are developing and implementing ways to improve the customer experience and to eliminate "pain points" for new generators seeking to connect to the network. We are also investing to improve the communication and management of planned and unplanned outages.*

AusNet Services has absorbed some operating cost expenses that could have been proposed as step changes and that its capital expenditure program has been smoothed.

In Section 4.1 below, we discuss the approach that AusNet Services is intending to take regarding depreciation. This is an important topic with implications for the total revenue allowed for AusNet Services and hence charges for customers, yet we cannot recall this matter being actively discussed with consumers at either CAP meetings and particularly not in the deep dives.

2.2.8 CCP23 observations about "Clearly Evidenced Impact"

AusNet Services states:

> *Over the past two years, we have set out to systematically listen to and gather insights on what our customers and stakeholders think about the services we provide," and that they "have reflected the views of customers and stakeholders in several key aspects of our Revenue Proposal, including the operating expenditure step changes … listing to our customers and stakeholders, we have been able to reduce our proposed revenue requirement by $8 million.*

There is also a need to share understanding and expectations about emerging issues including the future network.

2.2.9 CCP23 observations about "Proof Point"

4. Proof Point (from Table 7)

The "Proof point" elements of assessment of consumer engagement from table 7 are largely with the AER to assess.

CCP23 is encouraged by next steps engagement plans with expectations that the 2021 briefing sessions and deep dives will be engaging and seek to include methodologies that provide for IAP2 "Collaborate" level engagement.

2.3 Next steps

The following table of proposed engagement for 2021, to inform the revised revenue proposal, has been circulated by AusNet Services

Figure 2.5: Post-lodgement stakeholder engagement

Post-lodgement stakeholder engagement

Timing	Method	Description
Nov – Feb 2021	Bi-lateral meetings	Recognising that the customers and stakeholders we want to engage with on our proposal are in high-demand and have limited time availability, we plan to hold a series of one-on-one sessions with customers and stakeholders scheduled at a time that suits them.
Feb 2021	Briefing session	A forum to explain the implications of new information for our plans and agree focus areas for further deep dives.
April - May 2021	Deep Dives	We will hold additional deep dive workshops to seek feedback on topics of interest to our customers and stakeholders.
June 2021	Customer Advisory Panel	To agree on how new information and insights from post-lodgement engagement activities should be reflected in our Revised Revenue Proposal.

Source: AusNet Services to CCP

We consider that this proposed program of activity will build on the effective engagement that gained solid momentum from late June 2020 through to the lodgement of the initial proposal.

2.4 CCP overall observations on the AusNet Services consumer engagement activities

CCP23 presented the following summary observations at the public forum on 16 December 2020 and consider that these continue to be fair observations.

- AusNet Services did not prepare a draft plan or a draft proposal, but having a well-planned post-lodgement engagement program is likely a better option, particularly given the extraordinary nature of 2020. The greater focus on post lodgement engagement is an outcome of the request of AusNet Services for an extension not having being granted.
- Engagement activities were mainly in the IAP2 spectrum "Inform – Consult" range, with some activities tending to "Collaborate."
- Engagement program was slow to gain momentum.

- June to September 2020 gained impetus and focus.
- The breadth of engagement was not obvious to CCP23.
- AusNet Services has listened actively and responsively to consumers on the topics on which they have engaged. The breadth of topics could have been wider, to include DER, connections, depreciation changes, etc.
- Engagement is "work in progress". Next steps are very important to consolidate recent gains.

2.5 AER Issues Paper consumer engagement questions

Before considering the five consumer engagement questions that the AER has asked in its Issues Paper, we raise a separate question, prompted by the AER's assessment of consumer engagement for the Victorian distribution businesses in their draft determinations. The question is whether consumer engagement and assessment of consumer engagement should be any different for a transmission business than for a distribution business?

All businesses in the electricity supply chain ultimately receive their revenue from bill paying customers: households, small businesses and commercial and industrial enterprises. While the impact of energy costs might vary between customer classes, it is our strong view that every person or entity that pays an electricity bill is a customer for every business in the supply chain, including in this instance the transmission business. This concurs with what CCP sub-panels have been hearing from consumer representatives and advocates since the CCP began in 2013. One of the key points that we have heard consumer representatives raise is that transparency is all-important, notwithstanding that for a small usage customer the transmission use of system charge component of the bill is often smaller than the distribution use of system component or other bill components.

Consumer engagement and stakeholder input should play a major role in informing the development of a proposal from a transmission business, as much as it does for distribution business.

In asserting this point of view, we are cognisant of differences between transmission and distribution businesses. In particular, transmission businesses have a much smaller number of customers directly connected to their network than is the case for distribution businesses. For a directly connected customer, there are formal supply contracts and reasonable expectations of active and regular information flows. A key difference for the network business is that customers of a distribution business are all directly connected to the distribution network, but only a small number of very large customers are directly connected to the transmission network. These differences influence the form of engagement and the issues discussed.

The consumer engagement activities of a transmission network should not necessarily mirror those of a distribution network. Every network is unique, has a unique set of issues and customer perspectives, and therefore should design its own bespoke consumer engagement program to match the characteristics of its customers and of the network, and the relationship between them.

It was demonstrated in the surveys that AusNet Services conducted with large directly connected customers that there needs to be improvement in AusNet Services' communication and transparency in dealing with these customers. This feedback is important. It is also crucial that the impact of every element of the electricity bill on residential and small business customers is not downplayed, and that every reasonable effort is made to engage with these customers.

In recognising the importance of engaging with residential and small business customers, including disadvantaged residential customers, we are also aware that resourcing to enable engagement by these customer classes, particularly at advocacy organisation level, has been scarce for engagement with

transmission businesses. Much more focus in funding is applied to retailer and distribution network business activity.

AER Question 1. To what extent do you consider AusNet Services has engaged with (as opposed to simply seeking feedback from) consumers to inform the proposal?

Our observations are that AusNet Services have engaged effectively with a reasonable range of its customers to inform its regulatory proposal.

We have no doubt about the sincerity of engagement and clear intent to utilise consumer input to inform the proposal.

Where AusNet Services engaged in detail, particularly the "deep dives", the engagement was at the collaborate level of the IAP2 spectrum, cyber security and terminal stations are two examples of topics of good engagement and responsiveness by the business. We suggest that there are some other topics, for example depreciation and aspects of ICT for network management that would have benefited from more detailed engagement.

We also suggest that a current challenge for AusNet Services is in maintaining consistency of engagement over an extended period of time. This concern is raised by the engagement with C&I customers and echoes our observations that engagement with households and small business could be categorised as occurring in "fits and starts", with the good engagement being excellent, but gaps sometimes occurring in the engagement program. The extent to which COVID-19 was a factor in this observed lack of continuity is unclear, though we do not consider it to be the only factor.

AER Question 2. To what extent have consumers been provided with impartial support to engage with energy sector issues?

This is not an easy question for us to respond to given the observation that consumers and consumer advocacy groups have generally not been resourced to respond to engage with transmission level issues. The Powering Sydney's Future engagement lead by Transgrid is probably the exception to this observation.

We did not observe significant impartial support being provided to support consumers to engage. However, we recognise that Seed Advisory provided independent facilitation of deep dives and independent reports that are part of the regulatory proposal package of documents. It is also our observation that most of the groups represented on the TRR CAP were able to resource their participation, though we have not tested this observation. It may therefore be that impartial support for engagement with AusNet Services transmission regulatory proposal was somewhat less necessary for this particular reset, than is normally the case?

This is an important question for further consideration, including for future transmission regulatory processes. We are aware of some interest from other network businesses in having some consumer engagement expectations specified by the AER in the Framework and Approach documentation.

Perhaps more impartial support, particularly in the form of money to pay for time, would have increased the breadth of customers and consumer groups who were able to directly participate in the engagement activities for this reset, we cannot know.

AER Question 3. To what extent do you consider you were able to influence the topics engaged on by AusNet Services?

This is not a question that CCP23 can answer directly as our role is as an observer to the process not an influencer. However as indicated earlier in this section we observed that the consumers that were engaged were able to influence topics presented by AusNet Services and the revenue proposal includes

clear demonstration from the business about the aspects of the proposal that have been informed by consumer input. AusNet Services has also reached out to stakeholders for suggestions on topics for deep dive or discussion sessions between now and the revised proposal.

AER Question 4. To what extent were you able to access and resource independent research and engagement?

Again this is not a question that CCP23 can respond to directly. We did not observe any requests for independent research and are of the opinion that access to independent research and engagement was not an inhibiting factor for engagement in the lead up to the lodgement of the regulatory proposal.

AER Question 5. To what extent do you consider AusNet Services' proposal ties to your expressed views as a consumer?

As active observers of engagement process, we look forward to reading and hearing the views of the people who were engaged.

3 Drivers of Change

3.1 Future Networks – Integrated System Plan (ISP) & other factors

The Victorian transmission network is facing unprecedented challenges to adapt in the face of significant changes to the generation mix and the overall policy environment. In Victoria, AEMO is primarily responsible for the planning and construction of the transmission network to meet these new challenges. However, there are significant implications for the existing transmission network providing prescribed services and owned and operated by AusNet Services.

CCP23 considers that the more significant challenges that will impact on AusNet Services performance during 2023-27 regulatory period include:

1. The Victorian Government's renewal energy plan includes ambitious targets of 40% of state generation coming from renewable and largely non-synchronous energy generation sources by 2025 and 50% by 2030.[7] This target is supported by other policy initiatives including the creation of 6 renewable energy zones (REZs), enhanced support for energy efficiency and continued support for roof-top PV for residential and commercial customers.

2. As part of AEMO's national ISP plan, AEMO has classified three major transmission projects in Victoria as 'actionable' projects as illustrated in Figure 3.1.[8] In addition, the actionable projects of Energy Connect and Hume Link will have relevance for the operation of the Victorian transmission system.

   While AusNet Services is not responsible for the construction of these projects, they will need to take account of these ISP projects and the impact on AusNet Services' existing transmission system. In addition, AusNet Services plans a major upgrade of the Western Victoria transmission network (2025-26).

   AusNet Services will also need to commence preliminary works in anticipation the VNI-West ISP project which may be required by 2027-28 and even the Marinus Link between Tasmania and Victoria. VNI-West will provide a new interconnection between NSW and Victoria and is designed largely to support the growth of large-scale wind and solar renewable energy generation in central-west Victoria. The Victorian Energy Minister now has the statutory power to make an Order allowing for construction of transmission and network support assets outside the NEM rules and AER's regulatory processes such as the RIT-T.[9]

   1. The closure of Hazelwood brown coal plant, which has changed Victoria from being a net exporter to a net importer of electricity over the next few years. The transmission system must also begin preparing for the closure of other Victorian brown coal plants in the next decade or so. For example, the VNI-West project will need to be brought forward if there is an early closure of Yallourn Power Station.

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[7] DELWP website https://www.energy.vic.gov.au/renewable-energy/Victorian-renewable-energy-targets

[8] AEMO describes an Actionable ISP project as "*critical to address cost, security and reliability issues, and are either already progressing or are to commence immediately after the publication of the 2020 ISP10. These projects have not yet completed their regulatory approval process".* https://aemo.com.au/-/media/files/major-publications/isp/2020/2020-isp-overview.pdf?la=en

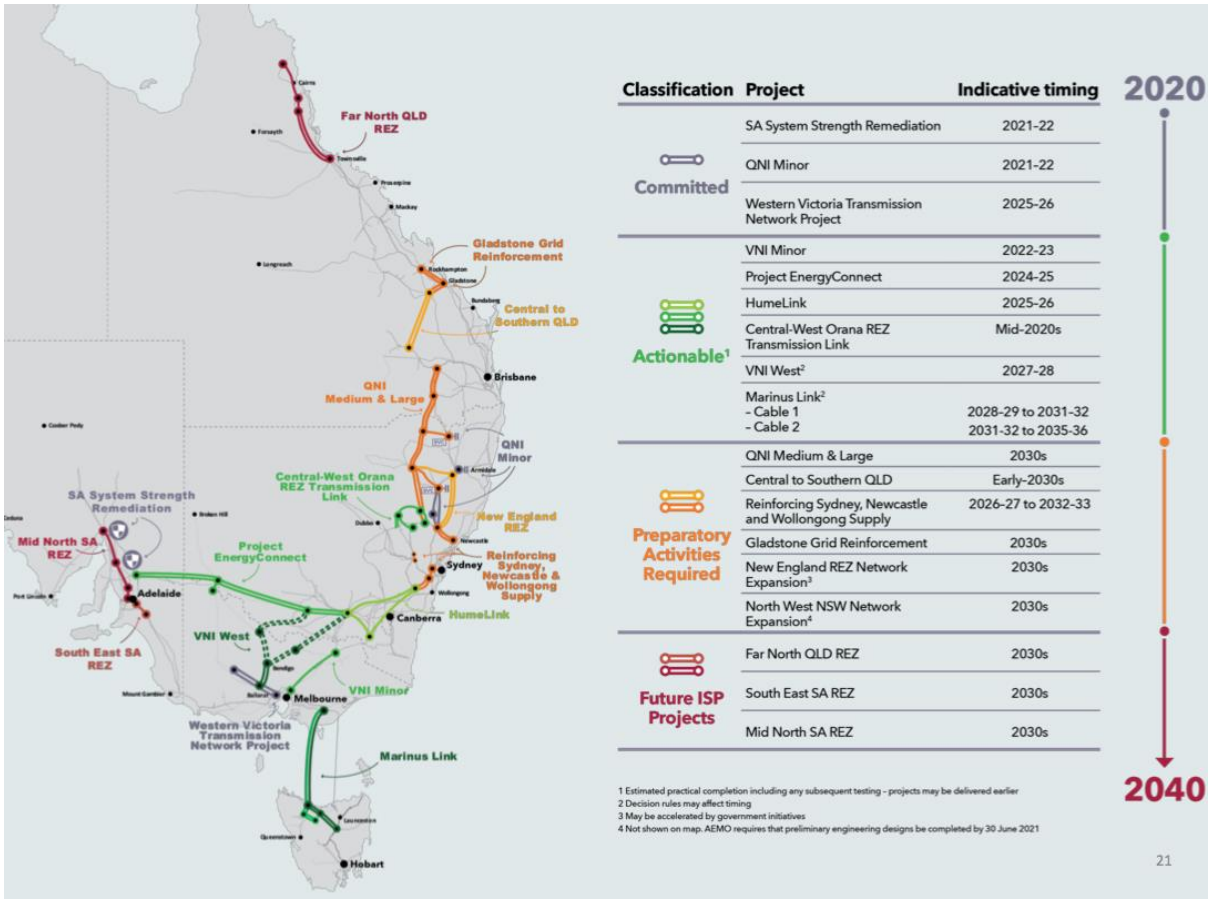
[9] The Victorian Government has amended the National Electricity (Victoria) Act 2020 in a bid to fast track augmentations of the Victorian declared transmission system or related services, to unlock more large-scale renewable supply and encourage more big batteries.
http://classic.austlii.edu.au/au/legis/vic/num_act/neaa202010o2020432/s1.html

2. The rapid decrease in minimum operational demand as a result of embedded generation, and the impact of this on the reliability and the system strength and security of the transmission network.
3. The requirement to implement new ICT control and management systems as a result of the rapidly changing operational conditions and increasing cyber security requirements.
4. The aging of certain key parts of the transmission network that was constructed over 60 years ago and will be under increasing stress.

It is not yet clear by how much the COVID-19 outbreak, which is continuing to disrupt normal business in 2021, will impact on energy demand and pricing and the provision of prescribed services by AusNet Services during the 2023-27 RCP. CCP23 supports AusNet Services' decision to not incorporate the long-term effects of the COVID-19 pandemic in its revenue proposal but will review this as part of its revised proposal when there is more data on the long-term impacts. Already, the impact on Australia's economy is somewhat less than forecast in mid-2020.

CCP23 has considered all these developments in its review of AusNet Services' 2023-27 regulatory proposal. Climate change forecasts and its effect on electricity utilisation are outside the scope of this submission, but we agree with AusNet Services that networks will need to monitor and adapt to the occurrence of more extreme storm events, extreme heat and bushfires.[10]

Figure 3.1: AEMO 2020 ISP Optimal Development Path



Source: AEMO, 2020 ISP Webinar, 24 August 2020, p 21.

[10] See AusNet Services, TRR 2023-27 Revenue Proposal, 29 October 2020, pp 33-24.

3.2 Price path

Figure 1.1 above, which is Figure 13-1 in the AusNet Services regulatory proposal, shows that the proposed price path reasonably matches the forecast revenue requirement in the coming regulatory period, and is reasonably flat in real terms.

3.3 Forecasts

The business sought (but did not get) a three-month extension to lodge its Revenue Proposal – to allow for forecasts to take better account of COVID-19.

While the AER decided to proceed along the existing review timelines, it acknowledged that adjustments to AusNet's plans to address COVID-19 impacts may be needed following lodgement of the revenue proposal.

AusNet has said that it will:

- Continue to engage with its customers throughout the regulatory process to seek their views on the pandemic's effects, as these become clearer.
- Reflect any new information, including AEMO's latest demand forecasts, in its Revised Proposal.

We support this way forward.

AusNet Services states that it has used AEMO' 2019 forecast as the latest forecast available when the proposals was submitted. AusNet services also committed to updating its forecast in its revised proposal having regard to the impact of COVID-19 on demand and AEMO's 2020 forecast. However, AusNet also suggests that that in its draft 2020 forecast, AEMO has overestimated the impacts of rooftop PV growth on maximum demand in several of Victoria's growth areas. AusNet states that "*we intend to undertaken an assessment of whether these forecasts are fit for purpose for our Revised Revenue Proposal"* including further engagement with its consumers.

CCP23 is pleased that AusNet Services is proposing further engagement with consumers on the demand forecast. We note AusNet Services concerns with AEMO's draft 2020 forecast; however, we also note that AEMO has sought independent forecast from the CSIRO. The CSIRO report provides projections of the future capacity of small-scale embedded technologies namely rooftop solar, batteries and electric vehicles. CSIRO highlights improvements in the performance of its forecasting methodology particularly with reference to its short-term forecasting method and scenarios to reflect the potential impact of COVID-19 on new installations and sales. It concludes:

> *Historical rooftop solar capacity growth has been particularly strong in 2019. While we expect this trend to be impacted by the COVID-10 pandemic in the short term, this strong historical growth together with strong policies in Victoria has contributed to higher updated projections relative to 2019 projections.*

We also comment on the overall demand forecast in Section 4.5, opex, of this advice.

As a general comment, CCP23 prefers networks to rely on AEMO forecasts unless there is clear evidence to the contrary. Also, we consider the CSIRO is an important independent source of forecasts on market adoption of technologies such as solar PV. For this reason, it is most important that AusNet Services' planned consumer engagement provides to consumers a detailed presentation of these independent forecasts and the detailed reasons for rejecting these independent forecasts.

3.4 Victorian Government energy efficiency stimulus

In November 2020, the Victorian Government announced a $797 million energy efficiency stimulus package to improve the quality of homes, create jobs and boost public health.

The stimulus measures include:

- $335 million to replace old wood, electric and gas-fired heaters with new energy-efficient systems in 250,000 homes;
- $112 million to upgrade the comfort and efficiency of 35,000 social homes;
- $14 million for appliance upgrades under the Victorian Energy Upgrades program; and
- New minimum energy efficiency standards for rental homes to ensure that they are fit for habitation will be in place from 2022.

The government is also providing funding to help set Victoria up for the move to seven star efficiency standards for new homes, supporting skills, training and jobs in the construction sector.

The funding was announced in various media releases from the Premier of Victoria, including releases on 15 November,[11] 17 November[12] and 24 November 2020,[13] with the details in the *Victorian Budget 2020/21*, which was handed down on 24 November 2020.[14]

These announcements came after the AusNet Services' (*transmission*) proposal to the AER on 29 October 2020.

However, the announcements were just before the Victorian *distribution* businesses submitted their revised proposals to the AER on 3 December 2020. The distribution businesses had little time to take into account the stimulus package in their revised proposals, but they recognised that the stimulus package would have significant impacts on their networks.

It is difficult to forecast what the impacts of this large stimulus investment will be on the energy market in Victoria in general, and on the AusNet transmission businesses in particular.

The Victorian Government has also announced the installation of the *Victorian Big Battery*, a 300 megawatt battery will be installed near the Moorabool Terminal Station, just outside Geelong, to be ready by the 2021-22 summer.[15]

AusNet Services executive general manager of regulation and external affairs, Alistair Parker, was quoted as saying that the battery would be able to power about 300,000 homes.

> "Its critical role though, will be enabling extra interconnector capacity," he said.
>
> "If we have a fault in the network it can very quickly give us 250 megawatts and nobody will see the inconvenience in the network."[16]

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[11] *Victoria's Big Housing Build*, 15 November 2020, available at https://www.premier.vic.gov.au/victorias-big-housing-build

[12] *Helping Victorians Pay Their Power Bills*, 17 November 2020, available at https://www.premier.vic.gov.au/helping-victorians-pay-their-power-bills

[13] *Making Victoria A Renewable Energy Powerhouse*, 24 November 2020, available at https://www.premier.vic.gov.au/making-victoria-renewable-energy-powerhouse

[14] See https://www.budget.vic.gov.au/clean-energy-power-our-recovery

[15] *Victoria To Build Southern Hemisphere's Biggest Battery*, 5 November 2020 available at https://www.premier.vic.gov.au/victoria-build-southern-hemispheres-biggest-battery and *Moorabool To Host Australia's Biggest Battery*, 5 November 2020, available at https://www.premier.vic.gov.au/moorabool-host-australias-biggest-battery

[16] *Victoria's new Tesla battery in Moorabool to drive down power prices, State Government says*, 5 November 2020, available at https://www.abc.net.au/news/2020-11-05/new-tesla-battery-for-moorabool-victoria/12851698

We do not yet know what effects this may have on AusNet Services' spending plans, performance, and incentive schemes.

As with other elements of uncertainty, our reaction is to call for business agility as a key part of the business narrative, so that the businesses can handle change and not be phased by it. We expect the effects of recent announcements to be considered further in the months ahead as we move to the draft decision and revised proposal phases of this regulatory process. A consolidated narrative about emerging and future DER, large scale renewable generation and 'future' issues would be helpful for stakeholders.

4 Key elements of AusNet Services' revenue proposal

4.1 Depreciation and RAB

4.1.1 AusNet Services' depreciation proposal

AusNet Services has adopted the AER's year-by-year tracking model to calculate the annual depreciation cost and regulatory depreciation. As most electricity networks have adopted this approach, CCP23 accepts this overall approach.

AusNet Services also proposed three important changes to part of its depreciation approach. In summary, commencing 1 April 2022, AusNet Services proposes:

- Create two new asset classes, namely (i) insulators and (ii) instrument transformers (ITs). These two new asset classes were previously included as part of a broader parent asset classes of 'towers and conductors' and 'switchgear' (respectively). However, AusNet Services claim that the economic life of these two classes was less than the parent class and should be depreciated accordingly.
- Further disaggregate the two asset classes into a total of six sub-classes based on AusNet Services' assessment of whether (for each category): (i) the asset has been decommissioned, (ii) the asset is expected to be decommissioned during 2023-27, and (iii) remainder of the assets,
- Reduce the asset age and, therefore, the remaining life of insulators and ITs, to reflect AusNet Services' view of the average economic life of each of the new category of assets. This proposal means that:
    - the average asset life of insulators will reduce from 60 years to 40.1 years. The average life of ITs will reduce from 45 years to 37.8 years.[17]
    - The average remaining asset life of insulators is now 18.1 years compared to the existing remaining asset life as at 1 April 2022 of 38.1 years,[18] representing a reduction of 20 years in the replacement capex models.
    - The average remaining asset life of ITs is now 26.1 years compared to the existing remaining asset life as at 1 April 2022 of 33.4.years, [19]representing a reduction of some 7 years in the replacement capex models.
- Fully depreciate insulators and ITs in the 2023-27 regulatory control period if they have been decommissioned, or will be decommissioned in 2023-27. Then apply straight-line depreciation to the remaining insulators and ITs on the basis of their revised economic lives.

AusNet explains its proposed changes as follows:

- Field experience indicates insulators and ITs need, on average, to be replaced earlier than the current life which is based on the standard asset life for the parent asset, namely towers and conductors and switchgear (respectively).
- In order to address this issue, insulators and ITs need to be assigned to an asset sub-class, separate from the parent class.

[17] AusNet Services, *TRR 2023-27 Revenue Proposal,* 29 October 2020, Table 9-19, pp 209-210.
[18] Ibid, p 205
[19] Ibid, p 207

- The depreciation costs should reflect the economic life of the two new asset classes. As a result, any insulators or ITs already decommissioned should be removed from the RAB by depreciating the remaining (new) economic life of the assets. Similarly, where AusNet Services expects insulators or ITs to be decommissioned over the period 2023-27, they should be fully depreciated over the 2023-27 period based on their revised residual life.

Table 4.1 below provides a detailed description of the proposed approach. Table 4.2 sets out the depreciation costs following the proposed reclassification and revised age profile, expressed in real $2021-22 terms. Table 4.3 summarises the regulatory depreciation costs in nominal terms.[20]

The inclusion of depreciation costs for decommissioned assets or assets proposed for decommissioning in 2023-27 (assuming revised average age) adds to the expected depreciation costs in the 2023-27 regulatory period if current practices continued.[21]

Table 4.1: AusNet Services Depreciation Methodology for insulators and instrument transformers

Type	Asset	Replacement status	Depreciation method
Assets in the opening RAB	Insulators	Decommissioned	Fully depreciate in 2022-23
		Planned for decommissioning during the 2023-27 regulatory period	Fully depreciate their residual values by the end of the 2023-27 regulatory control period
		Balance, in-service	Depreciate over a remaining asset life that reflects an economic life of 40 years
	Instrument transformers	Decommissioned	Fully depreciate in 2022-23
		Planned for decommissioning during the 2023-27 regulatory period	Fully depreciate their residual values by the end of the 2023-27 regulatory control period
		Balance, in-service	Depreciate over a remaining asset life that reflects an economic life of 38 years
	All other assets	N/A	Depreciate over a remaining asset life that reflects the standard asset life approved in the current determination
New capex in the capex program	Insulators		Depreciate over an economic life of 40 years
	Instrument transformers		Depreciate over an economic life of 38 years
	All other assets		Depreciate over the standard asset life approved in the current determination

Source: AusNet Services, *TRR 2023-27 – Revenue Proposal*, 29 October 2020, Table 9-1, p 193.

[20] Regulatory depreciation is based on the nominal straight-line depreciation less RAB indexation.

[21] AusNet Services does not provide the incremental cost of the changes over and above using the standard depreciation approach for these assets. The $28 million is estimated based on Table 4.2, ie ($8.4m + $2.9m + $13.1m + $ 4.4M) = $28.8m, and assuming a small amount for the depreciation cost if the decommissioning and change in standard and residual ages did not occur in 2023-27.

Table 4.2: Straight-line depreciation ($M, real 2021-22)

		2022-23	2023-24	2024-25	2025-26	2026-27	Total
Existing assets in the RAB	Insulators decommissioned	8.4	0.0	0.0	0.0	0.0	8.4
	Insulators to be decommissioned over 2023-27 regulatory period	0.6	0.6	0.6	0.6	0.6	2.9
	Balance of insulators	9.2	9.2	9.2	9.2	9.2	46.2
	Instrument transformers decommissioned	13.1	0.0	0.0	0.0	0.0	13.1
	Instrument transformers to be decommissioned over 2023-27 regulatory period	0.9	0.9	0.9	0.9	0.9	4.4
	Balance of instrument transformers	10.5	10.5	10.5	10.5	10.5	52.6
	All other assets	143.2	140.4	136.4	135.1	130.4	685.5
New capex	Insulators	0.0	0.1	0.3	0.4	0.6	1.4
	Instrument transformers	0.0	0.0	0.1	0.1	0.2	0.5
	All other assets	0.0	6.9	18.5	27.0	35.3	87.8
Total straight-line depreciation		**186.0**	**168.7**	**176.5**	**183.9**	**187.7**	**902.8**

Source: AusNet Services

Source: AusNet Services, *TRR 2023-27 – Revenue Proposal*, 29 October 2020, Table 9-20, p 210. Note: AusNet Services provides the revised depreciation costs for insulators and IT but does not appear to set out provide the incremental cost of the change (i.e the additional costs compared to retaining the previous practice).

Table 4.3: Summary of proposed regulatory depreciation ($M nominal)

	2022-23	2023-24	2024-25	2025-26	2026-27	Total
Straight-line depreciation	190.2	176.4	188.6	201.0	209.8	**966.0**
RAB indexation	-80.5	-82.2	-84.4	-86.4	-87.4	**-420.9**
Regulatory depreciation	**109.6**	**94.2**	**104.3**	**114.6**	**122.4**	**545.1**

Source: AusNet Services

Source: AusNet Services, *TRR 2023-27 – Revenue Proposal*, 29 October 2020, Table 9-21, p 210.

CCP23's comments on AusNet Services' proposal

As noted above, CCP23 accepts AusNet Services' overall depreciation approach with the exception of the proposed changes outlined above, namely the establishment of two new asset classes and a total of six sub-classes. These changes reflect AusNet Services' proposal to change the average (and residual life) of these two new asset classes, and the acceleration of depreciation of the decommissioned assets.

CCP23 has sought further information from AusNet Services about these new proposals, and the consequences of the proposal for the overall depreciation costs in the forecast 2023-27 regulatory control period. While we appreciate the additional information provided by AusNet, the issue requires further investigation by the AER, as discussed above. We are also concerned that AusNet Services' public information does not appear to clarify the incremental depreciation costs of these changes in 2023-27. If consumers are expected to support a change, it is important that they are provided with the full and transparent information on the impact of this change over at least 2 regulatory periods.

Our other concerns relate to matters of principle and to issues with the specific implementation of the new approach by AusNet Services, as described below.

Matters of principle:

There are aspects of AusNet Services approach that raise important matters of principle that extend beyond the AER's specific decision on AusNet Services.

- Reclassification of assets: As a matter of principle, the AER should adopt a cautionary approach to proposals for establishing new asset classes that are separate from the parent class in order to avoid continual gaming of the system.[22] It is up to the business proposing this change to clearly demonstrate its reasons and how such a change is in the long-term interests of consumers. In any large infrastructure asset, the parent asset class will include different components with different expected lives – the average or standard life of an asset class is effectively an average of all these component lives. If businesses are to propose selecting certain components for separate treatment, then the process must be two-way as other components of the parent asset will have asset lives longer than the original standard life for that asset class.

  If, therefore, the AER approves the reclassification of insulators and ITs and accepts AusNet Services argument that they have shorter lives than the remaining parent asset, then the average life of the parent asset class must be increased commensurately.

- Accelerated depreciation for decommissioned assets: CCP23 considers that this issue requires further examination by the AER as it has broader implications for the application of standard lives. CCP23 highlights, for instance, that these decommissioned assets were funded by consumers on the basis of the length of their expected average asset life at the time the original capital expenditure was approved.

  We acknowledge that there is a precedent for AusNet Services based on the AER's draft decision on AusNet Services' Victorian distribution network.[23] However, this raises a difficult precedent when applied to a transmission network business. For example, a switchgear transformer may cost many millions of dollars and have an expected life of some 60 years. However, that switchgear may be replaced well before its asset life has been reached, as a result of the need to expand capacity for the ISP project (see also section 4.2). This may lead to a large one-off increase in depreciation costs to current network users and therefore raises questions of intergenerational equity.

  Overall, changing the expected asset lives 'mid-stream' and with the associated proposal for instant write off, raises complex issues that go beyond insulators and ITs. CCP23 is therefore seeking further assessment of this approach on the basis of principle and potential precedent.

Implementation issues

CCP23 has raised specific questions with the AER and AusNet Services regarding certain aspects of their revised approach. They include:

- AusNet Services' assessment of the standard life of insulators: AusNet Services' proposal to reduce the standard life of insulators is based on its claim that its new polymeric insulators have an estimated average life of 25 years. This compares to the average age of replacement of older style insulators of 46-50 years. This is illustrated in Table 4.4 below.

[22] CCP23 is not suggesting that AusNet Services is attempting to 'game the system'. Rather, if the principle is accepted then it may open the door for other parties to do so.

[23] See for example, AER, Draft Decision – *AusNet Services Distribution Determination 2021 to 2026*, Attachment 4 Regulatory Depreciation, Section 4.4.2, September 2020.

AusNet Services states that existing polymeric insulators that have been replaced to date have an average age of 11 years. However, AusNet Services regards this as atypical of the total population of polymetric insulators. The proposal of a service life of 25 years is based on the internal research and the view that more recent polymeric insulators are safer, more resistant to corrosion, pollution and UV and have better hydrophobic properties.[24]

CCP23 finds it difficult to reconcile these enhanced attributes of the new polymeric insulators with the proposition that the average age is significantly less than the glass/porcelain insulators. In addition, we do not have information on the relative prices of the new polymeric insulators. To the extent they are more expensive, this will further increase the initial cost and the depreciation costs of AusNet Services' decision to move increasingly to this type of insulator.

We understand that the AER and AusNet Services are currently in discussion on this issue and we strongly support the AER's further investigation of the AusNet Services assessment of the average age of the polymetric insulators and the overall benefits and costs of the decision to move increasingly to this technology.

Table 4.4: Weighted average replacement age for insulators

Type	Average replacement age (years)	% of network	Weighted average replacement age (years)
Glass	50	9%	
Porcelain	46	63%	
Polymeric	25	28%	
All		**100%**	**40**

Source: AusNet Services

Source: AusNet Services, *TRR 2023-27 – Revenue Proposal*, 29 October 2020, Table 9-10, p 203.

- Valuation model: In order to implement its depreciation proposal, AusNet Services uses a 'valuation model' to calculate the residual values of insulators and instrument transformers. The NER clause 6A.6.3(b)(2) requires AusNet to value the assets when they were first included in the RAB. AusNet Services states that it assesses the initial value of the assets by first estimating the historical annual additions to the RAB and then "applying the current unit replacement cost including capitalised overheads". [25]

  CCP23 has expressed some concern with this approach and sought further clarity from AusNet Services. We understand from this discussion that AusNet services have used the historical CPI to reverse engineer from the current estimated cost to the initial historical value for both unit costs and overheads. However, we request the AER to further examine this approach as it may have implications for the assessment of the residual value of the decommissioned assets and the depreciation charges.

- CCP23 is concerned that AusNet Services does not appear to have discussed its proposal for changes to depreciation with the TRR Consumer Advisory Panel. Nor is this issue identified in the business' consumer engagement plans for 2021. CCP23 cannot therefore advise the AER that consumers have supported the proposed changes in approach.

[24] See AusNet Services, *TRR 2023-27 Revenue Proposal,* 29 October, 2020 pp 202-203.
[25] For a detailed description of AusNet Services' valuation model, see Ibid, pp 193-194.

4.1.2 AER Issues Paper consumer engagement questions

AER Question 6. Do you agree with AusNet Services' proposal to separate assets with shorter asset lives from broader asset classes?

As a matter of principle, this separation of assets from the broader parent class of assets should be discouraged and only allowed where there is compelling evidence to do so. Moreover, if it were clearly established that the assets do have significantly shorter economic lives than the average of the parent asset class, then from a purely mathematical perspective, we would expect to see the average life of the parent asset class increase commensurately.

CCP23 is also concerned that AusNet Services does not appear to have discussed these changes with its consumer forum, nor does it have plans to do so. In addition, AusNet Services' regulatory proposal does not appear to set out the incremental cost impact of the changes to depreciation. We do not accept that a change to depreciation that has significant impact on current consumers should be made without open communication and feedback from these consumers.

4.1.3 Regulated Asset Base (RAB)

AusNet Services estimates the closing asset base (i.e 2021-22) then proceeds to forecast its annual RAB based on new capex less disposals, and the forecast annual regulatory depreciation.

The proposal sets out proposed adjustments to the closing asset base/opening asset base. They include:[26]

- Final year transfer of $179m and $292m for insulators and ITs respectively, from 'tower and conductor' and 'switchgear' asset bases.
- Rolling in $294m of 'growth assets', reflecting their actual depreciated value as at 1 April 2022.
- Adjustments to the opening RAB arising from a change in the accounting treatment of property and vehicle leases. Previously the lease costs were allocated to opex. However, since 1 April 2019, the value of the lease has been capitalised 'up front'.

Table 4.5 below summarises the changes in the nominal value of the RAB over the forecast years. The forecast RAB growth is relatively modest from an opening RAB of 3,582m to a closing RAB in 2026-27 of $3,892m.

Table 4.5: 2020 ISP expansion plan to meet VRET target – central scenario – Forecast RAB 2023-27 ($M, nominal)

	2022-23	2023-24	2024-25	2025-26	2026-27
Opening RAB	3,581.9	3,655.3	3,751.9	3,840.8	3,885.6
Capex net of disposals	183.0	190.8	193.2	159.4	129.0
Straight-line depreciation	-190.2	-176.4	-188.6	-201.0	-209.8
RAB indexation	80.5	82.2	84.4	86.4	87.4
Closing RAB	**3,655.3**	**3,751.9**	**3,840.8**	**3,885.6**	**3,892.2**

Source: AusNet Services

Source: AusNet Services, *TRR 2023-27 – Revenue Proposal*, 29 Oct. 2020, Table 9-10, p 203.

[26] Ibid, p 187. The 'growth assets' refers to certain transmission system augmentations ordered by AEMO or the distribution networks and used to provide prescribed transmission services during the current regulatory period.

CCP23 Response to AusNet Services' RAB forecast

CCP23 has commented in a previous section about its concerns with the creation of new asset classes. If these changes proceed, it is important for there to be an appropriate reconciliation in the overall asset register. While we are not in a position to check this, we expect that the AER will conduct a thorough review to ensure consumers are not paying a return on assets if these assets are double counted.

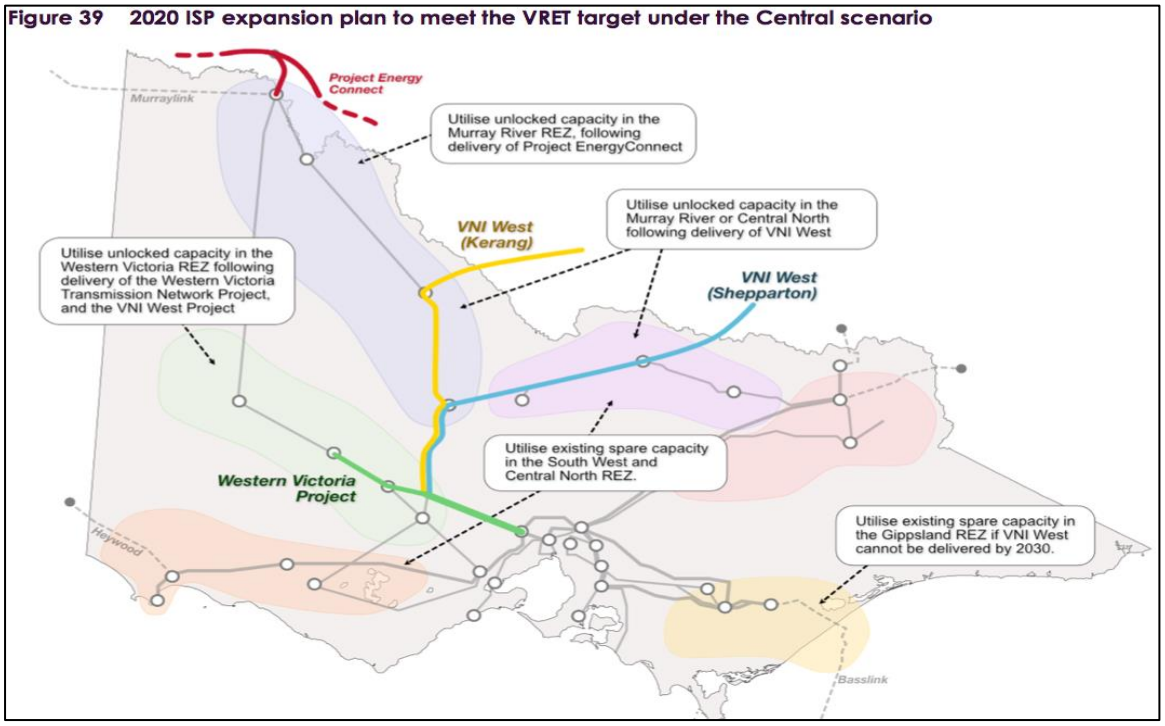
Significant 'growth assets' of $294m have been rolled into the opening RAB. We have been advised that growth assets are assets built at the request of the DNSP or AEMO. It is not clear to us how the efficiency and prudency of these amounts are assessed ex-post, or how they are recognised in the ex-ante forecast. CCP23 would welcome further explanation of this process, given the significant impact on AusNet Services RAB.

4.2 System capex

As noted in Section 3.1 above, the Victorian transmission network is central to the effective implementation of the Victorian Government's ambitious renewable energy targets of 40% by 2025 and 50% by 2030 of Victorian demand being met by Victorian renewable generation The Victorian Government has also recently announced seed funding of $540 million to support the development of six REZs in Victoria.[27] Located largely in the western areas of Victoria, these proposals will require significant expansion of the Victorian transmission system as well as upgrades of the existing transmission network.

Figure 4.1 below illustrates these developments. In particular, the ISP projects will have a vital role in unlocking the potential of the proposed REZ regions in western and central Victoria.

Figure 4.1: 2020 ISP expansion plan to meet VRET target – central scenario



Source: AEMO, *2020 Victorian Annual Planning Report*

[27] Media announcement by Premier of Victoria, "*Making Victoria a Renewable Energy Powerhouse*, 24 November 2020. https://www.premier.vic.gov.au/making-victoria-renewable-energy-powerhouse

The assessment of AusNet Services' proposed system capex must take account of its important contribution to the achievement of the Government's targets. However, it holds a unique position among transmission network owners/operators in the NEM with respect to the ISP related projects (and transmission expansion in general). As explained in section 3.1, In Victoria, AEMO is the transmission network system planner and is responsible for identifying the required expansions of the transmission network, including those expansions identified under the separate Integrated System Plan (ISP).

AEMO is also responsible for contracting the services to build these additional transmission assets through a competitive tendering process. Once the tender is awarded to a third party(s), the costs of the project are passed on to AusNet Services who in turn incorporates these project costs into its transmission network prices.[28] In its most recent tender process for the ISP project, 'VNI West', AEMO awarded the contract to Mondo, AusNet Services' commercial services business. Mondo will be required to plan, design, construct, own, operate and maintain construction of the transmission lines.[29]

Given the unique circumstances in Victoria, AusNet Services' system capex is has been dominated by replacement capex and was based largely on condition based modelling of existing assets. However, there is now a component of AusNet Services' non-contestable system capex that arises from the need to support the large ISP projects specified by AEMO. These include, for instance, upgrades of existing network assets such as switchgear and transformers to support the VNI West ISP project.

On the other hand, the Victorian ISP projects may enable AusNet Services to defer some replacement investments. For example, the ISP project 'VNI interconnect upgrade – minor', which commences construction in 2021, will allow AusNet Services to defer $33m capex for a transformer replacement at the Morang terminal station.

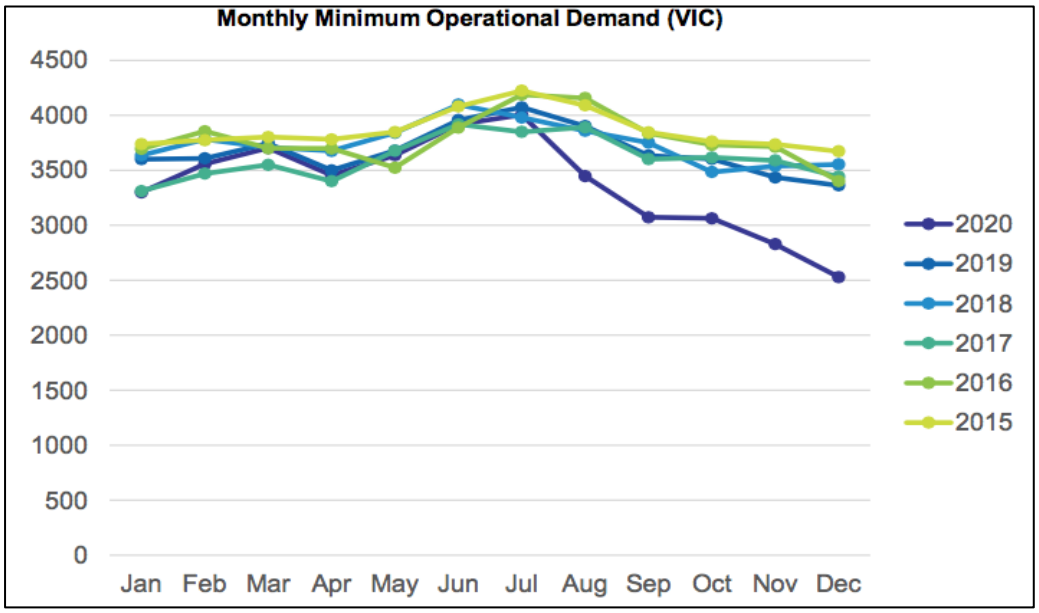
CCP23 welcomes AusNet Services' efforts to identify opportunities for savings in capex and opex arising from this and future ISP projects in Victoria. It is important consumers are not funding capex on transmission replacements/upgrades if these are likely to become redundant assets as the relevant ISPs are progressed.

4.2.1 Minimum operational demand forecasts

A further challenge facing AusNet Services' transmission and distribution Victorian networks is the significant decline in minimum demand largely as a result of the growing number and size of residential and commercial solar PV installations. Figure 4.2 below illustrates the decline in minimum demand since 2015 as observed by AusNet Services.[30]

[28] These charges are separate from the general AEMO charges to recover the costs of operating the NEM.
[29] See for instance, AEMO Statement: "AusNet Services Group awarded contract to deliver Western Victoria Transmission Network Project", 17 December 2020. https://www.aemo.com.au/initiatives/major-programs/western-victorian-regulatory-investment-test-for-transmission/procurement
[30] However, minimum demand in 2020 is likely to have also been affected by Covid-19 and the shutdown of the Victorian business and commercial sectors.

Figure 4.2: Monthly minimum operational



Source: AusNet Services, Presentation to CCP23, January 2021

The Victorian Governments 2020/21 budget continues to support the PV installation market. These developments are discussed in detail in section 3.3 above. For example, in November 2020, the Victorian Government announced as part of its renewable energy plan, the following:[31]

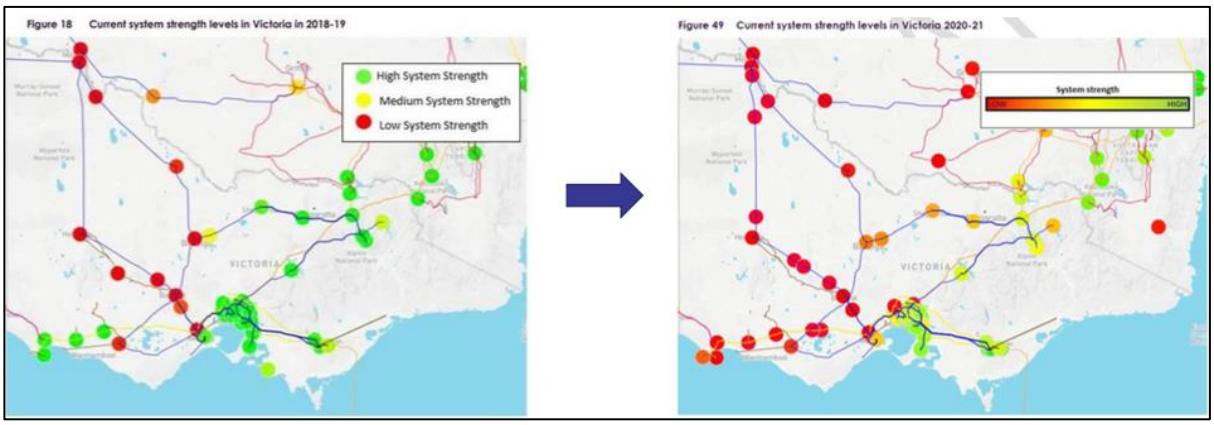
> *More than 100,000 households have now installed half-priced power stations on their roof at no upfront cost through the Government's Solar Homes program.*
>
> *And to help even more Victorians get the benefits of solar, the Government will provide $191 million to expand the program – with an extra 42,000 solar panel rebates over the next two years.*

AusNet Services states that this decline in minimum operational demand is already reducing system strength on the Victorian transmission network and creating 'significant operational challenges'.[32] The forecast further expansion of behind the meter DER will add to this operational challenge. Figure 4.3, provided by AusNet Services, illustrates the decline in system strength across the Victorian transmission network between 2018-19 and 2020-21.

[31] Victorian Government: "Making Victoria a Renewable Energy Powerhouse", 24 November 2020, p 9. https://www.premier.vic.gov.au/making-victoria-renewable-energy-powerhouse
[32] Ibid.

4.2.2 System strength

Figure 4.3: Changes in system strength 2018-19 to 2020-21



Source: AusNet Services, Presentation to CCP23, January 2021, p12.

CCP23 agrees that there is a fundamental shift in the challenges facing the transmission network arising from the ongoing decline in minimum operational demand and the rapidly increasing importance of large-scale renewable energy generation. CCP23 is also seeking to better understand the extent to which this very significant change in system strength observed in 2020 has been affected by the Covid-19 impacts on Victorian operational demand and how much of the change is more permanent.

The Victorian regulated transmission system must also adapt to factors such as the changes in export and input flows arising from interstate transmission developments (e.g. Energy Connect and HumeLink), the development of Snowy 2 and the closure of existing generation sites. For instance, AusNet Services highlights the impact of the relatively sudden closure of the Hazelwood brown coal power station in the La Trobe valley. Following this closure, Victoria became a net importer rather than exporter of electricity.

CCP23 therefore agrees that significant transmission investment will be required to address the potential threats to the reliability of supply and the security and stability of the Victorian power system. Subject to the AER's testing of the efficiency and prudency of the investment, these developments should be in the long term interests of consumers. They not only help secure a more reliable supply in the next few years, but will ultimately contribute to unlocking constraints on the network providing access to cheaper renewable energy from the REZs.

CCP23 also generally supports AusNet Services condition based replacement program. However, as discussed in the next section, there are some aspects of AusNet Services' replacement capex that we consider require further investigation by the AER.

In the following section we set out in more detail which components of AusNet Services' system capex proposal we support in principle (ie. subject to review of costs by the AER) and those components of the proposed system capex that we expect the AER to conduct further, more detailed analyses of.

4.2.3 AusNet Services' proposed system capex

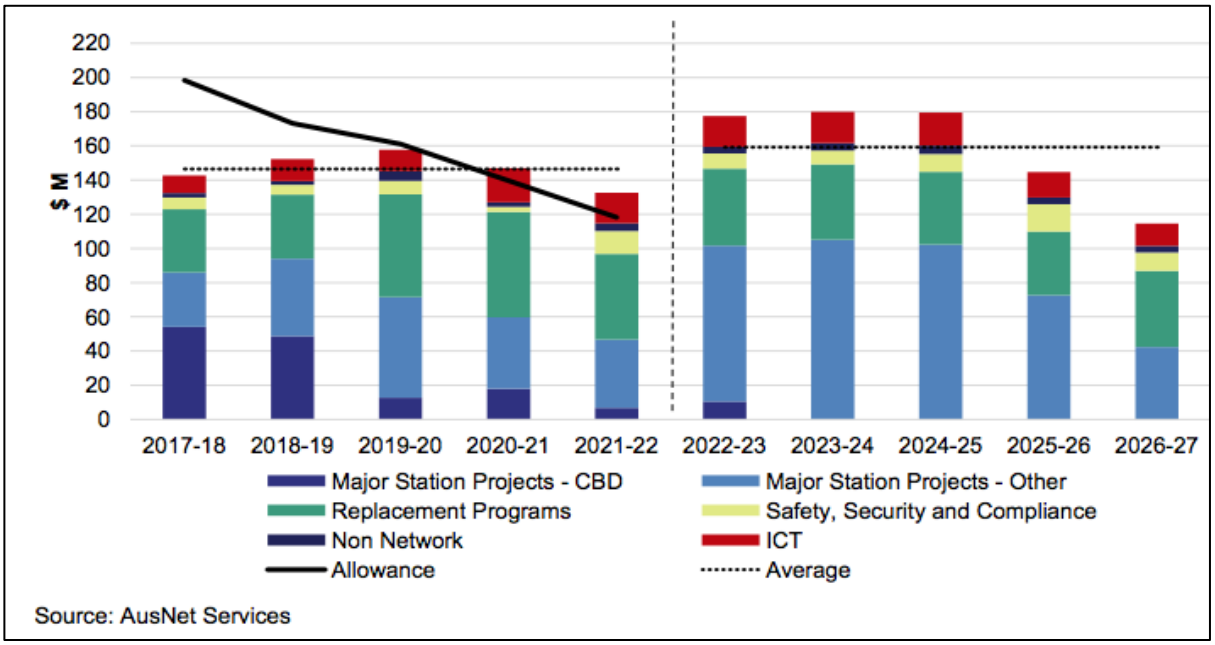
As discussed above, AusNet Services' proposed system capex reflects:

- Requirements to upgrade parts of the existing transmission network in order to support the ISP, the proposed REZ regime and ultimately, the 2025 market redesign. Another more specific driver for AusNet Services is to support the Victorian Government's mandated targets for renewable energy.

- Greater complexity of managing the network, particularly the closure of existing generators, changes in energy flows and the decline in minimum operational demand. AusNet Services also contends that AEMO has overestimated the impact of rooftop solar PV on maximum demand.[33]
- The need to replace existing transmission network assets on the basis of condition and age, using a probabilistic planning approach. AusNet Services highlights its 'condition based' approach to replacement but also notes: "the ageing asset base is a key driver of the increase in capex being forecast for the next regulatory period".[34]

To meet these challenges, AusNet Services proposes a total capex (including non-system capex) of $796m ($2021-22), which is 9% higher than the expected capex in the current regulatory period, although similar to the AER's allowance for the current regulatory period. However, while the overall capex amount is similar, the composition of this capex has changed reflecting the changing requirements on the transmission network. Figure 4.4 below illustrates the changes in focus between the current regulatory control period (RCP) and the 2023-27 RCP.

Figure 4.4: AusNet Services' historical and forecast capex ($M, real 2021-22)

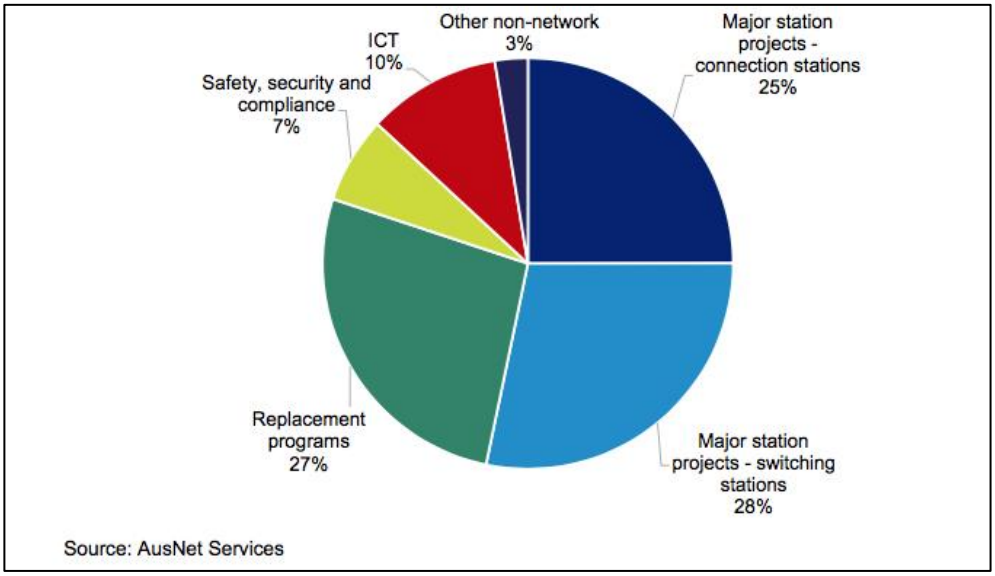


Source: AusNet Services: *TRR 2023-27, Revenue Proposal*, 28 October 2020, figure 4-1, p 71.

Figure 4.5 below further illustrates the allocation of total capex in AusNet Services' 2023-27 RCP proposal. The following sections will further consider the main categories of AusNet Services' proposed capex.

[33] AusNet Services has indicated that it will consult with customers on the most appropriate demand forecasts in the months prior to its revised revenue proposal.
[34] See AusNet Services: TRR 2023-27, Revenue Proposal, 28 October 2020, p 73.

Figure 4.5: Composition of forecast capex 2023-27.



Source: AusNet Services, *TRR 2023-27 Revenue Proposal,* 29 October 2020, Figure 4-4, p 75.

In particular, AusNet Services proposes a significant increase in expenditure on 'major station projects' notwithstanding that it has largely completed its current program of replacement of major stations in the CBD. Figure 4.4 above illustrates the change in focus in AusNet Services' capex program between the current and forecast RCPs.

Major Station Projects

As illustrated in Figure 4.5 above, some 53% of AusNet Services' total proposed capex relates to major station projects. The 53% is made up of 28% for 'major station projects - switching stations' and 25% for 'major station projects – connection assets'.

The forecast capex allocated to the upgrading/replacement of switching stations is significantly more important in the 2023-27 RCP than in the current RCP. AusNet Services explains this shift in emphasis is a reflection of the emerging changes to the network through the ISP/REZ program. They state that switching stations will form the 'backbone' of the Victorian transmission network or support interconnectors:[35]

"These stations are important nodes in the national interconnected transmission system and the dependable reliability of assets critical to reliability and security of the power system. This criticality has fundamentally increased since the closure of Hazelwood and Victoria moving from being a net exporter to net importer of electricity".

The connection station projects relate to upgrading/replacement of the terminal stations connecting the transmission network to the distribution network. This is largely an ongoing BAU activity and appears to be similar in scope to the current RCP.

CCP23 response to AusNet's major projects proposal

Enhancing the capacity of switching stations will be central to the reliability, security and stability of the existing transmission network, and the security of supply to Victorian consumers, as the new ISP projects and REZ developments continue through 2023-27 and beyond.

[35] AusNet Services, *TRR 2023-27 Revenue Proposal,* 29 October 2020, p 75.

Subject to the outcome of the AER's review and the regulatory investment test (RIT-T) (see below), CCP23 supports AusNet Services' major switching station capex plans. We accept that this investment is necessary to support AEMO's Victorian ISP program and to ensure a reliable and secure supply to Victorian consumers given the Victorian Governments' ambitious targets for renewable energy generation in Victoria. As such, the expenditure is likely to be in the long-term interests of all Victorian electricity consumers. Without these investments, the potential market benefits of the REZ program will not be realised.

CCP23 considers major projects designed to upgrade/replace connection assets are largely ongoing activities, and we expect the level and cost of this activity to be broadly similar to the expenditure in the current RCP.

AusNet Services claims that it has conducted a *"comprehensive cost-benefit analysis to ensure these proposed connection asset replacement activities are economic"* [36] in the long-term interests of consumers.

CCP23 looks to the AER to further assess whether these connection capex projects, are economic **and** prudent, and in the long-term interests of consumers.

Having stated a qualified support for the major station capex program, CCP23 acknowledges that the great majority of the proposed expenditure on major switching and connection stations will also be subject to the AER's regulatory investment test (RIT-T) process. The AER has developed a comprehensive set of guidelines[37] for transmission companies seeking to invest in projects in excess of $6m, or in projects identified by AEMO as 'actionable ISP projects'. In simple terms, the RIT-T is designed to ensure that major transmission projects are subject to comprehensive cost-benefit analyses in order to select preferred implementation options that maximise the net market benefit in the long-term interests of consumers.

Consumers have the opportunity to formally raise issues with a transmission company's proposal at set points in the RIT-T process, and ultimately to raise a dispute at the end of the process, with the outcome of the dispute determined by the AER.

However, the RIT-T process only partially reduces the risk to Victorian consumers of AusNet Services investing inefficient capex on its regulated transmission network. While Victorian consumers will only fund transmission investments that pass the RIT-T as determined by AEMO and the AER, the AER's approval is constrained largely to compliance with procedural issues and settlement of disputes. Moreover, to date, consumer engagement in the RIT-T processes has been inconsistent at best.[38]

AusNet Services states it has commenced the RIT-T process for some 15 major station projects, including two completed RIT-Ts. AusNet Services also states that any changes to the proposed projects as a result of a RIT-T will be reflected in its revised revenue proposal (subject to timing).[39] Figure 4.6 summarises the status of the RIT-T assessments for these 15 major station projects including the expected execution data.

[36] Ibid, page 75.
[37] For example, AER, Regulatory Investment test for transmission application guidelines; Cost benefit analysis guidelines; Guidelines to make the ISP actionable; Forecasting best practice guideline August 2020.
[38] CCCP23 acknowledges that the AER is now placing greater emphasis on consumer engagement in the RIT-T process. However, the issues are generally complex and the overall process rather long, which discourages effective engagement by consumers, particularly as ongoing consumer input is not funded.
[39] AusNet Services, Presentation to the CCP23, January 2021, p 8.

Figure 4.6: Status of RIT-T assessments for AusNet's major station projects

#	Station	Description	Initiate	Stage 1 PSCR	Stage 2 PADR	Stage 3 PACR	Execute†
1	ERTS	Redevelopment Stage 2					FY22
2	TSTS	66kV Transformer and Circuit Breaker Replacement					FY22
3	HOTS	SVC Replacement			Q2 2021	Q4 2021	FY21
4	SHTS	Transformer B2 and B3 Replacement			Q3/Q4 2021	Q4 2021	FY22
5	BLTS	66/22kV Circuit Breaker Replacement			Q3/Q4 2021	Q4 2021	FY22
6	TTS	66kV Circuit Breaker Replacement		Q1/Q2 2021	Q3/Q4 2021	Q4 2021	FY23
7	KTS	500/220kV Transformer Replacement		TBC	TBC	TBC	FY24
8	MLTS	Circuit Breaker Replacement		TBC	TBC	TBC	FY22
9	RCTS	Transformer and Switchgear Replacement		TBC	TBC	TBC	FY23
10	SMTS	330/220kV Transformer Replacement Stage 2		TBC	TBC	TBC	FY24
11	SMTS	500kV GIS Replacement		TBC	TBC	TBC	FY24
12	SYTS	500kV GIS Replacement			Q3/Q4 2021	Q4 2021	FY22
13	GNTS	66kV Circuit Breaker Replacement		TBC	TBC	TBC	FY24
14	HOTS	66kV Circuit Breaker Replacement		TBC	TBC	TBC	FY25
15	FTS	66kV Circuit Breaker Replacement		TBC	TBC	TBC	FY26

Green = complete
Orange = underway or scheduled to commence shortly
† assumes project commences (be executed) the year where forecast expenditure commences in Revenue Proposal

Source: AusNet Services, Presentation to CCP23, January 2021, p 8.

CCP23 supports AusNet Services' proposed capex for major station projects that are linked to the Victorian ISP program. These projects are crucial to the reliability, stability and security of supply in Victoria and will need to be prioritised given the Victorian government's ambitious renewable energy targets for 2025 and 2030.

The major station **connection** projects are likely to be subject to a RIT-T process as well as the AER's review of the efficiency and prudency of these projects. Given the complexity of the issues, CCP23 is not in a position to make such judgements and will rely on the AER and RIT-T processes to ensure the projects are necessary and in the long-term interests of consumers.

Replacement system capex

The third major component of AusNet Services' capex proposal is related to replacement expenditure. (repex). Repex makes up 27% of the total capital.

Figure 4.4 above suggests that this type of expenditure generally remains fairly constant between regulatory periods, although there may be small increases or decreases in the extent of replacement capex across various asset classes, depending on the age and condition of the relevant network assets. AusNet Services' proposed replacement capex for 2023-27 is $213.4m, which is 13% lower than their expected capex for the current 2018-22 RCP.

AusNet Services describes its replacement program as typically relating to "high volume, low value assets".[40] As a result, the great majority of these replacement projects will not be subject to a RIT-T process. However, the replacement program still requires economic justification. AusNet Services describes its assessment of capex for the high volume low value category as follows:[41]

[40] AusNet Services, *TRR 2023-27 Revenue Proposal*, 29 October 2020, p 75.
[41] Ibid.

> *Our approach to these typically 'high volume, low value' asset involves visual assessment of asset condition, with analysis and modelling then applied to assess the probability and consequence of asset failure and, therefore, whether it is economic to replace the relevant assets.*

AusNet Services further states:[42]

> *Based on asset condition data for individual asset or classes of assets, we assign a failure risk rating. This reflects the probability of the asset failing and the consequences that failure would have on network safety and reliability. This informs what and when we need to replace assets, while also ensuring a safe and reliable network at the lowest cost to customers.*

The AusNet Services proposal provides an outline of its governance framework that underpins both its regulatory capex proposal and its BAU budgetary, planning and governance processes.[43] The proposal also details the key inputs and assumptions that frame its forecast as set out in Figure 4.7 below.

Figure 4.7: AusNet Services' key inputs and assumptions for 2023-27 capex forecast

The key inputs and assumptions underpinning our capex forecast include:

- Compliance with laws, codes and standards;
- Demand forecasts;
- Value of customer reliability;
- Market impact;
- Condition reports;
- Failure risk ratings;
- Unit rates;
- S-curves;
- Cost escalators;
- Capex efficiency;
- Capitalised overheads;
- Capex/opex trade-offs;
- Network support costs; and
- Affordability and deliverability.

Source: AusNet Services, *TRR 2023-27 Revenue Proposal*, 29 October 2020, p 76.

CCP23 has reviewed a sample of AusNet Services' internal project analyses and plans. While the technical documents we reviewed did not all include all of the items listed in Figure 4.7, nevertheless they were comprehensive, included examination of options, and focused around the condition / risk / impact assessment of the relevant asset classes. We note, however, that assessment was made more difficult by the variations in approach to presenting the respective business cases.

Figure 4.8 provides an example of "risks and options analysis' component of the internal business case for Instrument Transformers.

[42] Ibid, pp 77-78.
[43] Ibid, p 76.

Figure 4.8: AusNet Services – Instrument Transformers, Risk and Option Analysis

5 Risk and Option Analysis

5.1.1 Current Transformers

The key drivers of this program are managing safety risk, supply risk and collateral damage risk.
Table 4 is a current assessment of the risk based upon the condition of the assets (C1- C5) and the monetised consequence of failure (criticality bands 1 – 5). CT Replacements planned during the current TRR period have been excluded from the Table.

The 128 current transformer assets in the high-risk area (Red zone) of the matrix mainly correspond to very poor condition (C5) 66kV [C-I-C] types and 500kV [C-I-C] types ,220kV [C-I-C] types and poor condition (C4) mainly [C-I-C] which are expected to be phased out during the 2022-2027 TRR period.

Current transformers that are under replacement during the current period have been excluded from the risk matrix.

Criticality Band	C1	C2	C3	C4	C5
5	166	49	71	25	44
4	40	9	13	3	10
3	49	33	29	14	12
2	52	34	107	82	31
1	322	108	122	93	3

Table 4- Current Transformer Risk Assessment

Excluding the ones identified to be replaced under station rebuilds during 2022-2027, following asset replacements are identified to be carried out under TRR 2022-27 period:

- Replace 12 off identified high risk C5 and C4 condition Current Transformer types: 500 kV [C-I-C] 06/550/5 types and 03 off 220kV [C-I-C] types
- Replace 27 identified high risk C5 and C4 condition Current Transformer types: 66kV [C-I-C] types (excluding 12 off associated CTs with poor condition LTCBs to be replaced with DTCBs - refer AMS 10-54)

Source: AusNet Services, AMS10-64 Instrument Transformers, 2023-27 Transmission Revenue Reset, Public, 28/07/20, p 24. https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Technical%20AMS%2010-64%20Instrument%20Transformers%20-%2029%20October%202020.pdf

CCP23 comments – Replacement Capex (repex)

CCP23 considers a replacement program based on condition rather than age, and including probabilistic analysis and a cost-benefit framework, is most appropriate approach to forecasting ongoing BAU replacement activity. To this extent, we consider that AusNet Services has a relatively mature approach to repex forecasting along with a well-established governance structure.

Although CCP23 supports the overall framework for forecasting replacement capex, the following elements of AusNet Services' key inputs and assumptions for 2023-27 require further consultation with its customers and examination by the AER.

Asset condition and failure risk ratings

AusNet Services uses an asset health index (scale of 1 to 5) for individual assets or classes of assets as a starting point. They then assign a 'failure risk rating' based on probability of the asset failing and the consequences of the failure on network safety and reliability.

While we agree that this is an appropriate methodology for assessing replacement priorities, CCP23 is also aware of instances where the inputs to this process can result in an excessive risk assessment overall. CCP23 expects that the AER will look closely at this issue in its review of the proposal.

- **Unit rates and project cost estimations**

AusNet Services' unit costs are marked 'confidential-in-confidence'. As a result, CCP23 cannot comment on whether these costs are reasonable in AusNet Services' circumstances. However, we understand that the AER has sufficient data on unit costs to make such an assessment.

- **Cost escalators**

AusNet Services has assumed a real increase in internal labour costs of 0.8% per annum, being the average of *"two expert forecasts of the EGWWS WPI"*.[44] Material costs are assumed to increase by CPI. External labour costs are also set to increase above CPI. AusNet Services explains this decision with reference to the cost estimates provided by its principle contractors and the expectation of increasing competition for skilled labour from the ISP projects and the infrastructure spending plans of federal and state governments. AusNet Services concludes that the AER's most recent determinations for external costs of a CPI escalation does not reflect the business' expected costs. AusNet Services states:[45]

> *In light of the unprecedented scale of infrastructure development taking place prior to and during the next regulatory period, a departure from the contracted labour cost escalation approach set out in the AER's recent distribution determinations is required for this transmission reset.*

AusNet Services is proposing that the AER adopt an average of its DAE labour costs escalation forecast with a forecast of the construction WPI, to reflect these conditions more accurately. A summary of AusNet's overall labour cost escalators for its capex program (which will be reviewed again in the revised revenue proposal) is set out in the table below.

Table 4.6: AusNet Services capex forecast – cost escalators

	2022-23	**2023-24**	**2024-25**	**2025-26**	**2026-27**
Internal Labour	CPI + 0.8%	CPI + 0.8%	CPI + 0.8%	CPI + 0.8%	CPI + 0.8%
Materials	CPI	CPI	CPI	CPI	CPI
Forecast construction WPI (note 1)	CPI + 0.40%	CPI + 0.56%	CPI + 1.04%	CPI + 1.25%	CPI + 1.25%

Source: AusNet Services, *TRR 2023-27 Regulatory Proposal*, 29 October 2020, pp 78 & 82. Note: AusNet Services is proposing to average the forecast construction WPI with the forecasts by the AER's contractor, DAE. The forecast includes a superannuation guarantee adjustment as per the AER's draft Victorian DNSP decision.

CCP23 does not at this stage accept an increase in internal labour costs of CPI + 0.8% pa or the external labour cost increases particularly given the most recent forecasts by the RBA, for very slow growth in

[44] Ibid, Table 4-2, p 78. EGWWS WPI refers to Electricity, Gas, Water and Waste Services Wage Price Index.
[45] AusNet Services, *TRR 2023-27 Revenue Proposal*, 29 October 2020, p 82.

wages over the near to medium term. In its recent (September 2020) draft determination for AusNet Services (distribution), the AER states that in line with its standard approach to real cost escalators:[46]

> *…We consider CPI growth is the best estimates of forecast growth in the price of contracted services for the following reasons:*
>
> - *Contracted services can be adjusted to address changes in the labour market and/or economic climate.*
>
> - *Forecasting labour price growth for contracted services, without taking into account productivity growth, would likely overstate the growth in the price of contracted services.*

Given this information, we consider the proposal for real price increases somewhat premature. CCP23 would prefer consistency in the AER's approach to these matters, with changes made only if there is compelling evidence to do so.

- **Network support costs**

The current and forecast rapid expansion of renewable energy generation in the Victorian market means that until AEMO undertakes the necessary augmentation of the network, the windows of opportunity for AusNet Services' to undertake planned outages/maintenance work are constrained. AEMO requires AusNet Services to procure network support services from the market if AusNet Services' proceeds with these works outside the nominated windows.

AusNet Services also states at the time of submitting its regulatory proposal it was in discussions with a network support provider and has not included any network support costs in its capex or opex proposal. Rather, it is discussing with the AER how a pass through mechanism may work and how this may impact on its Revised Revenue Proposal.

The NER specifically allows a TNSP to seek a determination from the AER to allow a pass through (ex post) of the efficient costs associated with the occurrence of a network support event.[47] The AER's decision must take account of the efficiency of the TNSP's decisions and actions in relation to the risk of the event, including whether the TNSP has taken any reasonable action to reduce the costs of the event.[48]

Based on CCP23's reading of the NER requirements, it would appear that AusNet Services could, in principle, apply for a pass-through of network support expenses. However, the AER is required to consider various matters as set out in Clause 6A.7.2(i) of the NER before it grants its approval of the expenditure. This includes for example, the AER's assessment of whether AusNet Services had taken all reasonable steps to manage its maintenance and supply interruption inside the windows set in advance by AEMO, and a consideration of the substance of its negotiations with a network support provider.

At this stage, there is little transparency about AEMO's requirements, AusNet Services' plans for network support services or how AusNet Services' intends to arrange its schedules such that the risk of requiring these network services is minimised. Directly connected customers are particularly concerned about the impact of scheduling of planned outages and how AusNet Services and AEMO are intending to mitigate any potential impacts on the affected businesses. Clearly, it is important to optimise these outages to minimise costs generally, while recognising the potential impact on particular large businesses. This warrants further discussion.

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[46] AER, *Draft decision, AusNet Services distribution determination* 2021-26, Attachment 6, pp 5-17 – 5-18.
[47] See NER, cl 6A.7.2
[48] See Ibid, sub-clause (i).

- **Affordability and deliverability**

CCP23 is pleased to see these two important issues are now part of AusNet Services' plans. However, the TRR CAP had quite limited discussions on how AusNet Services might balance affordability and reliability in developing its plans or the impact of price changes on end-use customers, beyond a couple of very specific topics. On the other hand, we agree that AusNet Services did discuss the question of deliverability schedules and we acknowledge that the business has since modified the profile of its capex program – within the 2023-27 regulatory period - to reflect this feedback (see also section 2).

- **Other considerations**

While CCP23 agrees that AusNet Services has provided a comprehensive list of inputs and assumptions, there are some important gaps. In particular, AusNet Services could put more emphasis on explaining the impact of the broader policy, technical, environmental and market developments that may impact on its proposed capex program.

In this context, CCP23 found AusNet Services' joint presentation with AEMO a very useful addition to understanding their respective roles and issues. We also appreciated the information AusNet Services provided on the overlaps between AEMO's plans and its own plans including areas where significant additional capex was required (e.g. switching stations), and areas where its capex might be reduced as a result of AEMO's planned ISP program.

However, it would be useful if, over the next few months, there were further discussions on the links between technology change, renewable energy policy development and environmental legislation and the capex forecasts. For example, how might AusNet Services' capex forecast be impacted by the Victorian Government's changes to the National Electricity (Victoria) Act 2005?[49]

- **Replacement of insulators and Instrument Transformers**

While CCP23 supports AusNet Services' overall approach to assessing replacement capex (subject to the qualifications above), we have a particular concern about the program for the replacement of insulators and instrument transformers (ITs).

AusNet Services' proposes to establish two new categories of assets (insulators and ITs), and to reduce the average age of these assets. CCP23 has discussed this issue with AusNet Services, and with the AER. However, the proposal still raises issues of practice and principle that need to be addressed by the AER and AusNet Services, and in consultation with consumers.

The most immediate impact of AusNet Services' proposal is an increase in depreciation costs in the 2023-27 RCP. Moreover, this impact is compounded by the parallel proposal to write-down decommissioned insulator and IT assets in the 2023-27 regulatory control period, an approach that will further increase depreciation costs in 2023-27 and raises broader policy issues.

We also discussed our concerns with these two aspects of AusNet Services' proposed replacement capex proposal in Section 4.1.

4.3 Non-system capex

Information and communications technology (ICT) represents around 10% ($83.8 million) of AusNet Services' total proposed capex and is 14% higher than the expected ICT capex for the current regulatory

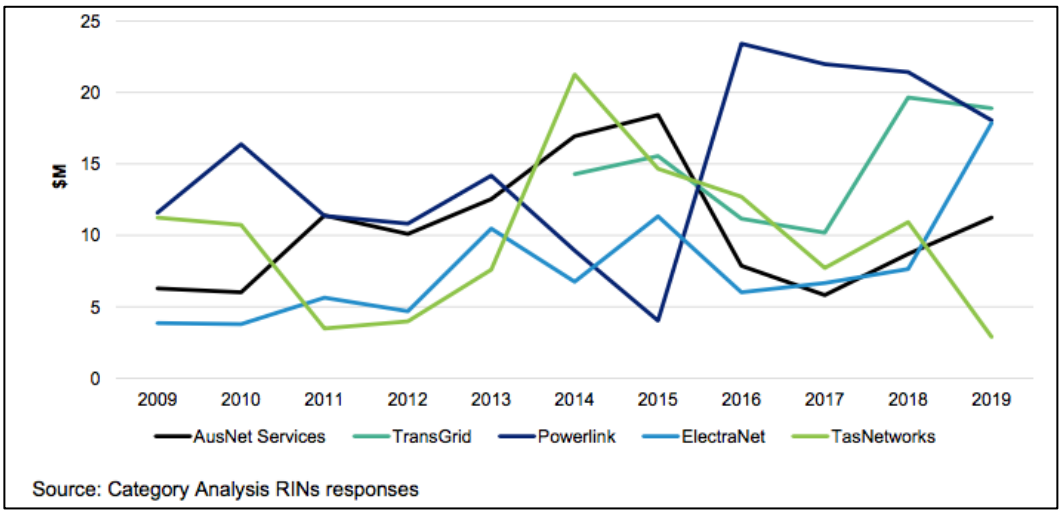
[49] The 2020 amendments to the Act, give the Victorian minister powers to expedite approval of transmission upgrades including interconnect related infrastructure, where these are deemed necessary for the reliability and security of electricity supply in Victoria. In November 2020, for example, the Minister ordered the procurement of 300 MW / 377MWh of battery storage at Moorabool to support the NSW-Victorian interconnect. The legislation allows the Minister to by-pass the formal RIT-T process.

control period. It is also a vital element in protecting assets and services while enabling further productivity improvements in the business.

Other non-capex forecast elements include some $20.6m for motor vehicles, buildings, tools and test equipment. While this is some 17% above the expected capex in the current regulatory control period, CCP23 considers the overall amount is reasonable and reflects in part the decision to own rather than lease vehicles and the expected small increases in the capital costs of new vehicles. AusNet Services states that it has accounted for this by a reduction in the forecast base year opex, and adjustment to the opening RAB for 2023-27. [50]

Our focus is therefore on the ICT expenditure as discussed below. Figure 4.9 below illustrates the trends in AusNet Services ICT total expenditure compared to other transmission networks.

Figure 4.9: Comparison of historical ICT capex with other transmission networks ($M, nominal, direct costs)



Source: AusNet Services, *TRR 2023-27 Revenue Proposal,* 29 October 2020. Figure 4-21, p 125.

AusNet Services significantly reduced its investment in ICT between 2015-16 and 2019-20, although this has increased in 2020-21. AusNet Services forecasts annual expenditure in excess of $15m over the next five years.

The key drivers of the ICT program are:[51]

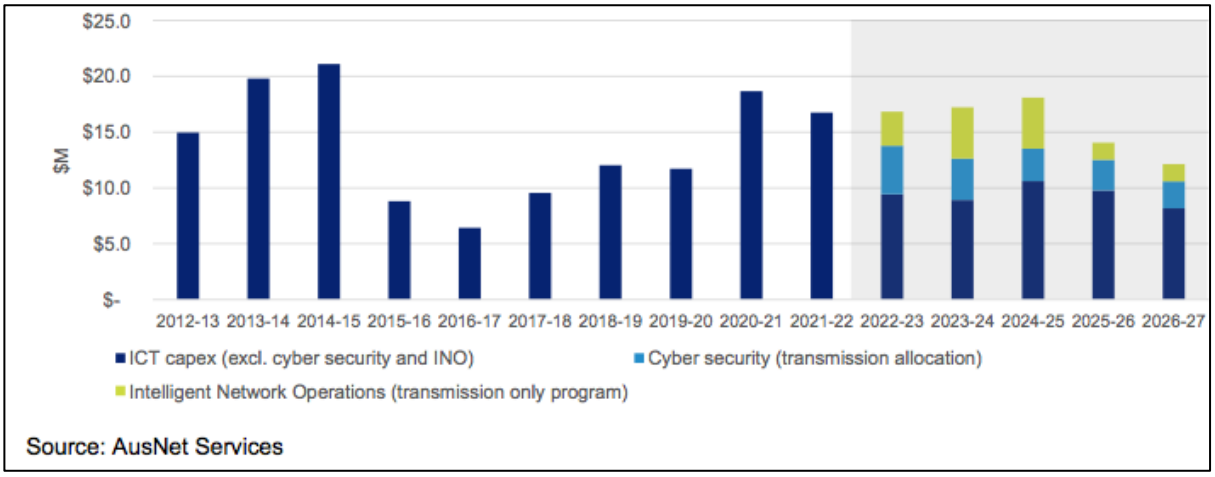
- Improving customer outcomes
- Cyber security enablement
- Leveraging and extending investments
- Be future ready
- Increasing digitisation and automation.

[50] For details of AusNet's capitalisation of leases, see AusNet Services: *TRR 2023-27 Revenue Proposal,* 28 October 2020, p 188. The change in approach follows the changes introduced by the Australian Accounting Standard Board for treatment of leases.

[51] AusNet Services: *TRR 2023-27 Revenue Proposal,* 28 October 2020, pp 119-120.

Of these key drivers, the largest expenditures relates to enhanced cyber security requirements and Intelligent Network Operations as illustrated in Figure 4.10 below.

Figure 4.10: ICT capex ($M, real 2021-22 direct costs)



Source: AusNet Services, *TRR 2023-27 Revenue Proposal*, 29 Oct. 2020. Figure 4-19, p 119.

AusNet Services' forecast is consistent with the AER's ICT forecasting assessment guideline to the extent that it separates recurrent and non-recurrent expenditure, with NPV analysis required only for the non-recurrent expenditure. Of the eight programs that make up the proposed ICT program, three are recurrent expenditure only, and five are a mix of recurrent and non-recurrent.[52]

The largest individual programs are enhanced cyber security ($16.8m total) and the extension of the Intelligent Network Operations ($15.9m). Cyber security is a company-wide program (i.e. including AusNet distribution business) as are most of the other ICT projects, while the Intelligent Network Operations is a transmission only program.

AusNet Services anticipates that AEMO will impose a regulatory obligation on the transmission businesses to reach the highest level of maturity of the Australian Energy Sector Cyber Security Framework by 2024. AusNet Services contends that this will result in a step increase in both capex and opex in the rest of the current regulatory period and in the 2023-27 RCP.[53]

The Intelligent Network Operations program will also expand over 2023-27. AusNet Services states that the shift in the generation mix toward variable renewable generation requires enhanced power system resilience capability to manage challenges such as frequency, voltage control and stability and system strength. This includes enhancing the current network operations activity of the control centre. AusNet Services indicates it has a priority focus *"to enhance control centre information and decision-making support systems capability".*[54]

AusNet Services also states that its investment in ICT will improve efficiency in its operations. For this reason, they have included a 0.31% productivity saving in the opex proposal.[55]

CCP23 Response to AusNet Services ICT proposal

Overall, CCP23 considers that AusNet Services proposal is reasonable, particularly given the challenges of managing the network in the face of growing renewable energy generation.

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[52] See AusNet Services, *TRR 2023-27 Revenue Proposal*, 29 October 2020, Table 4-15, p 123.
[53] Ibid, p 121.
[54] Ibid.
[55] Ibid, p 120.

Many of its projects are shared projects with AusNet Services' distribution business, and the AER's Draft Determination for the AusNet distribution business has approved the allocated ICT expenditure on these same projects. Subject to the AER confirming that the allocation of costs to the transmission business is reasonable, CCP23 accepts the proposed IT expenditure on the shared projects.

Of particular note are the two largest ICT capex items.

With respect to the shared cyber security capex, CCP23 agrees there are increasing regulatory requirements on all networks to upgrade their ICT resilience to cyber-attack. Cyber security is also important to consumers to protect their privacy and the performance of the network and reliability of supply. Therefore, in principle, CCP23 supports the increase in expenditure on cyber security as being both necessary and in the long term interests of consumers.

Similarly, we support investment in Intelligent Network Operations. With increasing renewable energy and the added complexity this creates in maintaining a reliable and secure supply, more sophisticated and integrated ICT systems are essential for managing operations, increasing data, and planning and forecasting tasks. AusNet Services states the objectives of the program in similar terms:[56]

> *The Intelligent Network Operations program therefore seeks to support the operations of the power system, maintaining stability, reliability and resilience of the transmission network as generation becomes more de-centralised and complex, coupled with increasing customer and environmental requirements.*

For these reasons, CCP23 supports the Intelligent Network Operations program in principle as being both necessary and in the long-term interests of consumers.

While we support the proposed Intelligent Network Operations capex, CCP23 would like to see evidence of how AusNet Services has developed its program in concert with the development of AEMO's systems. AEMO has proposed a significant upgrade of its systems to meet some of the same challenges as AusNet, and it would be appropriate for AusNet Services to explore any synergy between the two ICT programs.[57]

Finally, it is pleasing to see a statement in the proposal linking expenditure on ICT and future savings in operating costs via a productivity growth factor of 0.31% per annum. However, it appears to be derived from industry wide trends rather than a specific reflection of the effectiveness of AusNet Services ICT strategy. For example, AusNet Services states:[58]

> *The forecast growth in productivity reflects the annual productivity growth rate that the transmission industry has been able to achieve over the long term and as such is a reasonable estimate of productivity growth in the upcoming regulatory period.*

While improvements in opex productivity as a result of ICT capex investment is welcome to customers who have funded the ICT investment, AusNet Services' comments do not address our concerns with

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[56] AusNet Services: *Technology Document ICT Program Brief Intelligent Network Operations, Public*, 29 October 2020, p 4. https://www.aer.gov.au/system/files/AusNet%20Services%20-%20Supporting%20Technology%20Document%20ICT%20Program%20Brief%20Intelligent%20Network%20Operations%20-%2029%20October%202020.pdf

[57] For example, see AEMO "Network development outlook model" referred to in Appendix F.2 of the 2018 ISP https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/isp/2018/isp-appendices_final.pdf?la=en&hash=D52884BF713B2B23EEB3F90BA784CFAD

[58] AusNet Services, *TRR 2023-27 Revenue Proposal*, 29 October 2020, p 145

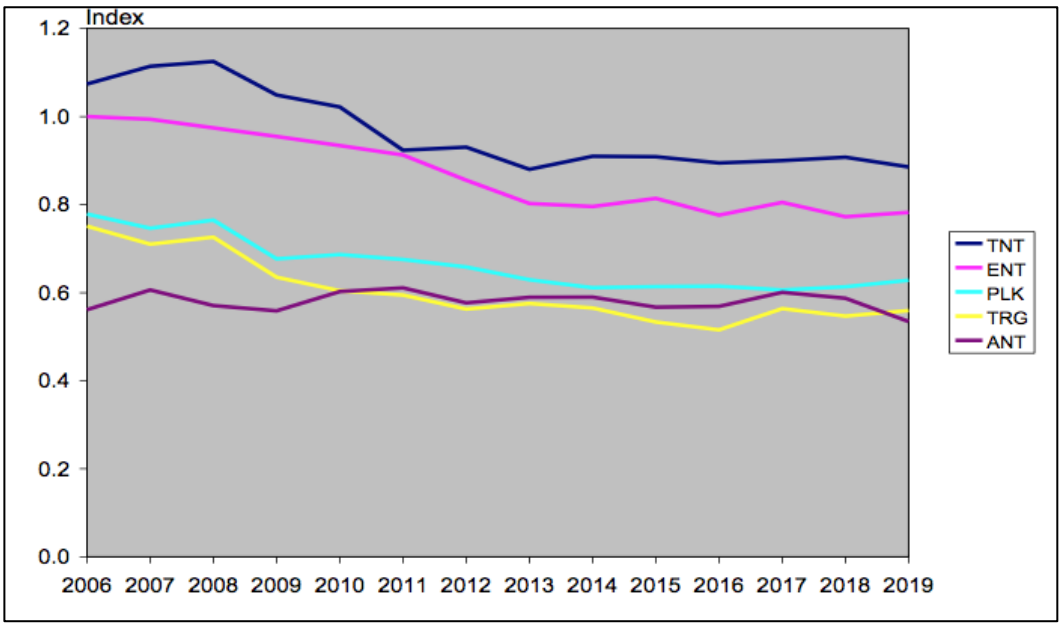
capex productivity as measured by the AER's annual productivity report. This is discussed in the following section.

4.4 Capex productivity

The AER and its consultant, Economic Insights, have progressively developed the measure of total factor productivity, and partial factor productivity (opex and capex) since 2013. However, there are still significant limitations to the use of this data for the transmission companies. The productivity assessments are nevertheless important as they point to areas of potential concern or opportunity for improvement for the benefit of the business and consumers.

The partial factor productivity trends for AusNet Services indicates there may still opportunities for improving capex productivity outcomes. Figure 4.11 below illustrates that AusNet Services ('ANT') has one of the lowest multilateral capital partial productivity index from 2006 to 2019.

Figure 4.11: TNSP multilateral capital partial productivity indexes 2006-2019



Source: Economic Insights, *Economic Benchmarking Results for the Australian Energy Regulator's 2020 TNSP Annual Benchmarking Report*, 15 October 2020, Figure 3.3, p 23.

The evidence from the AER's economic benchmarking 2020 report also suggests that AusNet Services' have maintained a fairly constant level of capital productivity since 2006 once the impact of major supply interruptions are removed. For example, the capital productivity growth rate between 2012 and 2019 is 1.25% per annum.[59] However, more detailed examination of the data suggests two major factors. In 2018, energy throughput was reduced due to reduced exports, presumably following the closure of Hazelwood. In 2019, there was an increase in the negative output measure, 'energy not supplied', due to a major supply failure to a large customer.

As components of overall productivity (as measured by total factor productivity (TFP)), energy not supplied and transformer construction contributed -5.93% and -2.68% (respectively) to the decline in TFP in 2018-19.[60]

[59] Economic Insights, *Economic Benchmarking Results for the Australian Energy Regulator's 2020 TNSP Annual Benchmarking Report*, 15 October 2020, Table 4-1, p 26.
[60] Ibid, Table 4-2, p 29.

On the other hand, AusNet Services demonstrates that on measures such as RAB per customer, its performance is relatively strong, suggesting that the business may have better control over its capex than other networks.[61] CCP23 also recognises that RAB per customer is an important measure in considering the costs to consumers.

Given the current forecasts of energy demand and maximum energy demand, along with the necessary investments arising from the ISP/REZ requirements, AusNet Services will need to be very focused on identifying opportunities to improve its capital productivity in the 2023-27 RCP.

The ISP / REZ support projects identified in AusNet Services' capex proposal also highlight the challenge in the future of providing meaningful measures of productivity for transmission companies. They will all face significant increases in capex and in the RAB associated with the ISP program while there will be no commensurate increase in operational demand. More specifically, while the ISP program is likely to increase transmission costs (including AEMO's), the ISP analysis identifies an overall net market benefit to consumers. This benefit will not be captured in the current economic benchmarking analyses, while the costs will potentially be included.

This is an area that could be further examined by the AER.

AER Question 7. Do you consider that AusNet Services' smoothing of its capex profile appropriately addresses deliverability concerns and reflects the views of stakeholders?

CCP23 supports AusNet Services' proposal to smooth the capex profile. This is a preferable approach to capex from both an economic efficiency and risk management perspective. AusNet Services' proposal suggests that it has undertaken the smoothing in a way that minimises risks to reliability and security of supply.

CCP23 also agrees that AusNet Services have consulted on this approach with its consumer representatives and with direct supply customers whose supply may be impacted by planned interruptions. From our observations there is general support for their approach, although we have not been party to the negotiations with direct customers who have particular concerns with interruptions to supply. Section 2 of this submission provides more detail on the customer engagement process.

AER Question 8. Does AusNet Services' economic assessment framework provide appropriate justification for its proposed capex projects and programs?

Overall, CCP23 observes that AusNet Services has a comprehensive and mature probabilistic/risk based project planning framework and governance structure. Therefore, it has fewer problems than some other networks with excessive growth in the RAB and underutilised assets. Over half of AusNet Services' capex program in 2023-27 will relate to major projects. These projects will be subject to a separate and quite rigorous RIT-T assessment before commencement of the project.

Notwithstanding CCP23's overall acceptance of AusNet Services' proposed projects and programs, we have specific concerns with some aspects of AusNet's replacement model following its proposal to establish two new asset classes. We discuss this issue further in sections 4.1 and 4.2 above.

AER Question 9. Do you consider that AusNet Services' forecast capex reasonably reflects the efficient costs of a prudent operator?

CCP23 cannot comment on detailed unit costing of capex. However as noted above, AusNet Services' overall capex planning and governance framework is mature. The ambitious state government plan for renewable energy and the relative short time for implementation of major ISP projects in Victoria will also be a challenge for AusNet Services. In particular, the business will be under considerable pressure to

[61] See AusNet Services, TRR 2023-27 Revenue Proposal, 29 October 2020, p 95.

undertake significant upgrades to its existing infrastructure in 2023-27. Ensuring project efficiency in the face of these requirements will prove a major challenge to AusNet Services planning capabilities.

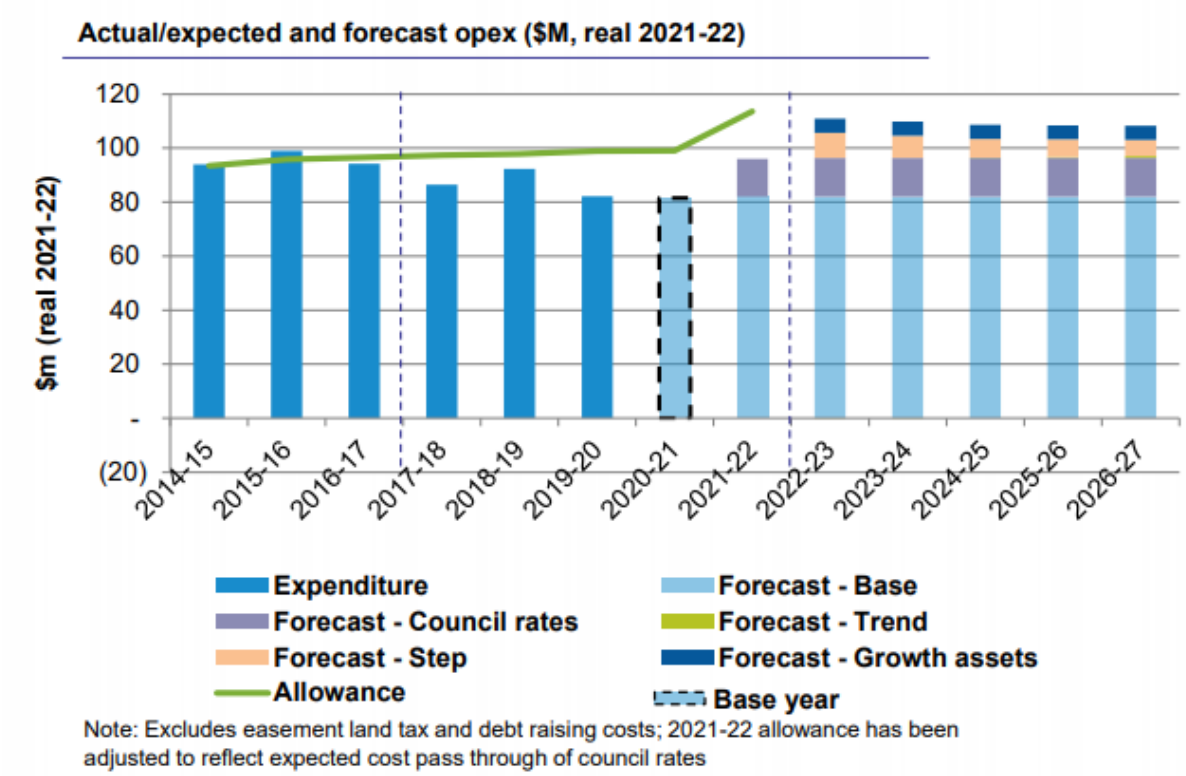
4.5 Opex

At the public Forum on 16 December 2020, AusNet Services said:

> *Excluding uncontrollable costs, proposed opex of $546M is 5% ($27M) lower than the current period allowance.*
>
> *Customers will receive the benefits of the substantial efficiency savings we have made.*
>
> *New cyber security obligations ($28M) and council rates increases ($70M) are driving an increase on current spending levels.*

The following chart was presented to summarise the opex aspects of the revenue proposal.

Figure 4.11: Opex aspects of the revenue proposal



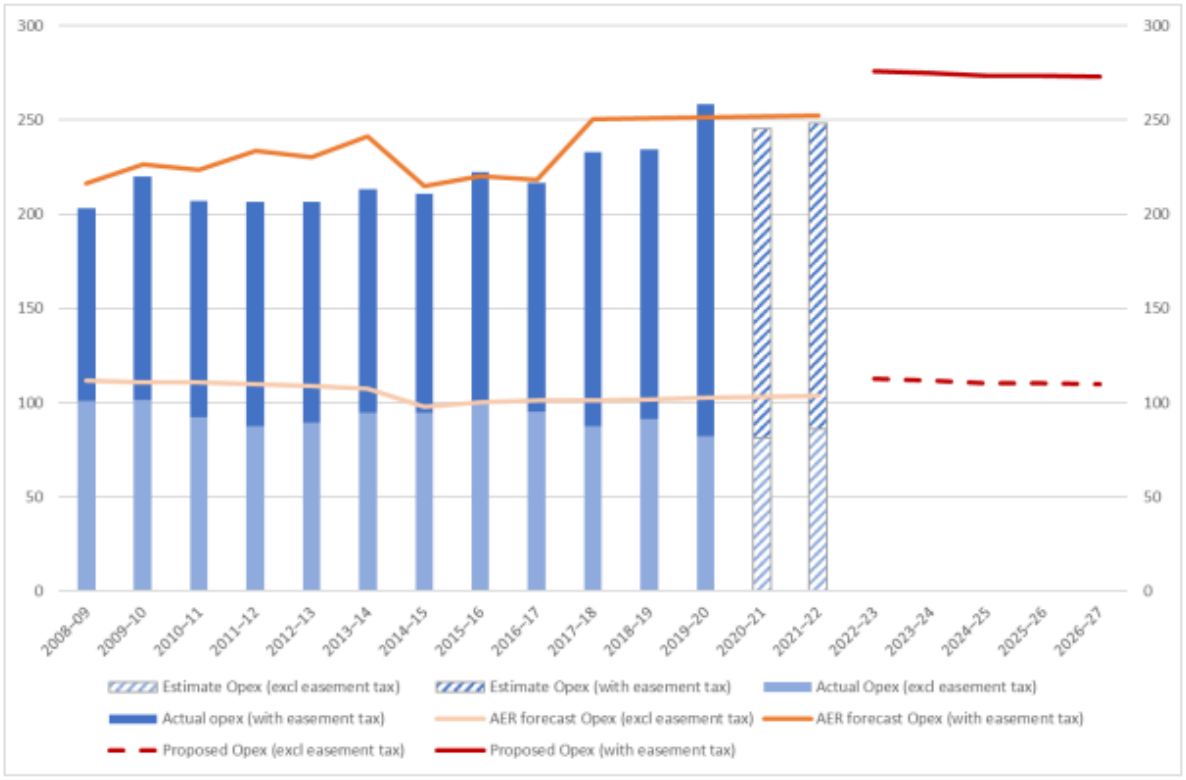
Source: AusNet Services, presentation to public forum December 2020

"Excluding uncontrollable costs" is not as clear cut in application as it might appear; there are degrees of controllability. We state later in this section that "controllable opex costs" are rising for customers. It's a question of perspective as to whether controllable opex is increasing or decreasing.

A standout feature of the operating costs for AusNet Services is the easement land tax which combined with council rates account for a third of the transmission use of system charges that are passed on to consumers.

The following table from the AER issues paper highlight the impact on transmission charges particularly from the easement land tax.

Figure 4.12: AusNet Services Transmission Opex over time, $real



Source: AER Issues Paper

The dotted red line (on right) of Figure 4.12 shows operating costs without easement land tax, while the solid line depicts total opex.

AusNet Services has developed its operating costs proposal using the standard base - step - trend methodology.

4.5.1 Base year

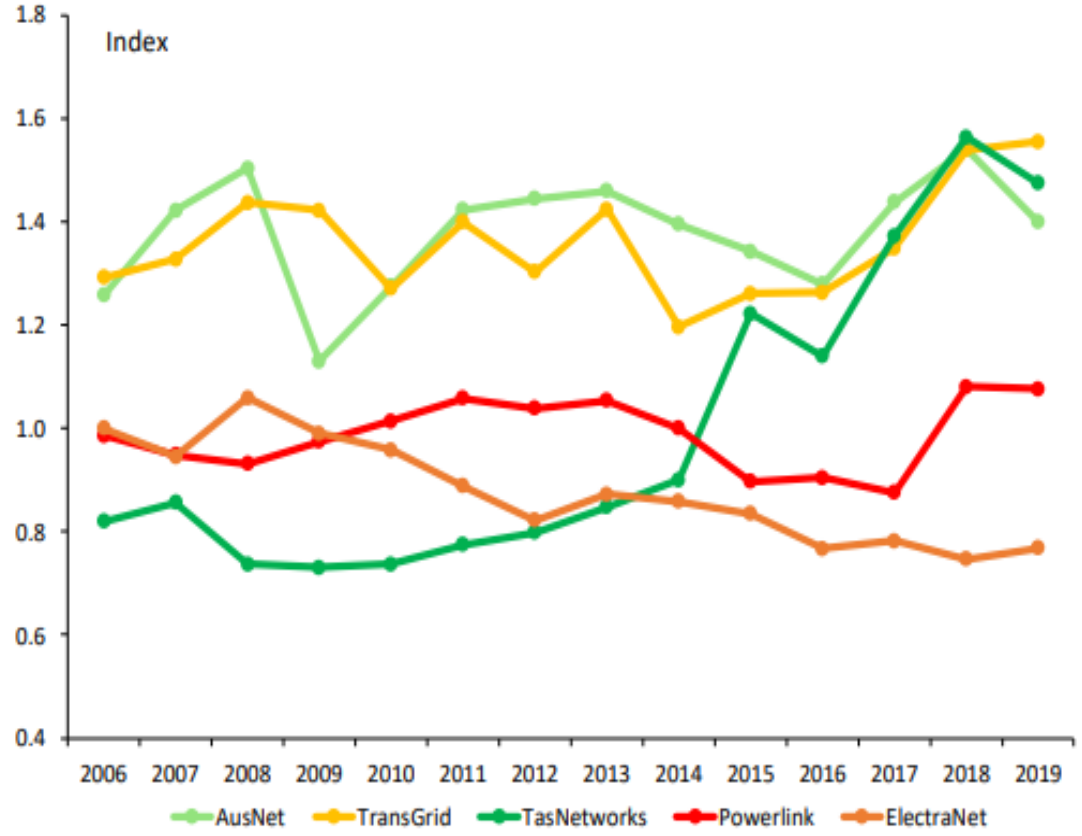
The base year of 2020-21 is being proposed, and has been generally accepted in the engagement with consumers and stakeholder that has been conducted associated with developing this proposal. We are also comfortable with this year as it is the last year from the current regulatory period for which final results will be known at the time of the final decision being made by the AER. Indicative figures also suggest that it will be among the lower expenditure years from the current period.

In accepting a base year as a foundation for a future regulatory period, it is crucial that the regulator and consumers are satisfied that the proposed base year is efficient, within reasonable bounds.

Over the last five years, the AER has been producing annual benchmarking reports where costs of network businesses are compared against their peers, separately for transmission and distribution businesses. The operating costs MPFP (Multilateral Partial Factor Productivity) from the 2020 report is shown below, identifying AusNet Services as being one of the three more efficient Australian transmission network businesses. Its efficiency, however, has dropped away during 2020, by comparison with TasNetworks and TransGrid. AusNet Services says that they are satisfied that the reported productivity for operating costs has improved over 2020 and this will be evident when the 2021 benchmarking report is released.

The data shows that AusNet Services has been among the most efficient transmission businesses for its operating costs, over the last decade. It is one of the most concentrated transmission networks in Australia and so should be among the best performed networks.

Figure 4.13: Opex MPFP, Transmission



Source: AER Benchmarking Report, Transmission, 2020

CCP23 has no reason to believe that AusNet Services operating costs are materially inefficient, and so we are satisfied with the 2021 base year proposal.

4.5.2 Step changes

AusNet Services is proposing five-step changes with a total cost to consumers over five years of $108.6M (Real). The most substantial step changes in extra $71.5 million for Council rate increases.

Table 4.7: Opex step changes

Table 5-10: Opex step changes ($M, real 2021-22)

Step change	Driver	Total over 5 years
Council rates	New regulatory obligation	71.5
Cyber Security	New regulatory obligation	27.9
5 minute settlement rule change	New regulatory obligation	3.9
Environmental Protection Act	New regulatory obligation	3.2
Cloud	Capex/opex trade-off	2.3
Total		**108.6**

Source: AusNet Services Regulatory Proposal, 2020

At the TRR CAP meeting in November 2019, four step changes were foreshadowed with a total cost of $58 million, these being:

- Cyber security
- Five-minute settlement
- Superannuation increases
- EPA, increased sit testing and maybe remediation requirements legislate in 2018.

In subsequent CAP meetings and deep dives, two additional step changes were mooted these being:

- Transformer oil replacement
- RiT-T obligations

A possible extra step change has also been foreshadowed, this being to meet the Transmission ring fencing guideline to ensure separation between the AusNet Services transmission and distribution businesses.

As a result of engagement with consumers, the business has decided to absorb the following three mooted "step changes"

- Transformer Oil replacement ($2.5m)
- RiT-T obligation ($1.8m)
- Superannuation Guarantee ($1.8m)

AusNet Services also says that it is committing to a productivity improvement which will result in about $8 million of savings for customers which build on the efficiency measures that have been put in place during the current period.

The combination of productivity savings and absorbed potential step changes is a saving of about $8 million for consumers over the regulatory period.

Returning to the five step changes proposed in the regulatory proposal we make the following observations:

<u>Council rates ($71.5m)</u>

These are an exogenous cost over which AusNet Services would appear to have little control. We wonder about whether negotiation has occurred between AusNet Services, local government as well as the Victorian state government about these considerable increases and the extent to which the impact on customers has been firmly presented?

From a regulatory point of view, we do not see that the AER has any choice but to accept Council rates as a step change.

<u>Cyber security ($27.9m)</u>

It is accepted that energy network businesses are a high priority for enhanced cyber security as part of Australia's national cyber security strategy. We are aware that AusNet Services distribution business has sought a step change of $4.7m for cyber security and that $27.9m has now been sought for the transmission business. The final determination for the distribution business step change is yet to be made, with the decision due in April 2021. It would be important for consumers to understand the difference between the cyber security needs for the distribution and transmission

businesses operated by AusNet Services and to be satisfied that costs were allocated appropriately between transmission and distribution businesses.

Five-minute settlement

AusNet Services distribution business has sought a $3.5 million step change in its revised revenue proposal.

While we accept that there are some additional costs for network businesses associated with the implementation of five minute settlement, we would need to be convinced that the $3.9 million sought by the transmission business is different from the $3.5 million sought by the distribution business and that a total of $7.4 million is needed across the two businesses

EPA levy

This would appear to be an exogenous cost over which AusNet Services has little control and so is a legitimate step change.

Cloud computing – Opex/Capex trade-off

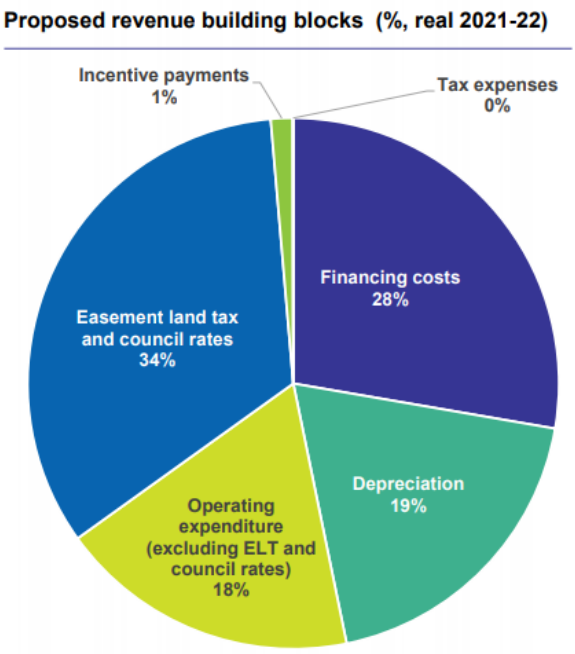
AusNet Services distribution business has sought 2.6 million for ICT step trend expenditure, as with some of step changes above, it is important to understand that the step change proposals are quite different for the distribution and transmission businesses. We would be satisfied if the relevant AER teams confirm that the trade-off between operating and capital costs that is proposed produces a better outcome for customers and are appropriately allocated between AusNet Services distribution and transmission businesses.

Taxes and rates

At the Public Forum, AusNet Services transmission business presented the following slide showing that the easement land tax and council rates account for a third of the revenue sought for transmission costs.

Figure 4.14: Proposed revenue building blocks

- As a result of recent and anticipated increases, Government taxes and council rates now account for **over one third of our proposed revenue**. In contrast, these costs accounted for:
  - **10%** of revenue in **2005**; and
  - **20%** of revenue in **2015.**
- **Despite these tax imposts,** proposed revenue is **8% ($241 million) less** than the current period.
- This reflects **reductions in all building blocks** (except for opex due to uncontrollable costs) due to:
  - Substantial cost savings made by our business;
  - Changes in regulatory parameters and; and
  - Movements in market interest rates.



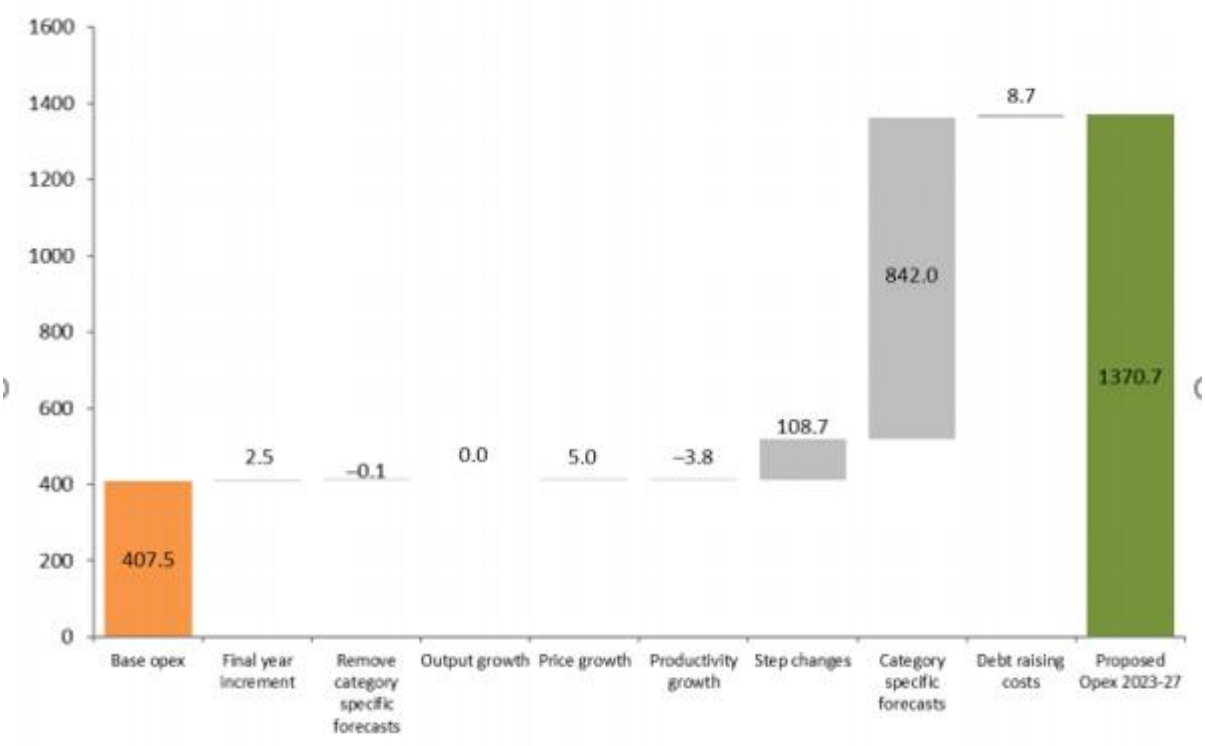
Source: AusNet Services Public Forum December 2020

CCP23 understands that the total cost of state and local government fees, rates and levies applied to electricity transmission in Victoria is higher than for any other Australian jurisdiction.

4.5.3 Trend

The following figure shows the 'bridge' chart of changes from the base opex to the proposed opex allowance for 2023-27.

Figure 4.15: AusNet Services forecast opex costs, $million 2021-22



Source: AER Issues Paper Figure 9

Inspection of Figure 4.15 above shows the significant impact of "category specific forecasts" with this component accounting for an additional $842.00m in the operating cost budget. These are costs that AusNet Services passes on to customers, but over which the business has no control. There are two category specific forecasts:

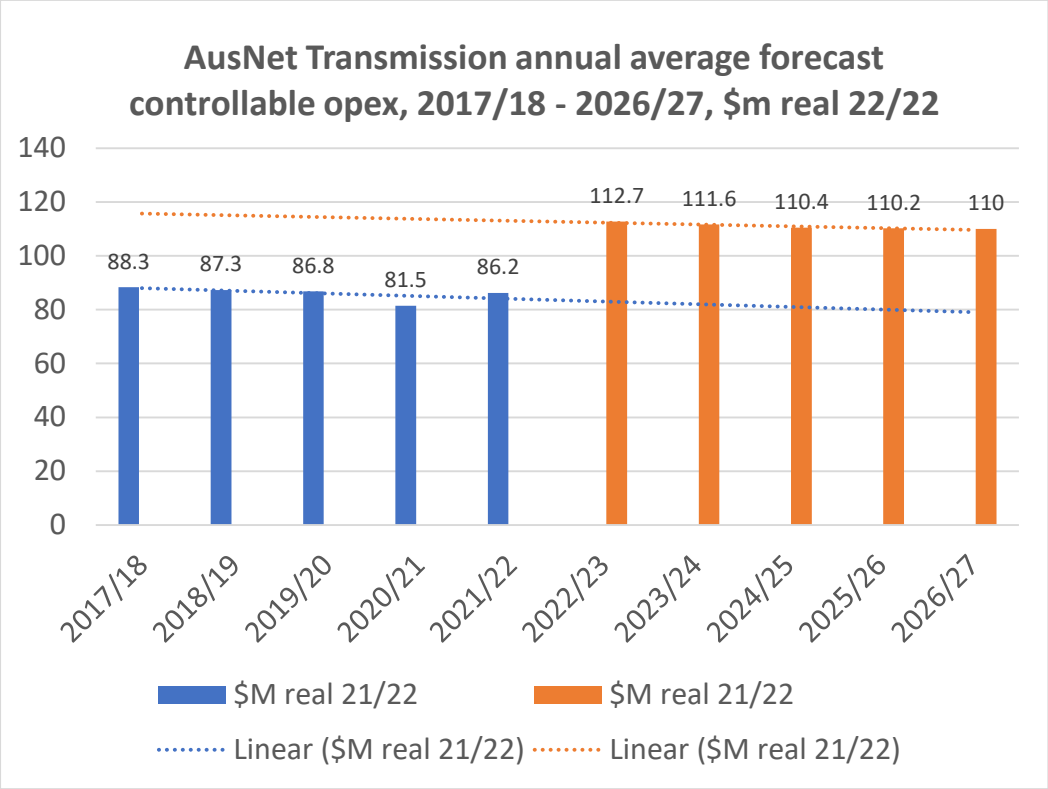
- Easement Land Tax which is forecast to be $816m over the five-year period
- AEMO directed new augmentations of the network and connection assets. These can also be directed by distribution businesses. This cost element is referred to as "Group 3 assets" and is probably better described as "excluded, prescribed assets." The forecast for these assets is $26.1million.

While we would like to be able to suggest that there is scope for these costs to be reduced, the reality for AusNet Services and its customers is that the costs are externally imposed (Victorian Government and AEMO / distribution businesses) and the most recent available valuations have been applied. The (Victorian Government and AEMO / distribution businesses) and the most recent available valuations have been applied. The consolation for customers is that there is an annual 'true up' cost pass through ensuring that there is an annual 'true up' cost pass through meaning that customers only pay for the actual costs of these category specific forecasts.

Controllable opex

AusNet Services is seeking a 30% increase in controllable opex costs from the end of the current, 2018-22 year and the first year of the next regulatory period, 2022/23. This is shown in Figure 4.16 below with controllable opex trend lines shown for current and next regulatory periods. There is a modest decline over both periods shown. There is a significant increase proposed for the start of the 2023-27 regulatory period.

Figure 4.16: Annual average controllable opex 2017-18 to 2026-27



Source: AusNet Services revenue proposal table 5-20

AusNet Services explains the build-up of its controllable opex with the following table.

Table 4.8: Total controllable forecast opex, $m 2021-22

	2022-23	2023-24	2024-25	2025-26	2026-27	Total
Base opex	82.1	82.1	82.1	82.1	82.1	**410.1**
Rate of change	0.0	0.0	0.1	0.4	0.7	**1.2**
Growth assets roll in	5.2	5.2	5.2	5.2	5.2	**26.2**
Step changes	23.7	22.6	21.3	20.8	20.3	**108.7**
Total	**110.9**	**109.8**	**108.6**	**108.4**	**108.2**	**546.1**

Source: AusNet Services revenue proposal table 5-17

Consideration of the changes in "controllable opex" reveals that 80% of this increase is due to the five step changes, which are considered above. Two thirds of the proposed step change increase is due to increases in council rates, which is not a 'controllable cost' as AusNet Services has no choice in whether to pay these rates. Three of the 4 remaining step changes are driven by external factors, cyber security, five-minute settlement and the EPA levy. While there is some capacity for AusNet Services to determine

how to respond to these requirements, they are not optional. The $2.6 million opex/capex trade-off is the only fully controllable cost of the base year increases.

Other influences on trend opex costs are summarised below.

Demand

Another aspect of developing trend opex cost projections is the impact of any likely changes in demand. Demand forecasts are also considered in section 3.4 of this Advice, where we recognise that "AusNet Services has said that it will continue to seek updated forecasts, including from CSIRO and AEMO, and will continue to engage with its customers about pandemic impacts and about the implications of updates forecasts.

We are satisfied that the current estimates of demand are reasonable, given levels of uncertainty, and expect that this will be an important aspect of the revised revenue proposal.

Wages growth

Wages growth is considered in section 4.2.3 where we state that CCP23 does not at this stage accept an increase in internal labour costs of CPI + 0.8% pa or the external labour cost increases, particularly given the most recent forecasts by the RBA, for very slow growth in wages over the near to medium term.

Productivity

AusNet Services says:

> *Having established that our base year opex is efficient, the productivity component of the rate of change should reflect this position on the 'efficiency frontier'. Further, to avoid double counting, the productivity forecast should not account for any productivity improvements that have been compensated for in the real price change and output growth components of the rate of change. Therefore, consistent with the AER's preferred methodology and the views of the Customer Advisory Panel, we have included a forecast of productivity improvements of 0.31% per annum in our forecast opex. The forecast growth in productivity reflects the annual productivity growth rate that the transmission industry has been able to achieve over the long term and as such is a reasonable estimate of productivity growth in the upcoming regulatory period.*

Table 4.9: Forecast productivity change

Table 5-8: Forecast productivity change ($M, real 2021-22)

	2022-23	2023-24	2024-25	2025-26	2026-27	Total
Productivity change (%)	0.31	0.31	0.31	0.31	0.31	
Productivity change ($)	**0.25**	**0.51**	**0.76**	**1.0**	**1.3**	**3.80**

Source: AusNet Services regulatory proposal 2020

Continuous improvement in productivity is a core of the incentive based regulatory process utilised in Australia and CCP generally has actively promoted the understanding that productivity is a dynamic process and that each regulatory proposal should be delivering improvement for customers. AusNet Services has done well to deliver this productivity improvement to its customers.

However, as noted in Section 4.3, Ausnet Services contributes the productivity change of 0.31% per annum to its investment in ICT capex. CCP23 considers it important for networks to demonstrate that their ICT programs are delivering benefits to consumers. We would also like to see improvements in

productivity coming from other parts of the business and AusNet services itself has illustrated a range of organisational and technological initiatives to improve operating efficiency. (See Table 5-4, p 139)

CCP23 would like to see AusNet Services adopt a more ambitious overall productivity improvement rather than use the industry average to reflect its stated initiatives.

AER Question 10. Do you consider that AusNet Services' forecast opex reasonably reflects the efficient costs of a prudent operator?

In addressing this question, there are four main considerations that we have taken into account

- AusNet Services benchmarking results which show the business to be relatively efficient when compared with its peers, being the most efficient for opex MPFP for a majority of years over the last decade. We also accept AusNet Services advice to us that the decline in 2019 results has been reversed in 2020.
- A commitment to improved productivity across its controllable opex over the next regulatory period, with an annual 0.31% improvement.
- The 'distortion' of AusNet Services operating costs, compared to its peers, by high levels of pass-through costs, particularly the Easement Land Tax
- An increase in controllable opex costs compared to the current period. The 'headline,' forecast increase in controllable opex is 30%, real, from the final year of the current period (2021-22, to the first year of the next period.

The approximate 30% increase in proposed 'controllable opex' for the 22/23 – 26/27 period would appear to belie the apparent operating efficiency of the business.

Consideration of the changes in "controllable opex" reveals that 80% of the increase is due to step changes and two thirds of the proposed step change increase is due to increases in council rates, which is not a 'controllable cost' as AusNet Services has no choice in whether to pay these rates. The second highest step change is cyber security which is about 25% of the proposed step change costs and while there is some control over how cyber security costs are met, it is not an optional expenditure item.

Assuming that the costs proposed are efficient, all step changes except the $2.3m opex / capex trade off for cloud-based ICT are responses to external requirements and so not fully within the 'control' of AusNet Services.

Consequently, we are satisfied that conditional on the opex expenditure increases satisfying efficiency criteria established by AER modelling and review, then the "AusNet Services' forecast opex reasonably reflects the efficient costs of a prudent operator."

5 Incentive schemes

Section 5 of the AER's Issues Paper discusses incentive schemes. Incentive schemes are a component of incentive based regulation, and complement the AER's approach to assessing efficient costs.

5.1 Available incentive schemes

The following incentive schemes can be applied to an electricity transmission business:

- Opex Efficiency Benefit Sharing Scheme (EBSS)
- Capital Expenditure Sharing Scheme (CESS)
- Service Target Performance Incentive Scheme (STPIS)

All three of these incentive schemes apply to AusNet Services in the current 2017-22 regulatory control period.

There is also potential for a Demand Management Innovation Allowance Mechanism (DMIAM).

AusNet Services has proposed that all these incentive schemes as well as the DMIAM should apply in the coming 2023-27 regulatory control period.

5.2 The purpose of incentive schemes

Once the AER has determined how network revenues will be calculated, networks have an incentive to provide services at the lowest possible cost, because returns are determined by the actual costs of providing services. If networks reduce their costs to below the AER's forecast of efficient costs, the savings are shared with their customers in future regulatory periods through the EBSS and CESS. The STPIS ensures that the network is not simply cutting costs at the expense of service quality.

Incentive schemes should encourage network businesses to make efficient decisions. Opex and capex incentive schemes are intended to provide a mechanism for the regulated business to keep its opex and capex spending as low as possible. The incentive schemes encourage businesses to make efficient decisions on when and what type of expenditure to incur, and meet service reliability targets. The business benefits financially from cost savings, while sharing some of those benefits with customers.

The extent to which incentive schemes meet their objectives depends on how well they are designed.

- Well-designed incentive schemes incentivise the business to find additional sources of efficiency that could not have been envisaged at the time of the regulatory proposal and determination.
- Badly-designed efficiency schemes reward businesses for cost savings that should have been in the base proposal, either because the proposal and determination over-estimated costs in the first place or because it should have been reasonable at that stage to see that the expenditure was not required or could be deferred.

The role of AEMO as transmission planner in Victoria is unique in the NEM. It means that planning decisions that in other NEM jurisdictions are made by the TNSP are not within the scope of AusNet Services as transmission system operator in Victoria. The incentives on AusNet Services as a TNSP must take this into account, ensuring that the incentive scheme applies only to services that are provided by AusNet Services as a regulated TNSP within the scope of decision-making available to the TNSP, and not those that are within AEMO's scope.

At a public forum held on 16 October 2020 as a Predetermination Conference on the Victorian Electricity Distributors' proposals for the Regulatory Determination 2021-26, the AER stated that it was scoping a review of the various incentive schemes, and would advise stakeholders when this has progressed further.[62] Given the potential for efficiency schemes to give distribution and transmission businesses rewards that are not in the long-term interests of consumers, we strongly support the AER undertaking the review in regard to both distribution and transmission businesses, and we urge the AER to assign a high priority to this work program in 2021. Our comments below are predicated on the current schemes continuing to apply, as we cannot at this stage anticipate any changes to the schemes that may be proposed pursuant to the AER's review of incentive schemes.

5.3 Opex Efficiency Benefit Sharing Scheme (EBSS)

The EBSS is intended to provide a continuous incentive for network businesses to pursue efficiency improvements in opex, and to share these fairly between network businesses and consumers. Consumers should benefit from improved efficiencies through lower network tariffs in future regulatory control periods.

AER Question: 11. Do you consider that AusNet Services' forecast EBSS provides an incentive for the business to pursue efficiency improvements in opex and to share these fairly between the business and consumers?

The AER's Framework & Approach paper for AusNet Services stated:

- We intend to apply the EBSS to AusNet Services in the 2022–27 regulatory control period if we are satisfied the scheme will fairly share efficiency gains and losses between the business and consumers.
- This will occur only if the opex forecast for the following period is based on the business' revealed costs.
- Our transmission determination for AusNet Services for the 2022–27 regulatory control period will specify if and how we will apply the EBSS.

We support application of the EBSS on the basis that it is genuinely based on business' revealed efficient opex costs and will fairly share efficiency gains and losses between the business and consumers. The AER should apply the EBSS if and only if it is satisfied that this is the case.

5.4 Capital Expenditure Sharing Scheme (CESS)

The CESS aims to incentivise businesses to undertake efficient capex throughout the regulatory control period by rewarding efficiency gains and penalising efficiency losses (each measured by reference to the difference between forecast and actual capex).

AER Question 12. Do you consider that AusNet Services' forecast CESS incentivises AusNet Services to undertake efficient capex throughout the regulatory control period by rewarding efficiency gains and penalising efficiency losses?

The AER's Framework & Approach paper set out the AER's intention to continue to apply the CESS as set out in its capex incentives guideline to AusNet Services in the 2022–27 regulatory control period.

We support the AER's intention to continue to apply the CESS on this basis.

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[62] See https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/citipower-determination-2021-26/draft-decision#step-71952, AER presentation slide 11.

5.5 Service Target Performance Incentive Scheme (STPIS)

The purpose of the STPIS is to provide incentives to TNSPs to provide greater transmission network reliability when network users place greatest value on reliability.

There are three STPIS components that are applicable to AusNet Services:

- service component (SC), which incentivises TNSPs to reduce the frequency of unplanned outages and the time taken to return the network to service
- market impact component (MIC), which incentivises TNSPs to minimise the financial impact of outages on the dispatch of generation
- network capability component (NCC), which incentivises TNSPs to identify transmission network limits and increase their capability by undertaking projects with a capital cost of less than $6 million and which are likely to result in a material benefit.

AER Question 13. What are your views on AusNet Services' indication that it may depart from a STPIS target calculated as the 5-year average?

AusNet Services' revenue proposal accepted the AER's Framework & Approach proposal to apply version 5 of the STPIS for the next regulatory control period.

AusNet Services' proposal raised an issue with the parameter 'Loss of Supply Event Frequency' that it maintained would result in an asymmetric scheme. This issue was not raised by AusNet Services in its submission to the AER's Preliminary Framework and Approach. AusNet Services has said that it will propose an alternative methodology in its revised proposal.

The AER has responded in its Issues Paper that it does not consider that the STPIS is an asymmetric scheme. One of the key features of the STPIS is that a TNSP can only keep its reward under the STPIS if the service level improvement is retained in subsequent regulatory control periods. If the improvement is not maintained, the TNSP will need to return the earlier reward to the network users. Hence, a TNSP can only earn a reward for service improvement results once. Consumers, however, receive ongoing benefits from the earlier service level improvements, because the performance targets are increased to that level in the next regulatory control period—for the next five years.

Our view is to support the AER's response in its Issues Paper that a TNSP can only earn a reward for service improvement results once, and therefore it may not be appropriate to propose an alternative methodology.

Regarding the market impact component (MIC), AusNet Services stated that it continues to be of the view that a review of the MIC assessment is required. It submits that the closure of thermal generation and the increase in renewable generation has significantly reduced the opportunities for AusNet Services to schedule outages. The AER set out its position in response to this issue in its Framework and Approach. The AER does not consider there is an immediate need to review the MIC. The AER considers that the incentive is operating appropriately, encouraging network management or investment to address network constraints. Until these constraints are addressed penalties will accrue to the TNSP. Once these constraints are addressed bonuses will be earned by the TNSP.

AusNet Services has set out its interpretation of exclusion clauses and sought the AER's view on these exclusions.

AusNet Services has indicated that it intends to use a network pass through to manage planned outages on its network.

AER Question 14. What are your views on AusNet Services' proposed use of a network pass through to manage planned outages and the interaction with the STPIS?

This relates to network support costs that were discussed in section 4.2 above.

5.6 Demand Management Innovation Allowance Mechanism (DMIAM)

AER Question 15. Do you consider the DMIAM should be applied to AusNet Services' 2022–27 regulatory control period?

The Demand Management Innovation Allowance Mechanism (DMIAM) provides transmission network service providers with an allowance to undertake innovative projects related to demand management projects.

AusNet Services has indicated that it considers that the DMIAM should be applied to it during the forthcoming regulatory control period.

In its Framework & Approach, the AER stated that it expected to develop and apply a DMIAM to AusNet Services for the 2022–27 regulatory control period. We support the application of the DMIAM on that basis.

Appendix 1 – Acronyms and abbreviations

Acronym/Abbreviation	Meaning
$ nominal	These are nominal dollars of the day
real $2021-22	These are dollar terms as at 30 June 2022
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ARR	Annual Revenue Requirement
ATO	Australian Tax Office
Augex	Augmentation expenditure
capex	Capital expenditure
CBD	Central Business District
CCP	Consumer Challenge Panel
CESS	Capital efficiency sharing scheme
CIM / CRM	Customer Information / Relationship Management
CPI	Consumer Price Index
DER	Distributed energy resources
DB / DNSP	Distribution Network Service Provider
DM / DR	Demand Management / Demand Response
DMIA	Demand Management Incentive Allowance
DMIAM	Demand Management Innovation Allowance Mechanism
DMIS	Demand Management Incentive Scheme
DUOS	Distribution Use of System
EBSS	Efficiency benefits sharing scheme
ECA	Energy Consumers Australia
EV	Electric Vehicle
ICT	Information and Communication Technologies
ISP	Integrated System Plan
LED	Light emitting diode
MPFP	Multilateral partial factor productivity
MW	megawatt
NEL	National Electricity Law
NER	National Electricity Rules (or Rules)
Next regulatory period	the period commencing 1 April 2022 and ending 31 March 2027

Opex	Operating and Maintenance Expenditure
PV	Photovoltaic (Solar PV)
RAB	Regulatory Asset Base
RBA	Reserve Bank of Australia
RCP	Regulatory Control Period
Regulatory control period	the period commencing 1 April 2022 and ending 31 March 2027
Regulatory Proposal	regulatory proposal submitted under clause 6.8 of the NER
Repex	Replacement capital expenditure
Revised Regulatory Proposal	revised proposal submitted under clause 6.10.3 of the NER
STPIS	Service target Performance Incentive Scheme
Table 7	Table 7 from the AER's draft determinations for Victorian electricity distribution businesses, 2021-26. Provides a summary of AER thinking about consumer engagement elements and regulator assessment.
TNSP	Transmission Service Provider
TRR CAP	Transmission Revenue Reset Consumer Advocacy Panel
WPI	Wage Price Index