RESET CUSTOMER PANEL REPORT ON AUSGRID'S DRAFT PLAN FOR 2024-29

Foreword

This Reset Customer Panel (the Panel) report, the first of several that will be produced to accompany Ausgrid's evolving 2024-29 revenue reset, is the product of a significant investment of time, energy and resources by the Panel's members and Ausgrid. In preparing for its upcoming revenue reset Ausgrid made a commitment to listen to its customers and let them shape the submission it makes to the Australian Energy Regulator (AER). In doing so it invited customers to influence elements of its submission like never before, and customers have, as this report describes, enthusiastically taken up the invitation.

To help shape and steer its extensive consultation with customers, Ausgrid established the Panel by drawing on members of its Customer Consultative Committee (CCC) and appointing me as an independent chair. The task assigned to the Panel was laid out in Terms of Reference (ToR) that are detailed in this report. For the past year the Panel has applied itself to the task harmoniously and with great purpose. I have been impressed by the level of co-operation provided by Ausgrid's executive and staff, especially their willingness to answer countless Panel member questions.

Australia's electricity industry and the way it deals with customers is changing rapidly. The external economic environment is also changing rapidly. Not surprisingly the expectations that customers have of their distributors is also changing. Like every other Australian distributor, Ausgrid is finding the adjustment it needs to make to operate in an era of transition, quite challenging. It is to the business's credit that it is embracing the challenge by inviting customers to help Ausgrid shape its future responses that will facilitate a smooth and efficient transition for its customers.

My role as Chair is being made much easier through the talented team Ausgrid assembled and for their ceaseless efforts and enthusiasm I thank my fellow panellists. Members bring to the task extensive experience in the mechanics of electricity revenue resets, customer engagement and broader policy formulation. At times the work assigned to us has created significant time demands but the goodwill of members to work collegiately has enabled us to navigate these pressure points and produce what we hope will be seen as a constructive influence.

This report focusses on the breadth and depth of Ausgrid's customer engagement, the contribution the Panel has made to its design, the early results of that engagement as well as questions and points of interest that have arisen from the Panel's extensive interaction with Ausgrid staff. In respect of the Panel's commentary on Ausgrid's upcoming draft revenue proposal, readers should note that some elements are more progressed than others, not surprising in view of the official lodgement date being some months away. Finally, the Panel acknowledges that earlier this year the AER issued its Better Resets Handbook (BRH) which provides guidance for distributors as to the genuine customer engagement it expects them to undertake. The Panel is confident that its report demonstrates how the AER's expectations are on track to be met.

Following the release of this report the Panel is happy to provide briefings to industry stakeholders.

Tony Robinson
Chair, Reset Customer Panel
29 August 2022

Key points in this report

- This is a progress report on Ausgrid's engagement for its 2024-29 revenue proposal and how they have translated that into specific expenditure and customer service objectives. Much more work needs to be done but we conclude that significant progress has been made with this Draft Plan.

- The electricity industry is changing rapidly as is the external economic environment that consumers face.

- New Net Zero focussed government schemes funded via pass-throughs to electricity distributors are introducing unknown cost factors into reset proposals. The ability of customer advocacy mechanisms like the Panel to positively influence reset outcomes is diluted as the aggregate cost of these schemes grows.

- Ausgrid has been generous in its provision of resources to enable its objectives of establishing and progressing a customer-centric revenue proposal.

- The Panel has retained its independence from Ausgrid since its establishment. We have had many vigorous discussions, some issues resolved, some issues still outstanding, all in the context of respectful and informed debate. No issue has been off limits.

- The Panel acknowledges the co-operation it has received from Ausgrid, the commitment of staff at all levels to respond to numerous inquiries and information requests, and the willingness of staff to be repeatedly challenged in their thinking. As a result the Panel can affirm the sincerity of its engagement by Ausgrid.

- Having actively assisted the design of a deep, broad and multi-channelled customer engagement framework, the Panel is confident the engagement is delivering accurate and meaningful customer insights that are helping shape the revenue proposal. In particular, the Voice of Community Panel has functioned exceptionally well and delivered an informed set of recommendations.

- Ausgrid has responded positively to the Panel's decision to develop framework tools to assist its assessment of elements of the revenue proposal.

- The Panel has proposed, and Ausgrid has agreed, that customer sentiment will need to be tested continuously through 2023 as more information comes to light about total electricity bill costs and macroeconomic conditions change.

- The Panel and Ausgrid have a shared understanding of the work that remains to be done ahead of its revenue proposal being finalised for submission in 202

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1. Context and scope of this report

Introduction and Summary

The Ausgrid 2024-29 revenue proposal is being drafted at a time of rapid energy industry change. Aside from any specific legislative measures by governments, consumers small and large are embracing the transition and looking for their electricity network to enable them to do that.

Residential and small business customers are providing evidence of that change every day in their enthusiasm to take up renewable energy opportunities in the form of solar rooftop installation and increasingly combining that investment with battery storage. Larger customers are seeking out corporate Power Purchase Agreements to meet corporate sustainability goals that are often much more ambitious than government targets. At the same time the car industry is re-equipping itself to make electric vehicle (EV) production a priority, given the surge in demand. Charging facilities are expanding to service that EV demand. There is much commentary around the ability of distribution networks to efficiently meet the demand of increasing electrification of the economy.

At the same time, all customers understand, many through personal experience, how climate change is placing greater strains on their electricity supply. From windstorms to bushfires, floods and the expectation of more hot days, customers appreciate that the electricity grid they will increasingly rely upon, needs to be able to withstand extreme weather events.

As this report acknowledges, customers are also interested in ensuring fairness remains a key principle within the electricity sector; people shouldn't be left behind and all deserve to share in the benefits offered by a low carbon future.

Amidst these sentiments Ausgrid needs to fulfil its obligation of preparing a five year revenue proposal for AER approval. Accounting for about one third of the total electricity bill, Ausgrid's submission is just one, albeit significant, determinant of the price customers pay and the services they receive. Wholesale markets play a critical role in determining price as do the retailers that customers deal with. In the background, incorporated into bills, are a growing range of charges imposed by state governments that support a range of policy initiatives aligned with the desire to achieve a low carbon transition.

With this in mind it is important to note that the influence customers have to shape the size of the bill they receive, through mechanisms such as the Panel, is modest. The Panel estimates that of all the costs that will ultimately comprise the electricity bill Ausgrid's customers receive between 2024 and 2029, probably less than 5% is dependent on the Panel's efforts to ensure the expectations and needs of customers are properly heard and acted on.

Recognition of the limited impact customer facing initiatives like the Panel can have on the quantum of customer bills in no way lessens the significance of having customers actively represented through the development of a distributor's revenue proposal. What customers receive for what they pay is a critically important outcome. Consumer engagement fulfills a significant role in providing feedback to Ausgrid on the quality of their services and particularly where improvements can be made. It is not just about the price of the services Ausgrid provides. 'Value for money' is front and centre in the Panel's consideration. If prices are going up, customers are entitled to get *the best possible* collection of quality services for what they pay. The Panel is continuously focussed on what quality service offering and delivery mean now, through the 2024-29 period and into the longer term.

While the Panel was not charged with commenting on broader policy issues, it is inescapable that they impact on the views and the expectations of customers. As cost pressure increases, much of it

well beyond the control of Ausgrid, the Panel thinks it important to remember that the interests of customers should always remain front and centre, for without them there is no industry. Customer interests are best served when policies impacting on them are aligned rather than at cross purposes.

The sum total of what Ausgrid's customers experience in the future is not determined exclusively by Ausgrid. That said, the challenging external environment requires Ausgrid, as well as every other actor, to consider every possible way in which their day to day activity can be geared towards the best interests of their customers.

Put simply, Ausgrid, just like other distributors and the broader electricity industry, has to try harder on behalf of its customers. This proposition should not be seen as a burden. The experience of Panel members is that customer service improvements often have no cost at all; indeed, some maybe achieved at a lower cost. What is required in order to identify and implement positive change is a constant ambition to be the very best service provider for customers. If customers recognise that distributors, generators, retailers and government policy operates on this basis, their capacity and willingness to absorb higher than anticipated prices will be enhanced.

Changes in the macroeconomic environment

When Ausgrid began its consumer engagement in mid 2021, the economic outlook generally, and the energy market outlook in particular, were relatively benign. Even as recently as the Federal election campaign, both parties were confidently promising large price falls in electricity prices.

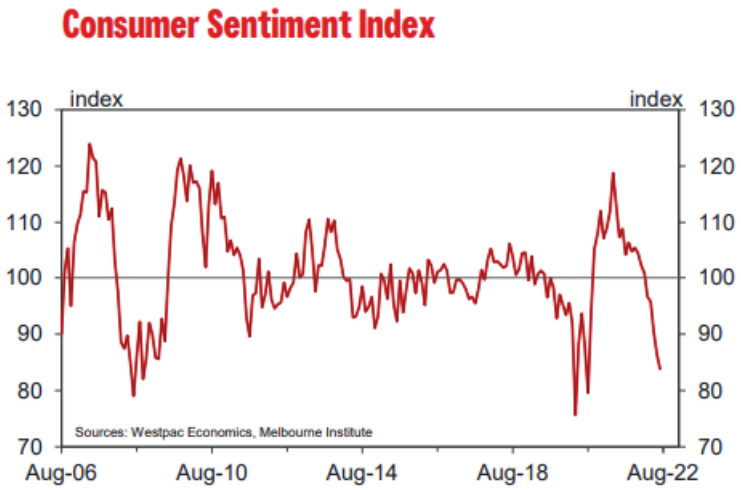
The change in the last few months has been dramatic. International and domestic developments have contributed to rapidly rising inflationary pressures, central banks responding with interest rate rises and rising concerns about a possible recession in many countries. Events in Ukraine plus local factors in the National Electricity Market (NEM) have contributed to significant rises in electricity and gas prices for Ausgrid customers and further increases are likely in the next 1-2 years. Cost of living pressures are very much centre of mind now for all customers small and large and the Panel expects that to continue throughout the remainder of Ausgrid's 2024-29 reset process.

The Reserve Bank of Australia's (RBA) latest Statement on Monetary Policy pointed to the many cost and supply chain pressures in the economy. The RBA forecasts inflation to peak at 7.75% by the end of 2022 and then decline to around the top of the 2-3% target range by 2024. Domestic retail gas and electricity prices are expected to increase by 10–15 per cent over the second half of 2022. The RBA suggests that if inflation expectations and general inflation psychology shift, it could mean higher inflation is more persistent. The report also highlights the tightness of the domestic labour market supporting strong wages growth (though less than inflation) and the impact of falling house prices having a wealth effect on reducing domestic consumption.

There are a number of other indicators of the recent and significant change in the pressures facing Ausgrid customers:

- The most recent Westpac Melbourne Institute of Consumer Sentiment published on 9th August 2022[1] showed that sentiment fell by 3% from 83.8 in July to 81.2 in August; this is similar to the lows during the COVID-19 pandemic (Covid) and the Global Financial Crisis; what is noteworthy is how quicky it has fallen – since the recent peak in November 2021 the Index has fallen every month for a cumulative decrease of 22.9%.

[1] "Consumer Sentiment takes another tumble" 9th August 2022. See https://www.westpac.com.au/content/dam/public/wbc/documents/pdf/aw/economics-research/er20220809BullConsumerSentiment.pdf.



- The most recent ABS (June 2022) Business Conditions and Sentiments survey[2] reported that:
    - 31% of businesses are having difficulty finding suitable staff;
    - nearly half (46%) of all businesses experienced increases in their operating expenses; and
    - more than two in five businesses (41%) faced supply chain disruptions. This has remained steady since it peaked in January 2022 (47%).

- Banks, drawing on their credit card data, are reporting that they are starting to see reduced discretionary spending in areas such as recreation, eating out and household goods to enable households to pay for essentials e.g. transport, utilities, food and mortgages[3].

Changes in electricity market environment

There are many changes going on in energy markets outside of Ausgrid's control that are having, and will have, significant impacts on the energy prices all Ausgrid's customers will pay:

- Higher hedge prices that flow through in different ways to different customer classes.
- Additional costs from the market disruption in May and June e.g. RERT[4], generator compensation for AEMO directions and during the period of NEM market suspension[5], Australian Energy Market Commission compensation during the administered pricing period[6] (these costs are a direct pass through to commercial and industrial customers).
- Higher transmission network charges as Transgrid constructs various Integrated System Plan (ISP) projects.

[2] See https://www.abs.gov.au/statistics/economy/business-indicators/business-conditions-and-sentiments/latest-release.

[3] See https://www.afr.com/policy/economy/consumer-slowdown-may-have-already-begun-20220805-p5b7jp.

[4] The Reliability and Emergency Reserve Trader is a function of the Australian Energy Market Operator (AEMO) see https://aemo.com.au/en/energy-systems/electricity/emergency-management/reliability-and-emergency-reserve-trader-rert.

[5] See https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-events-and-reports.

[6] See https://www.aemc.gov.au/our-work/apc-claims - :~:text=The CPT is designed to,cap of %24300 per MWh.

- NSW jurisdictional schemes e.g. the NSW Electricity Roadmap[7] (the Roadmap), Hydrogen Roadmap[8] and the Peak Demand Reduction Scheme[9] where we have no guidance on the likely costs of the first two.
- Significantly higher gas prices.

Here is some more detail on how these measures affect different customer classes.

Large Commercial and industrial customers

The impact of recent dramatic events in electricity and gas markets has and will be particularly acute on large customers. Some may have been purchasing on spot, others may be coming off an existing hedge contract and find a new hedge is 3, 4 or 5 times the existing price. These large customers also specifically bear significant additional costs mentioned above - RERT, AEMO directions, AEMC compensation during administered prices periods and AEMC compensation during market suspension. These costs are not explicitly passed on to residential and small business customers. The costs of the Peak Demand Reduction Scheme to be introduced from 1st November 2022, which will add $0.2448 per megawatt hour, will only be borne by large customers.

Further, those large customers who also use gas are now or when their current gas contract ends, facing a significantly increased gas price that could be 2 or 3 times their existing contract price.

Small business and residential customers

In December 2021, the AEMC forecast[10] that average household bills in NSW would decrease 4% in NSW over the period to 2023-24 driven by a fall in wholesale prices as renewables expanded. This was the context for the first stage of Ausgrid's customer engagement. On 25th May the AEMC issued an Addendum saying[11]:

The forecast contained in the 2021 price trends report should therefore be treated with caution given it does not reflect these recent events and the impact they have had on the cost of energy in the near term and over contracting timeframes.

The default market offer (DMO) was introduced a few years ago as a cap on the price paid by residential and small business consumers who do not shop around for the best offer. Across NSW 9.8% of residential and 17.8% of small business customers are on the DMO. The components are network (45%), wholesale (32%), retail (10%), environmental, including RERT (10%) and retail margin (3%). The table below shows the change for Ausgrid customers from 1st July 2022 – around 10%[12].

[7] See https://www.energy.nsw.gov.au/government-and-regulation/electricity-infrastructure-roadmap.
[8] See https://www.energy.nsw.gov.au/renewables/renewable-generation/hydrogen.
[9] See https://www.energy.nsw.gov.au/government-and-regulation/energy-security-safeguard/peak-demand-reduction-scheme.
[10] See https://www.aemc.gov.au/sites/default/files/2021-11/2021_residential_electricity_price_trends_report.pdf.
[11] See https://www.aemc.gov.au/sites/default/files/2022-05/Addendum%202022_05_25.pdf.
[12] See https://www.aer.gov.au/retail-markets/guidelines-reviews/default-market-offer-prices-2022%E2%80%9323.

Table 2.1 DMO 2022–23 final determination prices, including changes from DMO 3 in nominal and real terms*

Distribution zone		Residential without CL	Residential with CL	Small business without CL
Ausgrid (NSW)	DMO price	$1,512	$2,122	$4,360
	for annual usage of	3,900 kWh	Flat rate 4,800 kWh + CL 2,000 kWh	10,000 kWh
	Change y-o-y	+$119 (8.5%)	+$210 (11.0%)	+$690 (10.0%)
	Change y-o-y (real)	+$42 (2.9%)	+$105 (5.2%)	+$310 (4.3%)

The DMO reflects wholesale prices up to around the end of April 2022 and so does not include the significant rises in May and June. While the DMO is scheduled to be an annual adjustment, there may be pressure from retailers to have another adjustment prior to 1st July 2023. This pressure is likely to come from second and third tier retailers that do not have their own generation. Some smaller retailers have already left the market and there may be a trade-off between retail competition and DMO level.

Tariff tracker data from St Vincent de Paul has shown that in July 2022 market offers for households consuming 7,200 kWh pa have increased by 36% for Ausgrid customers[13].

Implications of these conditions on Ausgrid's regulatory proposal

Ausgrid's Draft Plan[14] highlights "*Challenging external factors impacting costs such as high inflation and rising interest rates*" as one of four key challenges as it prepares its revenue proposal. While the regulatory framework effectively allows Ausgrid to recover increased labour, materials and insurance costs in opex/capex allowances and increased interest rates in its WACC, it needs to reflect changing customer expectations and willingness to pay as this changing external environment unfolds. For example, uncertain (but expected large) costs from NSW jurisdictional schemes in addition to any cost increases from Ausgrid's proposal will make it more difficult for consumers to absorb or pass on increased network costs.

The Panel acknowledges that the external factors discussed above are generally beyond Ausgrid's control – they are a 'policy taker'. What is does mean is the need for continued deep and broad engagement.

The Panel welcomes Ausgrid's strong desire to continue deep engagement post Draft Plan to ensure its January 2023 proposal continues to reflect changing consumer views. We think that this engagement should also continue beyond the January submission in the lead-up to submission of its revised regulatory proposal in December 2023[15].

Building blocks and the extent of consumer influence

This engagement needs to focus on those matters where consumers can have an influence so it is worthwhile to examine where this influence exists. The table below summarises the major building

[13] NSW tariff tracker Alviss Consulting in St Vincent de Paul Society August 2022.

[14] On 1 September 2022 Ausgrid will publish a series of documents on its website. This report is based on pre-publication versions of those documents, which Ausgrid shared with the Panel during July and August 2022. There may be some minor differences between the information cited in this report due to final changes made to the pre-publication versions reviewed by the Panel.

[15] The Panel anticipates the AER will require this of all distributors preparing 2024-29 regulatory proposals.

block components of proposed total revenue in Ausgrid's Draft Plan and comments on the level of influence consumers have in the current engagement.

Table 1: Consumer influence over major building block components

Component	$[16]	%	Comment
Opex (including debt raising costs)	2,468	26	Largely 'recurrent'; forecast expenditure based on the 'base year' (2022/23) that is subject to an efficiency test by the AER. The Panel's challenge is focused on whether the annual productivity improvement should be more than the AER mandated 0.5%/year and on step changes (there are 6 step changes totaling $168.3m real FY$24)
Capex	3,239 (real FY$24)		High level of 'recurrent' expenditure means consumer influence is at the margins. The Panel's challenge is focused on ICT, resilience, DER and capex productivity especially capitalised overheads
Return on capex (WACC)	5,373	56	Ausgrid is the largest network in the NEM with a forecast opening RAB on 1 July 2024 of $17.5b and closing RAB on 30 June 2029 of $19.8b. WACC is set externally under a binding AER Guideline and the 2022 version (to be finalised in December 2022) will apply to Ausgrid
Return of capex (depreciation)	1,111	12	This is set based on past capex, proposed 2024-29 capex and the depreciation profile. There is a very small component subject to review on depreciation methodology
Incentive schemes (and revenue adjustments)	356	4	This is set based on performance in the current period against AER approved capex and opex allowances and other revenue adjustments (e.g. DMIAM and shared assets)
Corporate tax allowance	220	2	This is set based on AER methodology
Total Revenue	**$9,528**		**Total of column 2 excluding capex**

Networks are capital intensive businesses with long life assets – many with asset lives up to 50-60 years. Ausgrid is the largest network in the NEM. It's total assets at the start of the 2024-29 period on 1st July 2024 are estimated at $17.5b increasing to $19.8b at the end of the period on 30th June 2029. The allowed return on those assets (WACC) is set according to an AER binding guideline that is reviewed every four years. The current review will be complete in December 2022 and that will determine the Ausgrid WACC. The level of depreciation is effectively outside of consumer influence given standard practice accepted by the AER. Ausgrid is consulting on a minor change in methodology. Corporate tax is set externally based on an AER methodology.

As Table 1 demonstrates, this leaves consumers being able to influence at the margin, around 5-10% of total revenue at most – opex step changes, some new capex programs and productivity.

Apart from the specific expenditure categories, consumers and the Panel do have the opportunity to provide input on a range of other parts of the reset:

[16] Revenue presented in the Regulatory Appendices is in nominal terms other than capex which is in real $ FY24.

- Tariff Structure Statement (TSS);
- Development of a new incentive scheme – Customer Service Incentive Scheme (CSIS) which replaces part of the existing Service Target Performance Scheme (STPIS); and
- Service classification set out in the Framework and Approach (F and A).

Table 2 below summarises the scope of this report. We are providing comment on five documents prepared by Ausgrid and its consultants to be published on 1 September 2022:

1. "Our Draft Plan for 2024-29" (Draft Plan) – which focusses on the extensive consumer engagement and how Ausgrid has responded to what it has heard;
2. "Appendices: Regulatory Matters for our Draft Plan" (Regulatory Appendices)- which provides high level detail on the main expenditure categories and other matters required by the AER when Ausgrid submits its proposal in January 2023;
3. "Promoting the long-term interests of consumers in a changing climate: A decision-making framework" (Resilience Framework) – which is a co-designed draft investment framework for making resilience related decisions (discussed in detail in Chapter 6);
4. "Our Pricing Directions Paper for 2024-29" (Pricing Directions Paper) – which outlines the proposed pricing reforms being developed by Ausgrid for its draft TSS as part of its January 2023 submission to the AER (discussed in Chapters 5 and 7); and
5. "Ausgrid Regulatory Reset – 2024-2029 Customer and stakeholder engagement report Input to 2024-2029 Draft Plan" (bd Customer Engagement Report) prepared by bd Infrastructure which includes an overview of the methodology and engagement outcomes from the engagement leading up to the Draft Plan discussed in Chapters 2 and 3).

This report highlights areas of particular focus that have been subject to significant discussion and where further work has been identified – what the Panel has considered in detail for this report and what remains a focus for our next report on the Regulatory Proposal in January 2023. Some issues are addressed in detail, some have been resolved, some remain to be resolved with further discussions and customer engagement post the Draft Plan. The focus of our next report will be much more on specific aspects of the opex and capex building blocks and incentive schemes along with the TSS. For example, there will be more commentary on key expenditure issues of resilience and DER integration.

Table 2: Scope of this report

Issue/expenditure category	Where considered in this Report?	Further work post Draft Plan for next Report on January 2023 Regulatory Proposal
Opex • Base year/Step changes/Trend/Productivity	Step changes: • Insurance (Chapter 9) • Cyber security (Chapter 9 and Appendix G) • Resilience (Chapter 6) • Smart meter data (Chapters 5 and 7) • Innovation (Chapters 6, 7, 10, 12 and Appendix F) Productivity: (Chapter 9 and Appendix F)	Base year All step changes Trend Opex Productivity

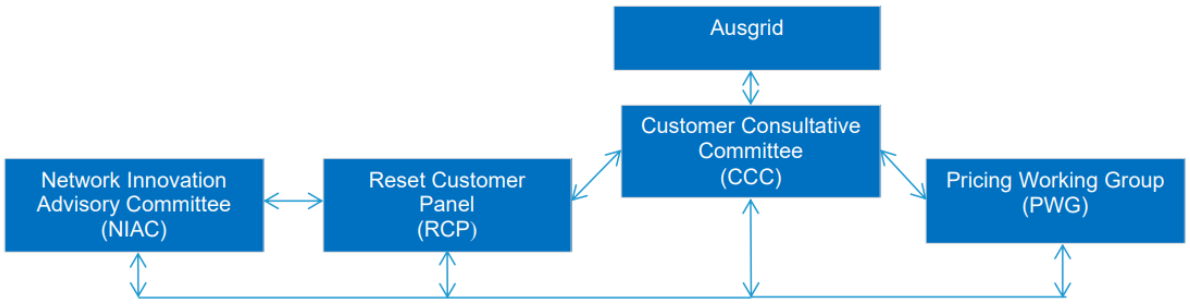
Capex • Augex/Repex/Resilience/DER integration/Cyber/ICT/OT/ Fleet and plant/ Property/Innovation/Capitalised overheads/Productivity/ Depreciation	Capex governance: (Chapter 9 and Appendix E) Capex programs: • Repex (Appendixes E and F) • Resilience (Chapter 6) • DER Integration (Chapter 7) • Cyber/ICT/OTI (Chapter 9 and Appendix G) • Capitalised overheads (Appendixes E and F) • Depreciation (Chapters 1, 9 and 12)	Augex Repex Resilience DER integration ICT/OTI (including Innovation and cyber) Fleet and plant Property Capitalised overheads Capex Productivity CAM Depreciation
Incentive schemes – CSIS/STPIS	CSIS (Chapter 8 and Appendix F) STPIS and major event days (Appendix F)	EBSS CESS CSIS details STPIS
Service classification	F and A relating to community batteries (Chapter 7)	Service classification
TSS	Pricing Directions paper (Chapter 5) Tariff trials to support DER Integration (Chapter 7)	Draft TSS
Customer service	Integrating BAU engagement; Council/CALD engagement; CSIS elements (Chapter 8)	Case studies on responses to customer concerns; review of Ausgrid's 2019-24 commitments

2. The Reset Customer Panel

Ausgrid's approach to consumer engagement

The Ausgrid consumer engagement structure is:

Figure 1: Customer Advocate Engagement Model



In 2021 Ausgrid refreshed the membership of its CCC adding members with expertise in small business, financial support, transport, Indigenous relationships, technical expertise in climate science and consumer use of technology to ensure a breadth of perspectives were brought to CCC deliberations. Having a breadth of perspectives is important as the energy sector transitions to ensure as far as possible that few customers are left behind.

In 2021 Ausgrid sought expressions of interest for membership of the Panel from members of its CCC, in order to ensure continuity of influence for the CCC on Ausgrid's business as usual (BAU) customer focus beyond the 2024-29 regulatory reset.

Panel membership

The Panel comprises six members drawn from Ausgrid's CCC:

- Louise Benjamin
- Iain Maitland
- Mike Swanston
- Mark Grenning
- Gavin Dufty
- Jan Kucic-Riker[17]

The Panel is chaired by an independent appointment, Tony Robinson[18]. Biographies of Panel members can be found at https://yoursay.ausgrid.com.au/page/whos-listening

The Panel's role is described in its ToR[19]:

to represent the long-term perspectives of our customers and challenge Ausgrid on key issues relating to the 2024-29 Regulatory Reset[20].

[17] Jan is employed by the Public Interest Advocacy Centre which was earlier represented on the Panel by Anna Livsey and Bernadette Dodsworth.
[18] The Panel's independent Chair was selected as part of an external recruitment process.
[19] The ToR for all Ausgrid committees including the Panel are published here.
[20] ToR at p.12.

A qualifier was offered in the Panel's commissioning:

Importantly the RCP does not represent customers per se; Ausgrid will also, in collaboration with the RCP, engage our customers directly on key issues and trade-offs arising during the 2024-29 Regulatory Reset. Members will be expected to provide independent and constructive feedback and challenge based on their expertise and insight during the development of the 2024-29 Regulatory Proposal[21]*.*

The specific functions of the Panel include but are not limited to:

- Form an independent view on the degree to which Ausgrid's 2024-29 Regulatory Proposal addresses the needs and preferences of customers.
- Co-design Customer Engagement Plan for the 2024-29 Regulatory Proposal including scope of engagement topics and level of engagement for relevant topics and themes and engagement methodology.
- Inform Ausgrid's customer research program and seek their own research/advice (including from AER) to understand and best represent customer views.
- Input into the development of the Draft Regulatory Proposal, by bringing customer views to key components of the plan and explore potential trade-offs between aspects of a regulatory proposal.
- Seek an in-depth understanding of Ausgrid's business including revenue requirements.
- Test key aspects of the Ausgrid Regulatory Proposal such as, operating expenditure, capital expenditure, major augmentation projects, revenue path profile, customer experience, approach and support for vulnerable customers and tariff reform.
- Provide advice on communication of engagement materials to ensure they are accessible and will encourage customer contributions and can support a diversity of views.
- Develop and deliver to Ausgrid, three independent reports on Ausgrid's Draft Regulatory Proposal, Regulatory Proposal and Revised Regulatory Proposal and participate in engagement process reviews.
- Assist in the development of appropriate timelines for key deliverables.
- Key deliverables and milestones will be developed with the RCP[22].

After the Panel's establishment, the role of independent consumer reports in revenue proposal submissions was articulated by the AER in its Better Resets Handbook (BRH) in early-2022:

The independent consumer report should provide a consumer view of the effectiveness of the pre-engagement lodgement process in identifying consumer preferences and outcomes and how they have been incorporated into the proposal. The independent consumer report can also provide views on technical issues in the proposal in the case where consumers feel capable of putting forward positions on these elements of the proposal[23]*.*

Panel organisation and operation

Since its inception in mid-2021, the Panel has operated independently of Ausgrid. Panel meetings have usually been held fortnightly for a minimum of two hours and follow an agenda prepared by

[21] ToR at p.12.

[22] ToR at p.12.

[23] Better Resets Handbook - Towards Consumer Centric Network Proposals, AER, 2021 (BRH) at p.9. See https://www.aer.gov.au/system/files/Better%20Reset%20Handbook%20-%20December%202021.pdf.

the Chair. Minutes are kept of each meeting and circulated ahead of the next meeting. A list of Panel only meetings is found at Appendix A.

Since late-2021 the Panel has organised its own meetings and does not require any programming support from Ausgrid in order to conduct them.

The Panel maintains a shared drop box for key information such as meeting minutes and a log of information requests made to Ausgrid.

In fulfilment of the obligation set out in its ToR to maintain evidence of *rigorous challenge*[24] to Ausgrid, the Panel agreed in August 2021 to establish a Challenge Log which records decisions demonstrating its impartiality and objectivity. The Challenge Log has not been shared with Ausgrid and will, upon request, be made available to the AER.

A budget for the Panel's operation was established at the time of the Panel's inception and agreement reached with Panel members that it would be adequate. Included in the budget is a provision for Panel commissioned research. To this point in time the Panel has not commissioned any research but it is planning for this to be initiated in coming weeks as Ausgrid's proposal evolves.

Panel engagement with Ausgrid

Beyond the requirement to co-design with Ausgrid its customer and stakeholder engagement framework[25] (the Engagement framework) for the 2024-29 revenue reset which is detailed in the following chapter, the ToR require the Panel to seek an in-depth understanding of Ausgrid's business and revenue requirements. Several Panel members were involved in the previous 2019-24 revenue reset and have brought to the current task a wealth of knowledge as to how the business operates. The other members have been able to familiarise themselves with Ausgrid's operations through an extensive series of meetings. These are detailed in Appendix A. In total Panel members contributed in excess of 800 hours of involvement to their task in the first 12 months.

The Panel has been impressed with its access to senior Ausgrid management including the Board, CEO and the executive leadership team. Access has facilitated fulsome and constructive inquiry and dialogue, which Panel members appreciate, as it has allowed a more comprehensive impression of work undertaken on key elements of the revenue proposal. The Panel acknowledges that the commitment given by Ausgrid to engage with, listen to and respond to its customers and the Panel is one that is shared deeply across the business.

Relationship of the Panel to other advisory groups

The establishment of the Panel has proceeded in parallel, and co-ordinated with, the work of other consultative bodies operated by Ausgrid. Each CCC meeting includes an update from the Panel of reset activities and other CCC members participate in selected RCP activities with Ausgrid. Because some Panel members are also members of the Pricing Working Group (PWG) and the Network Innovation Advisory Committee (NIAC) we have been able to contribute to shaping the business' position on future tariff structure, providing extensive input into Ausgrid's Pricing Directions Paper as part of the PWG and regular advice to the business on its innovation program as part of NIAC.

[24] ToR at p.13.

[25] The Ausgrid Engagement framework is published on Ausgrid's website.

3. Shaping Ausgrid's Customer Engagement

The Panel acknowledges the comprehensive Customer and Stakeholder Engagement report (the bd Customer Engagement Report) that has been prepared by bd Infrastructure and published alongside its Draft Plan. The Panel was invited to comment on the bd Customer Engagement Report as it was prepared and is satisfied that it accurately reports on the work Ausgrid has undertaken in the past year. The comments contained in this chapter centre on the co-designing of customer engagement from the Panel's perspective.

The AER's expectations of the nature, breadth and depth of customer engagement in revenue resets is laid out in section 3 of the BRH. This chapter of the Panel's report is concerned with how the engagement process was designed. Some evidence of customer preferences is noted in the following chapter and the Panel anticipates that more will be available in its next report.

Ausgrid acknowledged that, as prescribed in the BRH, the onus for high quality customer engagement rested with it[26], and advised the Panel from the time of its establishment that Panel member input would be welcomed. The Panel-Ausgrid co-design effort occurred mainly in 2021, although some tweaking of customer engagement methodology has continued this year.

The bd Customer Engagement Report notes that a number of contractors assisted in the development and delivery of its engagement program[27]. Ausgrid in mid-2021 contracted with Nous Group (Nous) to undertake an environmental scan of both how the electricity industry was changing and the way customers were reacting to this change. From these insights, which the Panel was invited to study, comment on and challenge, materials were developed that could be used for conversations with customers. The structure of the conversation was initially proposed by bd infrastructure. Other parties noted in the bd Customer Engagement Report contributed specialised content and feedback to the creation of customer engagement materials.

The centrepiece of Ausgrid's household and small customer engagement over the past year has been its Voice of Community Panel (VoCP). The VoCP brought together 45 customers across the three geographic regions the network operates in: Sydney, the Central Coast and the Hunter. Over a period of several weeks between March and June 2022 the VoCP participated in a number of consultative sessions during which their responses to themed issues were sought. The themes had been separately distilled from work undertaken by Nous which discussed the progress of its work with the Panel through meetings in the second half of 2021. In one sense, the VoCP initiative is a highly specialised version of the longer running Voice of Community program, established by Ausgrid in 2019/20 to elicit from its customers valuable feedback as to their satisfaction with the service provided to them.

Ausgrid's timely engagement of contractors enabled Panel members to consult with Gauge Consulting's Scott Newton[28] very soon after appointment. The first workshop for building the Engagement framework happened in August 2021, informed by work Ausgrid had commissioned Nous to undertake regarding customer trends. The Panel contributed actively to the design process and all times the views expressed by members were welcomed, respected and incorporated into the refinement of the Engagement framework.

[26] BRH p.16.
[27] Bd Customer Engagement Report at p.5.
[28] Gauge Consulting was hired by Ausgrid to facilitate the Engagement framework co-design process and support the Panel through this phase of the reset.

While helping Ausgrid develop its Engagement framework, the Panel has been keen to ensure that the voices of all customers are heard, and encouraged Ausgrid with its plan to arrange a series of interviews at which a range of customers could provide their perspectives on a number of relevant issues. In part, this initiative was based on what the Panel Chair had seen work with great effect during the previous AusNet revenue reset; when given the opportunity to discuss their relationship with Ausgrid some customers raised useful and entirely unexpected perspectives that shed valuable light on the relationship and how it can be improved. Following suggestions from the Panel as to the customers that should be offered personal interviews Ausgrid scheduled a series of meetings that ran between February and May 2022. A list of these, which Panel members observed, is provided in Appendix B.

Consultation overview

The Panel's reflections on the engagement processes underpinning Ausgrid's customer and stakeholder Engagement framework, which it has helped design, are noted as follows:

- *Early*
  Ausgrid commenced its consultation and consumer engagement design early in the regulatory process with a wide range of stakeholders representing the spectrum of Ausgrid's consumer segments. The diverse views and opinions provided helped shape a co-designed Engagement framework but it was one which the Panel was keen to ensure could be adjusted as the engagement unfolded. This template included an agreed overall narrative, identified key target groups to be consulted and the methods of collecting information.

- *Wide*
  As a result of this early co-design work Ausgrid achieved a number of objectives including engagement and consultation:
  - across a number of distinct geographies within the Ausgrid network
  - across a number of socio-economic, age and cultural demographics the Panel believed were at risk of being 'forgotten voices', such as –
    - First Nations;
    - Culturally and Linguistically Diverse (CALD) (including in language Arabic, Mandarin and Vietnamese consultation);
    - Youth;
    - Deaf communities; and
    - Tenants
  - across a range of household customer load and technology types;
  - with SMEs;
  - with high energy users and commercial and industrial customers;
  - with councils, and;
  - with retailers.

- *Deep*
  The early co-design and engagement allowed for deep consultation because it allowed time to explore various issues in detail. Preparing for different interviews enabled the interviewees to consider beforehand what they wished to contribute and ultimately led to a richer discussion of their preferences.

- *Bespoke*
  While it is not possible to have bespoke conversations with all customer segments and unique groups within the Ausgrid distribution area, some of the consultations were with

groups Ausgrid recognised it had not regularly or meaningfully consulted in previous revenue resets.

Customer engagement methodology

Various methods were used in Ausgrid's co-designed customer engagement to ascertain consumer and stakeholder perceptions, future views and expectations. These included a desktop review of data from internal and external parties including the Energy and Water Ombudsman scheme of New South Wales (EWON) which enabled Ausgrid to analyse and find pain points within its service delivery processes.

As mentioned earlier Ausgrid's VoCP was the centrepiece of its engagement effort. Having observed much of the extensive VoCP activity, the Panel is confident it has achieved its objective of accurately reflecting the contemporary views of a diverse range of customers and Ausgrid is to be commended for investing in and supporting the eight-day VoCP process, rather than something more abbreviated. This was particularly important given the Covid challenge confronting Ausgrid and panellists.

Focus groups were also utilised for specific groups to explore their unique views, aspirations and expectations. These are noted in Appendix B[29].

Feedback loops and analysis of consultations

Two of the key focus areas explored in the engagement co-design process were the necessity of detailed analysis of the results of each aspect of the consultative process, undertaken immediately following each process, and the provision for feedback to those who had participated in the consultation, after the consultation session. It is the Panel's view that these two areas have been undertaken with genuine commitment and expertise. Additionally, the regular and iterative feedback processes have been undertaken very successfully with Ausgrid, CCC, NIAC and the PWG.

Collaboration across distribution networks

One area that was explored within the co-design process was the necessity for collaboration between the three NSW distribution networks as each prepared a revenue submission. This collaboration has been initiated and/or completed successfully in the F and A, resilience, CALD consultations and synchronising calendar and meeting times and dates to allow Panel members also engaged in other resets to avoid diary clashes.

Key criteria expected from consumer engagement

The two key criteria for successful customer engagement are reliability and validity. With respect to reliability the Panel wanted to be confident the views expressed represent the overall customer base. The Panel can attest to a co-design process that enabled timely planning and design resulting in substantial customer engagement which generated a wide spectrum of views. Time was provided for bespoke conversations that facilitated a deep exploration of use perceptions and some early consideration of trade-offs.

The Panel is confident that the VoCP has enabled the views, attitudes and perceptions of the customers, communities and individuals that Ausgrid serves to be fully expressed. As a result readers of the bd Customer Engagement Report and the Draft Plan can be confident that it reliably represents the general views of a wide range of Ausgrid consumers.

[29] The Panel observed some of these sessions and the reports will be made available to the AER on request.

With respect to validity the Panel appreciates that the views of key stakeholder groups need to be accurate. Through the use of the various methods and varieties of consultation and engagement described, the Panel is confident that the diverse views of stakeholder groups have been meaningfully explored and accurately documented. Readers of the bd Customer Engagement Report and the Draft Plan can be confident that it is based on a valid representation of these consumers' views, aspirations and concerns.

An iterative process

As indicated earlier, Ausgrid allowed for an iterative process in the consultation matrix where the views, deliberations and responses from consultations were collected, collated and analysed and this information was provided as feedback to participants, enabling questioning ahead of affirmation of views. The iterative process provides a valuable check and balance to ensure that what has been captured is an accurate reflection of consumer preferences and views.

Third party affirmation

Throughout the customer engagement to date a number of third parties have witnessed the engagement processes which provides the opportunity for affirmation of the transparency of the engagement and confidence in its findings and outcomes. Apart from the Panel, these third parties include:

- Ausgrid CCC;
- AER personnel;
- AER Consumer Challenge Panel (CCP) members, and;
- Ausgrid Board members and staff from a variety of work areas.

Challenges faced

As mentioned above there are a number of challenges that Ausgrid faced in its consultation processes in developing this regulatory submission. These include:

- *The impacts of Covid*
  The inability to meet face-to-face required flexibility on behalf of all participants to establish working remote and virtual conversations. There is little doubt that this did change the way people interacted with each other, however as the process progressed and Covid restrictions were lifted more face-to-face meetings and interactions occurred mitigating the impact of remote consultation. Of particular concern was the challenge that on-line, in-language consultations with CALD consumers might present. Online engagement proved to be possible and the concern was not realised.

- *Weather events*
  During this time customers and communities in the Ausgrid network experienced significant weather events. There is little doubt that these events and the impact on the community at large would have lifted up and heightened views and perceptions around network outages, network response times and network resilience etc.

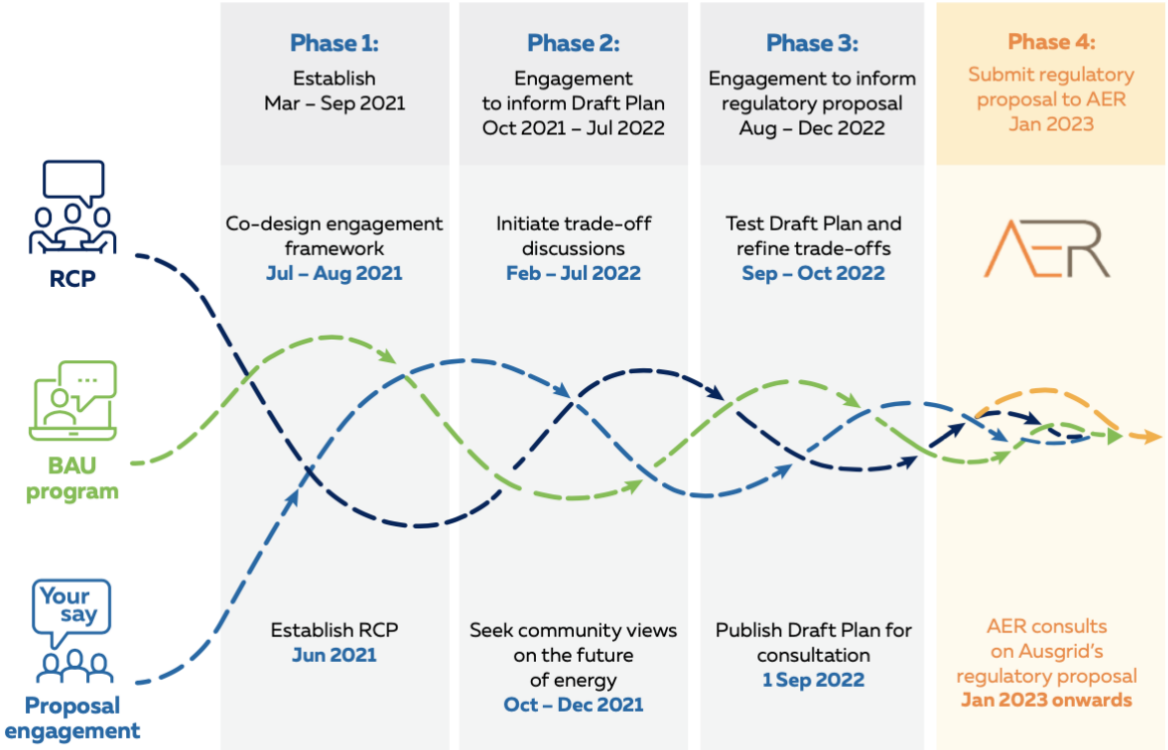
- *Energy Cost changes*
  In the early part of 2022 significant external impacts changed the underlying functioning of the wholesale electricity market driving up costs significantly and requiring AEMO to intervene in the market. These two events created significant public conversation, interest and concern. There is no doubt this heightened consumers' perceptions and aspirations regarding the affordability of the transition to net zero and future energy markets.

Shaping Ausgrid's customer engagement on its Draft Plan

The customer engagement to date has been very good and of a high quality. A key feature of the design of the Engagement framework was the need to blend the breadth of feedback obtained from disparate customer groups and stakeholders including Ausgrid's BAU engagement to ensure greater depth across as many groups as possible. This is also the phase where Ausgrid needs to test how it is responding to what customers have told it as well as dealing with any differing preferences or priorities of customers. The RCP is currently assisting Ausgrid with the design of this next critical blending phase of the engagement.

In discussions between Ausgrid, the Panel and bd infrastructure this process has been referred to as the 'blending' phase and has been represented by a helix figure designed to show the various voices blending together. The current version of the engagement helix is in Figure 3.3.1 in the Draft Plan (p.25).

Figure 3.3.1 Integrating our BAU engagement and our engagement across 4 phases of developing our 2024-29 proposal to the AER



Moving forward post the publication of the Draft Plan and into 2023 there are a number of themes which will ensure that this good engagement work is carried on and followed through. The Panel believes that Ausgrid should have an engagement narrative in 2023 that lifts up the following themes:

<u>Understandability</u>

As the engagement has covered a wide and diverse range of issues, many of which are complicated and technical, the Panel believes that Ausgrid needs to document what measures it undertook to ensure that customers, stakeholders and others who were consulted actually understood the questions that they were presented and choices or trade-offs they were asked to make.

This is important as it underpins confidence that consumers, key stakeholders and third parties have that the revenue proposal actually represents consumer preferences. This narrative should

document what challenges Ausgrid discovered through the consultation processes, and how it responded to ensure that people understood what was being asked of them and the choices they were asked to make.

Transparency

The Panel encouraged Ausgrid to lift up and document what various stakeholders' preferences were, and blend these various, and sometimes competing views into the overall offering that will be presented to the AER first in January 2023 and then in December 2023. Ausgrid has indicated to the Panel that it will do so.

Transparency in identifying what were the consumer preferences, acknowledging trade-offs were made, and how those trade-offs were managed and justified. This is critical in having confidence that the final product does represent consumers' views, and ultimately does represent the long-term interests of consumers.

Durability

Through this process of improving stakeholders' understanding of the issues being asked of them and the process of working through various trade-offs stakeholders were presented with, Ausgrid would have gained significant insights into important information and other complementary measures that consumers and stakeholders needed to fully understand the benefits and risks of various changes, e.g. the introduction of innovative tariffs.

We recommend that Ausgrid document all these learnings and develop a program of future information and other measures that Ausgrid continues with as the various changes are implemented through the next regulatory period. This information and other complementary measures will be critical in ensuring the success of this transition as Ausgrid's customer base will have a richer and more nuanced understanding of the rationale of proposed changes and the opportunities that exist for them.

4. Customer engagement process and outcomes

This chapter details the Panel's observation of how the co-designed Engagement framework proceeded and the outcomes it generated. The commentary is focussed on three areas- the VoCP (which covered residential and small business customers), individual customer interviews (which included large customers) and other customer feedback. We then make some observations on the engagement to date with CALD and Indigenous customers.

VoCP

Ausgrid's Customer and Stakeholder Engagement[30] report provides a detailed summary of the VoCP activity between February and June 2022.

The Panel determined prior to the VoCP sessions that it would, where possible, observe proceedings and prepare written observer reports. Observer reports were prepared for the following sessions:

- 22 February (Introductory meeting)
- 27 February (Day 1)
- 15 March (Day 2 of Hunter group)
- 16 March (Day 2 Central Coast group)
- 17 March (Day 2 Sydney group)
- 22 March (Day 3 Sydney group)
- 24 March (Day 3 Central Coast group)
- 24 May (Day 6 Hunter group)
- 25 May (Day 6 Central Coast group)

The Panel Observer reports were designed by members with a view to providing consistent oversight through a number of key questions:

- Did participants have sufficiently deep understanding to enable meaningful participation?
- Were the sessions long enough to allow time for participants to express themselves fully?
- What were the key findings from the session?

Sessions were both in-person and on-line, Covid making the latter more common than might have otherwise been the case. However, in the view of Panel observers, the way in which the on-line sessions were operated made no noticeable difference to the willingness of participants to contribute meaningfully.

As observers, Panel members did not participate in discussions, but were able to observe the way in which the sessions were managed and the discussions that took place between participants both in the large group and break-out groups, which were a feature of most sessions.

Panel members can attest that VoCP members engaged in genuine discussion. Typically, the early sessions saw the more confident participants dominate discussions but this changed as the engagement continued and the VoCP panellists grew more familiar with each other. Across the engagement, the VoCP panellists became increasingly prepared to listen carefully and offer feedback to each other. In this way they found themselves able to reach consensus positions on what were at time challenging issues. Relevant Observer Report commentary includes:

The capability of participants continues to develop.

[30] Also referred to as the bd Customer Engagement Report.

Yes, panel members show the benefits of being together in many sessions; productive conversations.

A notable feature of the VoCP work was the way in which participants developed their views across successive meetings, leading them to agree as a group with the set of recommendations that appear in the the bd Customer Engagement Report[31]. Panel Observer reports noted this growing confidence amongst the participants that they understood what they were being asked to consider, appreciated the challenges of the changing energy market, and were able to consider their own needs alongside those of others.

The Panel believes it is worth noting the involvement of Ausgrid board members and senior staff in some of the VoCP sessions and how this positively conveyed the commitment of Ausgrid to genuinely listen. In turn, Panel members believe this feature of the process instilled greater confidence amongst panellists that their input was valuable and would be listened to.

The material presented to VoCP panellists was influenced by the investigatory work that Nous and other contractors undertook in distilling broader customer concerns. As a result, six themes infused the VoCP engagement: fairness, sustainability, future network, customer experience, resilience, and value for money. These themes were quickly validated by panellists and became the subject of both direct conversation with and amongst the panellists.

Panel members observed much of the VoCP sessions and a copy of member observation reports will be made available to the AER on request. Three members participated in the final session which delivered ten recommendations:

- Advocate and lobby for reform to energy regulations to improve service to customers.
- Incentivise the adoption of cost effective renewable energy, balancing the speed and uptake of technologies, while leading by example.
- Enhanced community engagement and communication.
- Visibility of Ausgrid costs to customers.
- Maintain and improve current emergency procedures.
- Ausgrid to collaborate on research and innovation on emerging technologies and best practices.
- Executing collaborative innovation and research.
- Investing in capital expenditure (capex) to reduce future operational expenditure (opex).
- Influence customer behaviour with a flexible two-way pricing mechanism in order to optimise electricity supply and demand, balancing time of use, time of feed-in, and reliability.
- Review minimum level of reliability of supply[32].

Observing the progress of the VoCP sessions enables the Panel to confidently state that the process by which the VoCP arrived at their recommendations was robust and the recommendations accurately reflect the views and experiences of those who participated.

Individual customer interviews

The Panel is satisfied that the individual customer interviews it helped arrange with Ausgrid delivered valuable authentic feedback that will influence a more customer focussed revenue reset.

[31] Appendix A of the bd Customer Engagement Report.

[32] The Panel acknowledges that the VoCP delivered one minority recommendation seeking Ausgrid implementation of 'best in class cyber security protection.'

The interviews, listed in Appendix B, were arranged with Panel Observer participation and a record was kept by Panel members[33]. Typically, the interviews lasted for between 45 and 60 minutes and followed a script agreed to by Ausgrid and the Panel. Included in the discussion were subjects aligned with the themes identified in the preceding section, namely customer service, resilience, net zero and pricing.

The customer interviews proved valuable for a number of reasons including:

- They provided an unprecedented opportunity for some customers to speak at length about their experiences, both positive and negative, of Ausgrid's service. The conversations revealed that customers often are more concerned about specific customer service shortcomings than they are about cost. A good example of this was the small business owner who expressed frustration that a planned outage shutdown resulted in office equipment not re-starting easily, a phenomenon that customers may sometimes experience because the optimum equipment shut down and restart procedure may not be known to them and has never formed part of the advice provided by Ausgrid to customers in planned maintenance notifications.

- They enabled Panel observers to conclude that occasionally the response of Ausgrid staff involved in the interview, while always respectful, reflected surprise at what they were hearing, perhaps indicative that many electricity distributor staff do not regularly hear the day to day experiences of customers.

- They enabled both Ausgrid staff and Panel observers to appreciate substantial knock-on effects of service shortcomings. One interview stands out with a hospital where staff revealed that a consequence of being unable to access accurate advice on supply restoration time forces them to sometimes cancel the remaining day surgery procedures. The absence of power per se is not problematic as all hospitals run back-up generators. Rather, it is the mandated obligation to always have an active back up supply available. Because the customer in this case cannot access anything other than general advice, and because that incorporates defaulted restoration advice[34], the hospital is forced in the limited time available to it to decide to shut down the surgery list.

- They recognised that the customer relationship nowadays sometimes involves expert intermediaries. Ausgrid needs to consult with this group of businesses to gain a full understanding of its customers' experiences.

Preliminary customer preferences

Most of the customer engagement work undertaken up to the time of this report has been general in nature, focussed on themes and lived experiences. Towards the end of the VoCP engagement, however, panellists were introduced to an online bill impact tool (the ready reckoner) and it assisted

[33] The Panel had not received permission from customers interviewed to publish their details so meetings are described generically in Appendix B.

[34] The Panel understands that Ausgrid, like other distributors, relies upon a long trusted restoration advice protocol; where it can confirm an outage it advises a three hour restoration time. This is an estimate of the time it will take to despatch field staff to undertake a visual inspection of the line, and then arrange for rectification. Even though some restorations are completed quickly, the three hour default advice is provided because Ausgrid cannot more immediately detect the precise location of the fault and estimate the rectification difficulty.

them in expressing some preliminary preferences around future service levels. These are detailed in the bd Customer Engagement Report.

Other customer feedback

As well as seeking input from individual residential and non-residential customers, the Engagement framework which the Panel co-designed included some 'shared experience' customer groups. This grew out of a recognition that some customers gain their impression of Ausgrid's role and value to them as a consequence of a lived circumstance. For some that may be a health condition they live with such as hearing impairment. For others, it is the economic circumstances they endure, such as low income accommodation. For a third group it is the effects of severe weather events, notably floods, fires and severe storms. To accommodate these perspectives, a series of focus groups, deep dives and interviews were conducted and a summary of this part of the customer engagement is provided in the bd Customer Engagement Report. The Panel was able to observe some of this engagement and believes Ausgrid accurately understands the views expressed.

CALD and Indigenous engagement

Engagement and consultation with CALD and Indigenous consumers has not traditionally been a major focus of energy market businesses, agencies and regulators, either as part of a revenue reset process or as part of BAU activities. There have been a few notable exceptions to this, and some have been documented by others[35].

Historically, Ausgrid has, at times, been at the forefront of CALD specific communications, providing translated materials and information in language well before other businesses in the energy market. More recently, Ausgrid has undertaken research with its CALD life support customers[36], provided translated safety material on storms and fallen lines[37] as well as work with SEC Newgate on best practice communication with CALD consumers[38].

Prior to this reset, Ausgrid had not undertaken CALD or Indigenous specific engagement in the preparation of their revenue proposal.

The 2024-29 revenue reset process has seen a marked shift in Ausgrid's commitment and approach generally to consumer engagement and consultation. Ausgrid's focus on working with CALD and Indigenous consumers has been one of the important pillars of the focus on the consumer voice. Ausgrid's catchment has the most diverse (both culturally and by language) consumer base in the nation[39]. Ausgrid's CALD and Indigenous work program is on-going, extensive, iterative and ground-breaking and has been undertaken in consultation and collaboration with the bi-lingual facilitation team at ECCNSW, Indigenous Energy Australia (IEA), Ausgrid staff, consultants and members of the Panel.

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[35] For some examples and case studies, see *Continuing Cultural Connections: CALD best practice in a consumer centric energy market, ECCNSW 2020* https://f1ixhmea.dreamwp.com/wp-content/uploads/2020/10/Continuing-Cultural-Connections-WEB7.pdf.

[36] See *'Ausgrid Life Support Customers – Communication Preferences' – Survey 2017.*

[37] See *'Ausgrid CALD community insights Storm & Powerline Safety Campaign', a part of Ausgrid's Public Electrical Safety Awareness Plan (PESAP)* February-March 2019.

[38] See Ausgrid insights based on SEC Newgate's *'Customers at the Centre Research Project.'*

[39] For a heat map of language data across Sydney see https://lighthouse.mq.edu.au/article/november/namaste!-new-map-reveals-fastest-growing-languages-across-sydney.

Early commitments were made by Ausgrid and they were extensively explored and adapted with the Panel, Ausgrid personnel and those potentially undertaking the consultation and engagement activities. This process provided an opportunity to make the actual engagement as reliable and valid as it could be. In addition, successful collaboration with Endeavour Energy on which languages and communities were to be consulted, provided the opportunity for both businesses to utilise the findings and allows for an even greater level of confidence that the consumer views and opinions gained were valid and confidence that their views can be extrapolated to other communities and language groups who were not consulted this time.

The actual process of engagement and consultation to date has been well documented in the extensive bd Customer Engagement Report, which accompanies the Draft Plan. There were certainly challenges in actually doing the engagement, notably Covid and online mechanisms and these have been more fully detailed elsewhere in this report. CALD and Indigenous engagement has not traditionally been undertaken online and can be challenging for both those consulting and those being consulted. Ausgrid and those undertaking the engagement activities have been able to adapt, flex and pivot as circumstances changed and the Panel considers that the engagement to date has been inclusive, thorough and well executed.

Ausgrid is an industry leader for undertaking specific engagement with Indigenous communities, through its collaboration with Indigenous Energy Australia (IEA). As indicated in the extensive bd Customer Engagement Report accompanying Ausgrid's Draft Plan, 'Ausgrid's engagement with indigenous communities is only just beginning and will be ongoing through and beyond the next price reset[40]. The aim is not to engage indigenous communities on the issues that matter to the business, but instead seek to understand what the needs and aspirations are of those communities so that the business can respond in the ways that have an impact'[41].

Conclusion

The Panel is satisfied that the various forms of customer engagement outlined above generated meaningful and insightful contributions from a wide range of Ausgrid customers, and that these have been accurately reflected in the VoCP recommendations as well as the Panel's Observer reports.

[40] Bd Customer Engagement Report at p.34.
[41] Bd Customer Engagement Report at p.49.

5. Pricing

As we noted in chapter 2, there is common membership between several Panel members with membership of the PWG. The Panel acknowledges that the decision by Ausgrid to release a Pricing Directions Paper simultaneously with its Draft Plan underscores the critical nexus between pricing strategy, the network strategy and achieving Ausgrid's vision. Ausgrid has been consulting monthly with its PWG as it developed its tariff trials and the Pricing Directions Paper. The Panel offers some brief comments only in this report on the Pricing Directions Paper and will work with the PWG on a more detailed response in our next Report on Ausgrid's draft TSS to be lodged with the AER in January 2023.

The Panel commends Ausgrid for its ambition around pricing and its intention to build on the current tariffs to *develop opportunities for retailers and other partners to reward customers for their flexible use of the grid*[42]. There is also the critical fairness lens embedded in the tariff narrative to *manage an orderly transition and to continue to build trust with the community through leadership and a clear commitment to support a fair, affordable, resilient and decarbonised system for the benefit of all*[43].

The Panel has observed that Ausgrid's residential and small business customers (through the VoCP) want Ausgrid to maximise the benefits and opportunities for as many as possible from the introduction of flexible pricing. The VoCP raised their concerns with Ausgrid on several occasions about those who do not have the same opportunities to invest in energy efficient technology e.g. renters and those who live in apartments and embedded networks.

The Panel remains concerned about the slow pace of the roll out of smart meters as this is the critical first step in Ausgrid's customers being allocated to the demand and two way pricing tariffs currently being trialled. In the Pricing Directions Paper (p.9) Ausgrid notes that as at today it only has approximately 160,000 residential and small business customers on demand tariffs and the Panel understands from PWG discussions Ausgrid has around 1 million customers on non-smart interval meters.

The Panel acknowledges the leading role that Ausgrid played in arranging the joint consultation with the AER and customer advocates on the tariff trials currently being run by Ausgrid, Endeavour and Essential. The Panel welcomes this as another example of constructive collaboration between the 3 NSW networks and encourages Ausgrid to share the learnings of its tariff trials with other DNSPs.

The Panel is looking forward to the results of Ausgrid's three tariff trials:

- the Energy storage tariff (Pricing Directions Paper p.38) specifically for community batteries will provide valuable insights into how community batteries can be incentivised to provide network support services. We discuss in chapter 7 the potential for community batteries to be used to avoid additional growth expenditure;
- the flexible load tariff (Pricing Directions Paper p.39) is critical given the expected acceleration of EV take up pursuant to the NSW Government's EV strategy, discussed in chapter 10, between 2024-2030 and the potential demands charging these EVs will place on the network; and

[42] Pricing Paper at p.4.
[43] Pricing Paper at p.4.

- the Project Edith dynamic network prices tariff (Pricing Directions Paper p.39) which will continue to provide critical learnings on how Ausgrid can offer dynamic pricing to customers and aggregators.

The Panel has been made aware of the importance of the improved opportunities that will be available to Ausgrid in 2029-34 to introduce dynamic and other innovative pricing options in 2029-34 as a result of the roll out of the major ERP ICT project discussed in chapter 9. Panel members have been encouraging the Ausgrid pricing team to articulate these benefits from the ERP as part of the ERP business case modelling.

We set out below some additional observations on the opportunities for customers in the proposed Pricing Directions Paper and recommendations for the draft TSS in January 2023.

Tariffs a foundation for a future network

The Panel believes that the development of new innovative and future focused tariffs provides the foundations for the future energy system. This is not only within the distribution network but will also allow consumers and their intermediaries to utilise consumer and other DER that are available in the system optimising financial, social and environmental outcomes. Ausgrid has a critical role to play here as it is the intermediary (the gateway if you like) between load and generation at the household level and the broader wholesale electricity market.

An example is EV tariffs. We consider it is important that tariffs be cost reflective from the start. These tariffs should reflect actual costs of provision, not be an instrument of cross-subsidy to support the expansion of EVs that end up being inequitable to the vast majority of Ausgrid's customers who do not own an EV. It may be very difficult to reverse inequitable EV tariffs in the future when the numbers of EVs expand.

Value stacking

The Panel believes that the tariff narrative needs to be broader and, where possible, it should lift up and highlight where "value stacking" is occurring. This shows the depth of the value proposition that is being offered to consumers. For example, innovative future focused tariffs, provide a platform that allows new markets to be developed to enable customers to derive greater value from their investments in technology – this is discussed further in chapter 7. In addition, new tariffs can provide a platform for the implementation of dynamic operating envelopes and lifting up the distribution system operator function and provide the opportunity to deliver greater resilience to the community to name a few.

Concessions and complementary measures

The Panel also recommends that Ausgrid focus on the distribution customer impacts of the introduction of new tariffs and how that relates to New South Wales government complementary measures. These complementary measures include electricity concessions and other social supports, and other public policy and programs and programs such as energy efficiency, solar and other subsidies.

In doing this Ausgrid will gain valuable insights into the relationship between their proposed changes and the impact that this will have on the efficacy of other public policy programs external to Ausgrid. It will also enable Ausgrid to provide very valuable advice to the New South Wales Government and will help to ensure that its policy levers are responsive to changes that are happening within the energy market and the distribution system. This will help ensure a smooth transition for all consumers.

Future costs and impacts on consumers

A critical work stream to be undertaken in 2023 is to get a greater understanding of the distributional pricing impacts on consumers of both the Roadmap, and the ISP as this is rolled out. This is discussed further in chapter 10.

The Panel believes that these costs will have a material impact on consumers' bills. As a result of this it will shape how consumers react in the future and it may drive an increased uptake of DER and result in the need to be more flexible in delivering particular products, services and innovations to Ausgrid's customer base. This could include: information on how consumers could best manage their consumption to avoid or reduce these cost impacts, the promotion of government supports and complementary measures including concessions, energy efficiency and appliance rebates, the provision of portals or other platforms so people can access information about their consumption and energy use, and in the medium to long-term development of dynamic operating envelopes and other service offerings.

Ongoing information and education

As changes in tariffs are introduced, there needs to be a coherent and ongoing information and education campaign within the broader community to garner support for these reforms.

The Panel noted that in the initial consultations undertaken by Ausgrid with both the VoCP and other stakeholders there was much reluctance to explore changes within the pricing frameworks. However, as participants gained more detailed information on the rationale for the changes and the opportunities that this created for consumers, the Panel observed views and preferences changing significantly towards support.

This suggests that there will need to be a thoughtful and ongoing work program developed by Ausgrid that reaches out to the community. The aim of this communications program should be to enter into a detailed dialogue explaining the opportunities of future pricing platforms, the rationale for these pricing platforms and the benefits both individually and at a societal level that these changes will deliver.

6. Resilience

The importance of resilience in discussions with Ausgrid and in engagement

In chapter 5, reference was made to six themes which were identified in early research and subsequently resonated with customers when engagement commenced. One of them coincided with a broader discussion and gave life to a separate program of work. In contrast to Panel members' past reset experience where resilience was not a topic at all, it was a key topic from the start of the Panel's work.

Shortly after agreeing that resilience was a justifiable theme for the ensuing customer engagement dialogue, the Panel was introduced to work that Ausgrid had commissioned KPMG and Risk Frontiers to undertake concerning the exposure of its asset base to specific climate risks. The Panel was advised that this work had been commissioned to meet a key Board priority[44].

Panel members subsequently received further advice on the modelling framework and exposure data and responded by encouraging Ausgrid and KPMG to better align the model to the historic performance of distribution assets. An example of what Panel members felt was a limitation in the modelling was the limited extent to which it appeared to not make any allowance for Ausgrid's tolerance of threshold exceedance. By this the Panel sought to contrast what the model would likely recommend as a future investment with the historic tolerance of assets that may have been damaged by weather events but still performed satisfactorily and had not required replacement. Without this scrutiny, the Panel felt that Ausgrid's asset investment program would be less likely to gain the AER's approval.

The Panel also proposed to Ausgrid an alternative way of modelling climate risks. Rather than approach the question looking at higher risks across all assets, it was suggested that starting with asset classes and considering risks specific to them might be a more accurate method - an example being the initial consideration of all ground level assets and what a higher incidence of inundation would mean for them.

At the October Ausgrid/ RCP resilience work stream session, the Panel discussed in detail KPMG's model and its use of ESCI[45] recommended projections of RCP 4.5 and RCP 8.5. The project delivered high resolution climate projection data across the national electricity market at sub-daily intervals to the year 2100. The project has also tailored guidance and insights to enable the electricity sector to assess climate risks and to plan for the future with greater confidence. The Panel accepts the value of ESCI data but was still seeking a connection with the likely impacts on different asset classes.

By mid-November Panel members recognised that while resilience had gained currency within discussions, there was no corresponding shared understanding amongst those using it as to its exact meaning and context. This was a problem insofar as the AER remained the final arbiter on revenue resets and had not to that point in time indicated how it would treat distributor arguments for additional revenue in order to maintain or achieve more resilient networks.

The Panel sought clarification from Ausgrid on what it believed was the distinction between resilience and reliability. Panel members also stressed that while an expectation of increased severe

[44] In the first meeting between the Panel and Ausgrid's Board on 1 October 2021, the Ausgrid Chair confirmed to the Panel that a key strategic priority for the Board was the need for Ausgrid to adapt to the impacts of climate change and the expected increase in severe weather events and to develop a program to maintain network resilience and that staff had been tasked with the Climate Impact assessment exercise.

[45] ESCI is the Electricity Sector Climate Information project that was developed by the CSIRO, the Bureau of Meteorology and the AEMO. See https://www.climatechangeinaustralia.gov.au/en/projects/esci/about-esci/.

weather events was well founded, it was more accurate to describe the future trend as involving an increased frequency of climate and severe weather events rather than frequent severe weather events.

Ausgrid briefed Panel members in December that it was leading a collaboration with five other networks to develop a joint network paper on resilience. At the same time, the Panel challenged the NOUS presumption that appeared to directly link customer support of a more resilient network with a willingness to pay more for electricity supply. Members felt this linkage could only be predicated on something that was beyond Ausgrid's capacity to deliver, namely that additional investment would produce a lessened outage period following a weather event in that specific locality.

The upside of this session was the production of data regarding fire starts from network assets. This material encouraged the Panel to subsequently request Ausgrid to separate investment that might reasonably mitigate fire starts from the remaining resilience discussion as the former pertained to a long standing and serious electricity distributor obligation. Separately, the Panel felt an evidentiary base linking changing climatic conditions and their impact on assets would assist in better understanding the need for future resilience based investment. This was consistent with discussions between Panel members and AER staff.

The need for an agreed resilience investment framework

In January 2022, Ausgrid joined with the other five networks in publishing the *Network Resilience – 2022 collaboration paper*. In early February TasNetworks, on behalf of the distributors involved, hosted an on-line discussion of the paper, attracting a large audience. The Panel participated in the discussion and subsequently prepared a submission to Ausgrid on 2 April 2022 as part of the consultation on the paper[46]. A few weeks later in April 2022, the AER issued its guidance note on the key issues of network resilience[47] (the AER Resilience Note).

The Panel is also aware of increased Government focus on the adequacy of network responses to the impacts of climate change[48]. The Panel was concerned that in the absence of the AER and customers supporting a 'resilience investment strategy' that the NSW Government might intervene and impose a licence condition on Ausgrid leading to another round of gold plating and inefficient expenditure being imposed on consumers.

As the Panel considered the AER Resilience Note it became apparent that a duality was opening up on the broad subject of resilience. On the one hand there was discussion involving distributors with reference to local and state government and some customers via interviews and the VoCP. This appeared to interpret it as a new category of investment proportionate to the rising concern about increasing climate change induced severe weather events on the network and, consequently, customer supply. On the other hand, the AER, through its BRH and the AER Resilience Note, restated the primacy of the National Electricity Rules and the need for resilience related investment to fit within those rules.

The Panel came to the view that it needed to present Ausgrid with what it believed was an appropriate method of working through the advice available to us so Ausgrid could formulate an investment proposal that the Panel believed was capable of acceptance by the AER. Ausgrid willingly joined the Panel in formulating an agreed pathway to an agreed investment framework. Ausgrid

[46] The Panel will provide a copy of its submission to the AER on request.
[47] See https://www.aer.gov.au/system/files/Network%20resilience%20-%20note%20on%20key%20issues.pdf.
[48] See for example the Victorian Electricity Distribution Network Resilience Review Expert Panel Final Recommendations Report May 2022.

proposed that Ausgrid and the Panel co-design an investment framework for resilience decision-making. Through mid-2022 this has become known as Ausgrid's Resilience Investment Framework (the Resilience Framework)[49].

The Resilience Framework has been under development since April 2022 and has involved a significant time commitment from Panel members, the Total Environment Centre[50] and many Ausgrid staff in externally facilitated workshops, drafting and joint review sessions. The Panel is very pleased to support the release of the Resilience Framework for further consultation as part of the Draft Plan. The Panel will be supporting Ausgrid in this engagement.

Ways customers are protected in the Resilience Framework

Some of the important features in the Resilience Framework that demonstrate customers will be at the centre of Ausgrid's resilience decision-making include:

- the Resilience Framework builds on the AER's Resilience Note;
- it is a flexible forward looking framework that can adapt as climate modelling and future risks become clearer;
- it takes a risk based approach focussing on the most at risk areas of the network and community;
- it encourages flexible modular solutions;
- in 2024-29 Ausgrid will partner with others to assist local communities to identify their own vulnerabilities and develop their own local resilience plans;
- Ausgrid must establish a link between the modelled risk and likely impact on its network performance in the specific geographic areas;
- Ausgrid must explore all possible solutions including non-network and community based solutions;
- Ausgrid will test the design and scope of any investments with the local community;
- network solutions must be based on a CBA that demonstrates that the investment will reduce the modelled risk;
- where benefits are uncertain the technology will be tested and piloted through NIAC;
- Ausgrid must engage on the balance of proactive/reactive investments and confirm customers' willingness to pay for localised improvements;
- CCC/NIAC oversight will ensure accountability; and
- Before 2029 Ausgrid and the CCC will do a full post implementation review (PIR) on the effectiveness of the Resilience Framework as well as of the program of resilience activities and investment funded as part of the 2024-29 reset.

Building community resilience

A core concern for the Panel during the resilience discussions has been around the boundaries of Ausgrid's role – i.e. Ausgrid should not become responsible for supporting community resilience beyond what it ought reasonably to do as a provider of essential network services. Accordingly, the Panel made a series of requests to Ausgrid to develop partnerships and review the maturity of its communities. The Panel acknowledges that this is a difficult task given the multiplicity of Federal, State and local agencies involved in the resilience planning and disaster recovery space, the uncertainty surrounding the future of Resilience NSW and the recently announced recommendations to be implemented following the Government's 2022 NSW Flood Inquiry. This led to a focus on the need for local communities to develop a bespoke local resilience plan.

[49] In the Draft Plan Ausgrid refers to this as the Climate Resilience Framework.

[50] The Panel would like to acknowledge Mark Byrne's significant contribution to the development of the Resilience Framework.

Ausgrid is concerned that its most at-risk communities may also be some of its most vulnerable communities and that those communities should not be disadvantaged by the lack of preparedness or funding to prepare that community's local resilience plan. Ausgrid has engaged AECOM to do a gap analysis on resilience planning and the Panel has been observing some of the interviews with key stakeholders. The Panel considers that this preparation is critical to support the opex step change for community resilience in the Draft Plan. In our next report, the Panel will review Ausgrid's progress in developing partnerships and understanding community resilience in more detail. Ausgrid has provided the Panel with an interim update in Appendix C.

Assessing the proposed resilience investment

Ausgrid has included a proposed totex investment of no more than $204m in its Draft Plan (p.29). We understand that this comprises $25m in an opex step change to support community resilience (including $5m for increased mobile response resources) and $179m in capex investment with $66m of the $179m being repex in nature. A number of possible solutions are provided at Figure 4.01 of the Draft Plan (p.29) including:

- Installing stronger powerlines in areas with large amounts of vegetation, potentially in partnership with local councils; and
- in anticipation of additional storms, maintaining existing levels of storm response capabilities by investing an additional $5 million per annum.

The Panel will review a sample of business cases for this expenditure and report on them in our next report. The Panel has been briefed on the proposed Council aerial bundled cable co-funding model and we have expressed our concerns that the current trigger for investment does not appear to be based on urban heat map climate science data as would be required under the Resilience Framework.

In relation to the opex step change, we are keen to also see how this has been costed and the benefits for customers. The Panel believes that opex (not exceeding the proposed $25m) will be required in 2024-29 to:

- assist with the development of community resilience planning and the development of partnerships as discussed above;
- for additional mobile response resources which was discussed and supported by the VoCP in their deliberations; and
- for innovation for research, trials and pilots to quantify benefits of proposed solutions.

We have agreed with Ausgrid that we will be discussing the vision, scope and detail of the $204m resilience expenditure category over coming months and into 2023. This is not surprising as this is a new capex program for Ausgrid in 2024-29 and is in fact industry leading as far as the Panel is aware.

In 2023 Ausgrid will need to keep validating that its proposed resilience program aligns with consumer preferences and priorities. Engagement will also be needed to confirm support for any resilience program in light of the energy and wider economy conditions at that time.

7. DER Integration

Forecasting the uptake of new technologies by consumers

The 2024-29 regulatory period will see a significant increase in consumer investments in behind-the-meter and other localised distributed energy resources (DER). This is leading some to describe the future potential of DER as a consumer driven network enabling a consumer driven energy future. Recently there has been a push by some customer advocates to describe these investments and customers' load more generally from the customers' perspective as 'Customer Energy Resources' . In this report the Panel continues to use the term DER as that is the term used by Ausgrid, other networks and the AER.

That said, the Panel recognises that customers are increasingly investing in new equipment and indicating a desire to change behaviour to take advantage of new opportunities, incentives and price outcomes. It follows, in the Panel's view, that customers are best respected by Ausgrid and other distributors when their actions, rather than an isolated focus on the needs of the grid, provide the lens through which future DER investment is shaped.

Future customer investment will be driven by a number of factors including but not limited to:

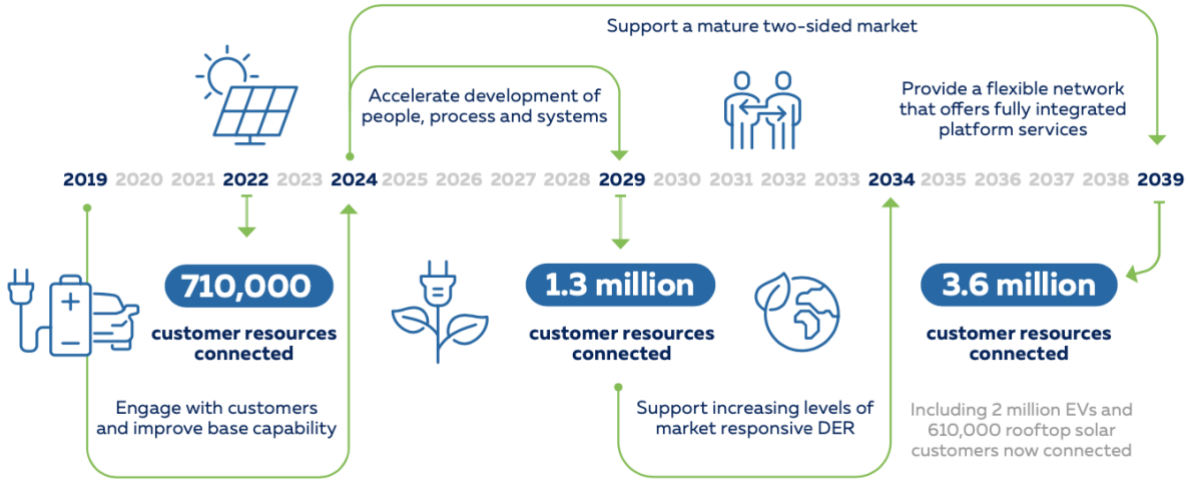
- availability of new appliances including EVs, smart appliances and household batteries;
- new technologies;
- households desire to reduce their emissions footprint;
- households desire to control rising electricity bills;
- exit of the use of natural gas as a home heating and cooking source; and
- State and Federal government policy objectives and supports to drive investment by individual consumers.

These factors will see an increase in the uptake of EVs, roof top photovoltaic systems (PV), home and community batteries. As new appliances continue to be purchased and used by households, they will be accompanied by an increased number of digital meters allowing for greater visibility and understanding of changes not only by distributors but consumers and third parties. In turn this will accelerate the convergence of various technologies enabled by the consumer data right (CDR)[51] such as telecommunications and electricity, leading to the 'digitisation' of energy services.

The extent of these household investments will be significant. Ausgrid's DER forecast predicts an increase from the relatively low penetration of rooftop solar/PV (220,000), EVs (3,000) and other resources such as controlled hot water load (totalling 710,000 resources in 2022) to 1.3 million by the end of the 2024-29 regulatory period. Ausgrid further predicts this total will almost treble in the subsequent decade to 3.6 million by 2039. This is represented in Ausgrid's Draft Plan in Figure 4.2.2 (p.46).

[51] For more information see https://www.energy.gov.au/government-priorities/energy-markets/consumer-data-right-energy.

Figure 4.2.2 Potential roadmap for DER integration to enable the transition to net zero



Note: Customer rescources include rooftop solar, storage, electric vehicles and controllable loads like hot water.

The Draft Plan (p.18) notes that these potential DER forecasts are based on AEMO's step change scenario. In order to translate the AEMO forecasts for Ausgrid's network area further forecasting and refinement of the modelling is needed. The Panel understands that the aim of this modelling is to use customer segmentation to allocate the forecast uptake within localised network areas of interest to predict potential impact on specific parts of Ausgrid's network from these resources.

In June 2022 Panel members engaged with Ausgrid's Council Innovation and Sustainability Working group discussed the charging typology modelling and its further disaggregation into forecast demand profiles across residential, fleets, buses, DC Fast charging and car parks. Panel members concluded that the modelling complexity makes it difficult to form a view on precise network impacts and that the AER is best placed to test the assumptions and sensitivity used in the modelling.

It is also clear that forecasting energy demand is challenging given the pressure from the NSW Government to accelerate the electrification of public transport. In 2021 the NSW Government announced its intention to have the entire NSW bus fleet converted to zero emission vehicles with Greater Sydney transitioned by 2035, outer metropolitan regions by 2040 and regional NSW by 2047[52]. The plan presents challenges as some existing depots are further from substations and may require more major work to facilitate charging point installation. Ausgrid has advised the Panel that work is underway in accommodating the policy change but anticipates that further demands will be placed upon it in coming years to fulfil the Government's plan.

Deriving value from these resources – a customer's perspective

Investment in new resources will be undertaken at a time when the cost of electricity is expected to be significantly higher than what it was during the period when the majority of engagement underpinning this Draft Plan was undertaken. As noted earlier, the Panel is acutely aware that the higher electricity costs are part of a broader inflationary environment affecting essential and nondiscretionary goods and services, aptly described by Ausgrid as a time of significant economic upheaval[53].

[52] See https://www.transport.nsw.gov.au/projects/current-projects/zero-emission-buses.
[53] Draft Plan at p.54.

We expect these price rises (both electricity and wider economy driven) will provide a strong incentive to consumers to increase their investment in DER to minimise their exposure by increasing their investment in DER. In turn this will lead to increased expectations on Ausgrid to facilitate that increased investment.

This DER future creates a significant opportunity for Ausgrid if sound decisions are made now. However, there are also significant risks for Ausgrid if it fails to act strategically and fairly without a clear focus on customer outcomes. These risks arise if Ausgrid doesn't respond with sound policy foundations enabling customers and communities to 'plug and play' with their energy future. There are also risks if Ausgrid lays a foundation that is unfair to those who may not have the same access to these opportunities during 2024-29 while the energy system adapts to much greater two-way flow. The risk is manifested in the form of significant consumer backlash, political interference and loss of social license.

Ausgrid best mitigates the risks described above by articulating a clear vision in the 2024-29 regulatory reset and beyond it into the 2029-34 period. This vision should include how it is planning for the future, the tools it will be using to enable this future and the opportunities all consumers will have to find additional value. In short, a vision for a smarter distribution network, a future that serves the community.

This vision needs to include details of the technical infrastructure and architecture that will underpin it. As mentioned in chapter 5, the pricing platforms that will be available to households and their agents to optimise the value of these DER resources are critically important, both in additional value they receive directly as well as indirectly via societal benefits such as emission reduction, increased utilisation and avoided costs.

DER and net zero

The Panel has observed that the concept of DER integration is best understood by customers in the context of their desire to achieve net zero by 2050. It is also referred to by Ausgrid in the same way for example in its recently adopted vision: *Communities to have the power in a resilient, affordable, net-zero future*[54]. This linkage is reinforced in the welcome letter to the Draft Plan (p.9) from the Ausgrid Chair and CEO:

Through this engagement our communities are telling us they expect an affordable, resilient and net zero future. This Draft Plan outlines a range of potential responses we are considering, including: …

- *Readying the grid for further customer uptake of technology such as rooftop solar, batteries and electric vehicles, and supporting a fair transition to net zero; and..*

The opportunities that arise for customers from a well-managed and staged DER integration plan include:

- the ability to access and extract additional value up and down the supply chain such as in the wholesale market;
- the ability to reduce investments needed in other parts of the supply chain such as unnecessary transmission and large scale generation builds;
- a more resilient network enabling households to 'island' at times of network outage;

[54] In the first meeting between the Panel and Ausgrid's Board on 1 October 2021, the Ausgrid Chair confirmed to the Panel that a key strategic priority for the Board was the need for Ausgrid to develop its capability to be a platform to support the integration of DER consistent with the NSW Government's net zero policy.

- the entry of new service providers facilitated by the introduction of the CDR creating new services to meet consumer demand; and ensuring there is the opportunity for consumers to extract additional value from the distribution network and support the distribution network to the energy system as a whole.

In this vision consumers will be deeply interwoven into the into the minute-by-minute operation of the distribution network some proactively but most likely through the outsourcing of their resources (including discretionary load) to aggregators, retailers and new service providers.

If Ausgrid plans and implements this foundation well it will form a key part in not only realising the value to consumers but providing the social license for the network to assume the role of a trusted distribution system operator (DSO). With this comes the ability to offer and use many tools including dynamic operating envelopes, direct load and injection control and other future services.

The Panel has had the opportunity to review Ausgrid's detailed DER Integration plans, the principles underlying its plans, the development of its DSO plans through Project Edith, the community battery trials overseen by NIAC and other innovation trials. We have also encouraged Ausgrid to present the spectrum of responses available to it for dynamic network management in the face of localised congestion challenges as a hierarchy so that all opportunities are explored, documented and implemented before additional capex is used.

The Draft Plan includes a very brief summary of Ausgrid's DER plans and vision referring in 4.2.1 (p.44) to the five principles that underlies its investment and in 4.2.2 (p.47) to its seven steps to dynamic network management. We encourage Ausgrid to share a much richer version of this vision in its January proposal from two perspectives:

- primarily from the customer's perspective on how Ausgrid is doing everything to assist all customers to benefit from the investment made by some customers in DER, and
- from Ausgrid's perspective as it seeks to manage the network with increasing two-way flows.

Innovation and community batteries

Ausgrid currently has 3 community batteries as part of a trial[55]that is being overseen by NIAC. The Panel is very supportive of the work that Ausgrid is undertaking to prove the technical and commercial viability of community batteries through this trial. In May 2022 the Panel made a submission[56] to the AER in response to the AER's Preliminary Position paper on Ausgrid's F and A. The Panel's position is to support Ausgrid being able to use/lease excess community battery capacity during the proof of concept stage between 2024-29 for batteries where their predominate purpose is the provision of network services. The Panel believes there is the potential for community batteries to offer significant advantages to Ausgrid customers[57] as a cheaper alternative to network upgrades.

The Panel agrees with Ausgrid's conclusion in its Draft Plan (p.45):

Our Voice of Community Panel is telling us that they strongly support innovation such as our distributor-led community battery trial.

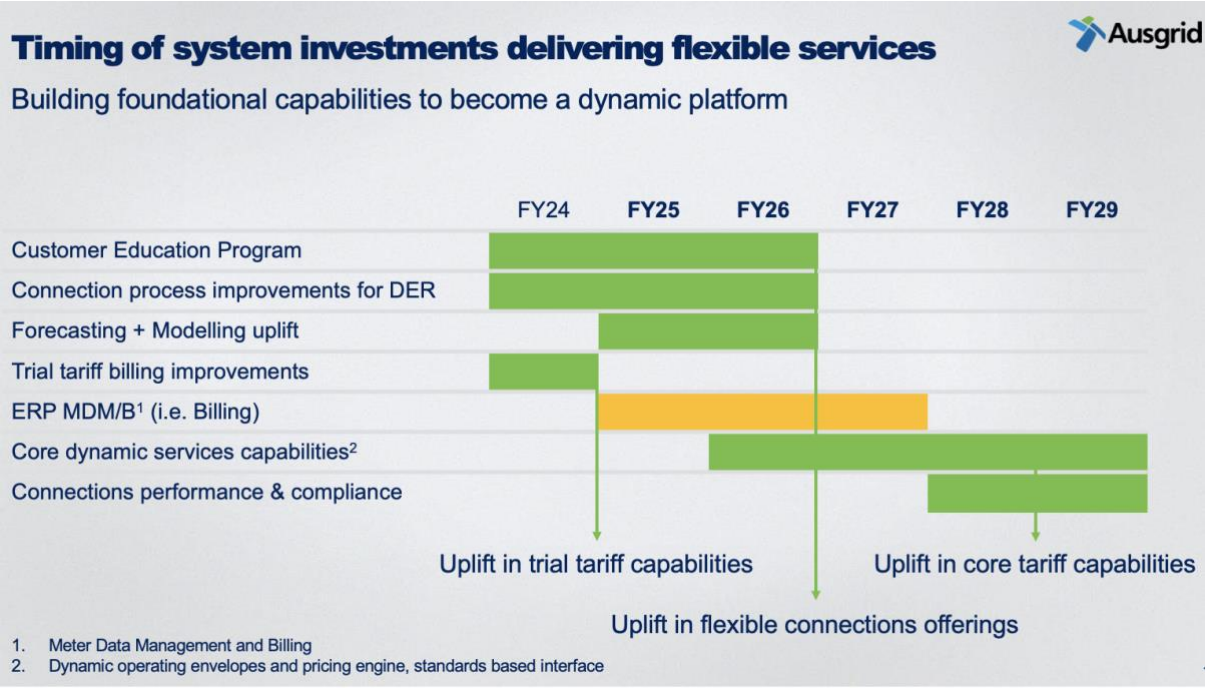
[55] See https://www.ausgrid.com.au/In-your-community/Community-Batteries.
[56] The Panel's 20 May 2022 submission can be found here.
[57] The Draft Plan at p.11 refers to participating customers saving up to $200 per year.

The Panel observed that the VoCP panellists were excited about the potential for community batteries to play an important role in the progress towards net zero and were very supportive of Ausgrid pursuing regulatory reform to enable Ausgrid to maximise the potential value of these resources including the potential for customers to donate surplus energy to other local community members. The Ausgrid trial and proposed pilot of community batteries in 2024-29 will provide important learnings for the Federal Government's commitment to roll out over 400 community batteries nationally[58]. As part of reviewing the business cases for community batteries in 2024-29, the Panel will be seeking information from Ausgrid about the extent to which Federal funding might be available for the roll out of community batteries in Ausgrid's network area during 2024-29.

Assessing the proposed DER Integration investment

Ausgrid has included a proposed totex investment of $153m (p.14 Regulatory Appendices). We understand that this comprises $34m ICT investment for the platform and the foundation noted earlier, $96m of augex (including $26m for dynamic network management devices such as community batteries) and the Smart meter data opex step change of s$23.5m. The Panel has not yet reviewed these business cases and has agreed with Ausgrid that we will be discussing the vision, scope and detail of this expenditure category in our next report. This is not surprising as this is a new capex program for Ausgrid in 2024-29, though not a first for electricity distribution in the NEM with SAPN and Victorian DNSPs having DER capex previously approved by the AER.

The Panel is keen to work with the PWG to review the scope and benefits of the $34m ICT investment and how it aims to build the platform that we have described above. The following slide was included in a presentation to the PWG on 5 August 2022 and sets out Ausgrid's plans to develop its system capability during 2024-29 to be ready for its important DSO role in 2029-34 and to support the introduction of dynamic pricing in 2029-34.



The Panel will be approaching the analysis of the modelling of Ausgrid's proposed expenditure up to $153m looking for the following outcomes:

[58] Powering Australia at pp 22-23.

- use of the AER's methodology for calculating the value of Customer Export Curtailment (CECV) in Ausgrid's cost benefit analysis. The Panel supports the AER's methodology at this stage, although we note that Ausgrid like other networks believes that the AER's CECV methodology does not forecast future market conditions. In the Draft Plan (p.44) Ausgrid has indicated that it is considering proposing a higher CECV in its January 2023 proposal than the one in the AER methodology. Appendix D discusses why the Panel favours the AER methodology;
- consistency with the AER's recently released DER Integration Expenditure Guidance note (June 2022);
- the risk of curtailment in Ausgrid's network in the 2024-29 period should not be exaggerated given the low penetration of DER in 2022, the low network utilisation, the decline in available feed-in-tariffs in NSW, Ausgrid's proposed introduction of export charges (albeit at a low level) and the best economic use of self-generated energy generally pointing to self-consumption rather than export;
- maximisation of the smart meter data in the opex step change to reduce curtailment and to support customer education to extract maximum value from their investments in DER;
- the ability for Ausgrid investments to provide multiple value streams to consumers, that is investment in new systems and capability that has the ability to support a DER future;
- the impact of the current tariff trials and implementation of innovative tariffs that provide the foundation for the development of future markets and service offerings; for example, what will be the impact of two way tariffs and other demand and time of use tariffs that are being designed to encourage export/consumption in the middle of the day?;
- where investments are made to improve network resilience, they are built with the aim of enhancing local DER to optimise local outcomes; and
- the expected impact on Ausgrid's network utilisation.

In coming months Ausgrid will need to keep testing consumer preferences and support for its proposed program in light of the prevailing energy and wider economy conditions at that time.

Additional Panel recommendations to maximise value in DER integration investment

The Panel has the following additional recommendations for Ausgrid as it further costs and develops its DER integration plans in 2023:

- Discussion about the risk of curtailment should be contextualised in the steps that Ausgrid will be taking to support consumers in making the best economic decisions for them. In most cases the Panel believes this will be self-consumption.
- Ausgrid support an industry/government information and education campaign to inform the community about how to optimise their DER.
- The Panel also believes that there needs to be an education campaign for load only households so that they are encouraged to request their retailer to supply them with a smart meter so that they have the opportunity to shift to the new tariffs with reduced rates during the middle of the day. The Panel remains very concerned about the slow roll out of smart meters in NSW.
- A timetable for the visibility of localised constraint maps so that customers might understand what capacity different parts of the network can host. This is also relevant to industrial sites seeking to undertake upgrades, where capacity may be limited.

- An explanation of how the ICT investment can support some of the issues we have raised in this chapter at no additional costs.

The Panel acknowledges that customers have made it clear they expect Ausgrid to facilitate the transition to net zero in a proactive, prudent and fair manner. Customers are seeking a future where they not only have the opportunity to extract additional value from the assets they have purchased, but share their assets locally. They want Ausgrid to be central to their community's energy future through the deployment and management of community batteries. If this is done well the Panel believes Ausgrid's DER integration program will improve utilisation of the network, make the benefits accessible to many more consumers, reduce energy costs and assist in identifying those customers who, notwithstanding the efforts by Ausgrid to manage fairness, require Government support in the transition.

8. Customer service and Ausgrid customers' lived experience

Integrating BAU customer engagement with the engagement framework

As part of designing the Engagement framework, the Panel first sought to understand consumer feedback to Ausgrid via its contact centre and other channels including EWON complaints. The purpose of this was to better understand past and current pain points.

Through these requests the Panel gained a greater insight into the level of, and the sophistication to which, Ausgrid was using its existing data sets and consumer feedback platforms to meet and better respond to customer needs.

Ausgrid has advised the Panel that it has made changes to the way it internally deals with these issues and responds to information streams. This has resulted in improved customer service, understanding of the nature of the issues consumers face and its response capacity. In its next report the Panel plans to publish a number of case studies demonstrating the progress Ausgrid has made in responding to customer concerns and removing identified pain points.

What do customers want from Ausgrid?

Better outage and restoration information

The Panel has repeatedly and consistently observed customers desire accurate and frequent information about restoration times for both planned and unplanned outages. In many cases customers said they preferred to receive this information by SMS with the Ausgrid website as a very useful back-up[59]. Feedback on this issue revealed some frustrating gaps. For instance, many customers reported not receiving text messages at all and Ausgrid advises that this is because these mobile phone contact details are held by retailers. The VoCP was particularly focussed on this issue and gave a specific recommendation to Ausgrid on this point. Others were very focussed on the fact that updates were not made regularly with outage information remaining at 'expected restoration in six hours' for long periods without being updated.

One customer in Merriwa highlighted that customer service both in outage restoration times as well as frequency and timeliness of SMS messages can be improved in the regional parts of Ausgrid's network. In that instance the power had been restored before they received SMS notification updating the restoration information.

During the VoCP deliberations Ausgrid responded to the request from customers to improve the accuracy and responsiveness of outage restoration information through an ICT investment, including the development of APIs which were specifically requested by at least one large customer. The key issues that the Panel observed in the VoCP discussions was that Ausgrid had not been able to properly articulate the customer benefits of its investment for the residential and small business customers. We discuss this further below. So a common question the Panel observed was:

What would customers receive for the proposed investment?

Would they receive hourly notifications about restoration times?

Customers expressly rejected the use of chatbots and it is pleasing to see that Ausgrid has listened to this feedback and dropped this investment in its Draft Plan. What is critical from a customer point of

[59] Some customers who had recently experienced a prolonged outage as a result of a severe weather event observed that SMS updates and website information were of no use without access to a community hub or charging facility to maintain access to communication. This feedback supports the provision by emergency responders (including Ausgrid) of community hubs during prolonged outages.

view is for Ausgrid to be able to describe precisely the value that customers will receive from any investment.

The current Draft Plan includes a $20m investment for improved customer service. The Draft Plan (p.34) summarises the customer benefits as –

…*Faster unplanned outage communications that provide more accurate estimated restoration times; and SMS updates about planned outages progress, including forecast timing and estimated restoration times*.

Based on our observation of the engagement to date, the Panel expects that these types of benefits will be welcomed by customers in Ausgrid's future engagement. However, we also anticipate that customers will be looking for very specific and tangible details (frequency, dollars or minutes) about the improvements in outage notification, rather than vague expressions of 'faster outage communications.' As this is a preference consistently and highly valued by customers the Panel recommends that Ausgrid reviews its outage notification processes and planned improvements to see if there is anything else that can be done (whether manually or automated) to improve the collection of information from its field staff and the updating of feedback to customers. We think customers would value a case study on Ausgrid's outage communication strategy setting out the steps that Ausgrid has taken so far in this regulatory period and those it plans to take between now and 2029, along with the foreshadowed quantifiable improvements. The Panel believes that this would be an important engagement tool to support the January proposal.

In relation to connection improvements, the Panel has observed that this is a frustration, particularly for large customers and has been raised as a priority area for Ausgrid to attend to. The Panel has asked Ausgrid to review the baseline in the CSIS to ensure that the improvements from the $7.5m investment in customer information systems is reflected in the base line to avoid double reward under the CSIS for achieving improvements in delivery of complex connections. The next section details the Panel's approach to improving the current CSIS.

Councils

In Ausgrid's engagement with Councils that the Panel has been involved in and observed, there has been acknowledgement of the significant effort Ausgrid has made to improve its relationship with councils, particularly around the provision of street lighting. However, further improvement is sought by councils in relation to vegetation management and Ausgrid's responsiveness to applications for Tiger Tails[60] and outages connected with development. The Panel received positive feedback from Sutherland Shire in relation to the No Go Zone vegetation management trial and acknowledges the effort of numerous Ausgrid staff to improve the efficiency of this service. At the same time the Panel heard instances of Councils waiting up to eight months for a Tiger Tails applications.

Designing CSIS

From an early point in our discussions with Ausgrid the Panel expressed an interest in developing a more demanding customer service incentive, noting the current incentive of exceeding a set percentage of customer calls is well below broader customer expectations of service. Discussion continued throughout the year and Ausgrid was supportive of designing a more demanding

[60] Tiger Tails are highly visible yellow and black insulated protective sleeves placed over low voltage conductors in close proximity to work sites. They are a mandatory safety feature designed to minimise the risk of electrocution. An application must be made to Ausgrid for the tails to be installed.

Customer Service Incentive Scheme (CSIS). A series of meetings with the Panel focussed on whether the CSIS model adopted by AusNet Services in its most recent revenue proposal, comprising four elements, was appropriate or whether something even more ambitious could be achieved, including a metric relating to the quality of service given to CALD customers.

Customer interviews revealed a low level of understanding as to how customer incentives work within the NER but Panel members observed the interest customers had for improved customer service.

At this point in time the Panel's discussions with Ausgrid have advanced to a prospective CSIS comprising five elements:

- Planned outage management (urban)
- Planned outage management (regional)
- Unplanned outage management
- Improved complex connection timeframes
- Complaint resolution timeframes

Ausgrid's at-risk revenue under the proposed CSIS, consistent with the AER's ceiling of 0.5% of total revenue, is around $9m per annum. Panel members recognise a key attraction of a an enhanced CSIS: by exposing a substantial amount of future performance the scheme requires a number of people within the business to be more responsible for customer facing processes than has previously been the case. In the Panel's view this will help reshape workplace culture to the benefit of customers.

The CALD strategy

Challenges, limitations and opportunities for CALD and Indigenous engagement

CALD and Indigenous engagement can be more challenging than other forms of customer engagement.

Bespoke engagement can be, and mostly is, more expensive and complicated than more traditional approaches. CALD and Indigenous consumer engagement is no exception. Budget constraints and the sheer 'newness' to Ausgrid of the bespoke consultation activities they have proposed in this reset have added complexity to their engagement mechanisms. Ausgrid has committed to maintaining their commitment to an iterative process for CALD consultation in the next phase of engagement and has co-designed the process with ECCNSW and the Panel to ensure that the requisite feedback mechanisms are in place to ensure CALD consumers continue to have ownership and agency in the final decisions made.

Looking forward, there are several areas on which Ausgrid could focus some attention. The Panel sees that it may be advantageous for Ausgrid to undertake these as BAU activities rather than waiting for the next reset period so that there is a considerable body of information and data to utilise.

Areas of interest and focus could include:

- CALD and Indigenous small business – Small to medium enterprises are consumers that are notoriously difficult to engage, particularly 'small' business as they are generally not members of peak organisations and hence have little or no 'voice'. This is especially true for CALD 'small' businesses and engagement with these consumers generally requires bespoke and individual engagement. No distribution network (DNSP) has been particularly successful

so far in engagement activities with these consumers. Approximately 40% of small businesses in NSW have a CALD background[61]. Indigenous small business is an emerging and growing sector and engagement activities with Indigenous communities in this reset could provide avenues for further engagement and collaboration.

- CALD metrics development for an expanded CSIS measure in the next reset – The Panel advice on CSIS measures and CALD consumers has been detailed elsewhere in this report. A CALD metric was not able to be adopted because there was no contemporary data and no recognised metrics available. This could be addressed as a BAU process post reset.
- Building capacity and knowledge as the 2029-34 reset approaches – Ausgrid could explore the possibility of dedicated language and culture approaches within their next reset. This may include the use of external and internal (Ausgrid) consultants and personnel and would be best planned early.
- Exploring, collecting and analysing relevant data sources about customers – current MSAT data (via retailers) about consumers is at best patchy and incomplete. Particularly important is customer data about life support customers but there are a number of consumer focussed activities (outage notifications, language and communications preferences among others) that would be made easier and more effective with better and more complete data about end-consumers.

The future demands on customer service contact

Whilst there are efficiencies that can be achieved in automating self-help functions and providing a user friendly website, both large and small customers have expressed preferences for dealing with a staff member when contacting Ausgrid. This means that the Panel and Ausgrid need to focus on the performance of the contact centre staff and those staff separately charged with managing large customer relationships. In the customer-centric DER future described earlier in this report, Ausgrid will need to equip its contact centre with highly skilled and culturally aware staff to deal with the multitude of issues they will encounter as they seek to employ a range of distributed energy equipment. The Panel anticipates that a growing share of inquiries will be in relatively new areas concerned with battery operation and EV recharging. Councils will be a key partner in the DER enabled world and will also want information on what they can do and how they can support their residents to obtain best use from their new appliances and technology and how Councils can best invest in supporting infrastructure to maximise the effectiveness of these resources.

[61] Quote from (then) NSW Minister for Ageing, Disability and Multicultural Affairs, the Hon. John Ajaka.

9. Preliminary work on select aspects in Ausgrid's Draft Plan

To this point in time the Panel's influence on Ausgrid's developing revenue proposal is demonstrated in several ways. First, the Panel has created increased rigour around key elements prior to their finalisation and consideration by the Panel. The decision to propose frameworks was based in large part on the experience of Panel members in the previous Ausgrid reset; the sheer scale of Ausgrid as a distribution business makes a granular assessment of its individual expenditure items impossible but applying an overarching discipline on categories of future expenditure provides a level of comfort that customers will benefit from prudent investment. In addition to the Resilience Framework already mentioned, other examples of the Panel's frame working and analysis include:

- The Capex Governance Note[62];
- The Capex and Opex productivity note[63];
- Cyber security[64];
- Insurance; and
- Trends in ICT/OTI investments in 2019-2029.

The effect of these frameworks and analysis is, in the Panel's view, that the components of discretionary investment outlined in Ausgrid's Draft Plan should be read as upper limits that could only be agreed to if, amongst other things, the requirements of the frameworks are satisfied.

Capex

Draft Plan Proposal

Ausgrid's Draft Plan includes $3,239m capex investment across existing and two new investment programs (resilience and DER integration). The drivers for this expenditure are summarised in Figure A.4 in the Regulatory Appendices (p.8).

[62] See Appendix E.
[63] See Appendix F.
[64] See Appendix G.

Figure A.4 Capex forecast by driver ($ million, real FY24)

	FY25	FY26	FY27	FY28	FY29	FY20-24 actual/ estimated	FY25-29 total forecast	% change
Replacement	278	258	265	300	271	1449	1370	-5%
Resilience	24	37	45	39	34	1	179	n/a
Growth	43	30	29	29	29	190	159	-16%
DER	14	17	21	21	22	4	96	n/a
OTI	29	21	20	23	22	188	114	-39%
ICT	66	96	56	37	36	222	292	32%
Fleet	44	41	32	25	26	119	167	41%
Property	36	24	53	23	27	167	163	-2%
Overheads	137	139	143	141	139	689	700	1%
Total	**671**	**663**	**663**	**638**	**605**	**3,030**	**3239**	**7%**

Note: excludes Software-as-a-Service (SaaS) costs that for the 2019-24 period are treated as capex

The Panel asked Ausgrid to include 2 additional columns in this Table of capex forecast by drivers so that customers and stakeholders could track the drivers against forecast spend for the current 2019-24 period as well as the final column indicating the % change by program. Top down trend analysis of existing capex programs is an express requirement in the BRH[65]. Revised Figure A.4 also enables a quick view of where Ausgrid is finding capex productivity by reference to some individual capex categories.

Seeking to build on the involvement some members had with Ausgrid in its 2019-24 revenue reset, the Panel agreed to draft a governance paper outlining its expectations and requirements for the current reset. A short Capex Governance note was drafted in September 2021 proposing a two-stage process for the Panel's review of Ausgrid's planned 2024-29 capex. The aim of the review is to

[65] See BRH chapter 4 and in particular 4.2.1 p.20. Top-down testing of the total capital expenditure forecast and at the category level.

enable the Panel to be confident the proposed capex investment is well-considered and demonstrates prudence and efficiency while delivering clear customer benefits. In this regard the Panel notes its process accords with the AER's guidance on capex investment detailed in the BRH, namely:

for capital expenditure proposals, we expect businesses to engage with consumers on why the expenditure is required over the forecast period and what other options are available to consumers[66].

The Panel's approach is sufficiently flexible to consider a range of categories of capital investment, including long-term asset replacement, augmentation to meet capacity or changed network need (such as DER integration), ICT and other non-network requirements.

The Panel's Capex Governance Note can be found at Appendix E.

Ausgrid acknowledged and supported the Panel's approach, advising the Panel in November 2021 that its oversight of capex investment proposals included an enhanced role for its internal Board Investment Governance Committee (IGC) in testing the alignment of proposals to the business' strategy and risk appetite in addition to the Board's normal governance roles

In detailed discussions with the Panel and in the Draft Plan (pp.38 and 56) Ausgrid has noted changes it has introduced to its investment governance since the 2019-24 reset, including retaining an independent member on Ausgrid's IGC, as well as updated and standardised NPV modelling, more rigorous application of post implementation reviews and improved KPIs. In August 2022 Panel members began the detailed deep dive into business case analysis referred to in the Capex Governance note.

The Panel will make further comment on Ausgrid's proposed capex in its next report.

Productivity - opex and capex

AER regulation of electricity networks is designed to replicate what happens in a 'workably competitive market'. This means that, like businesses in a competitive market, regulated networks should continually seek to improve their efficiency and consumers should benefit from this. It is fundamental to the achievement of the National Electricity Objective.

The AER seeks to achieve the 'workably competitive' outcome through incentive-based regulation. Networks have access to a range of schemes that incentivise networks to spend less than their AER allowances (CESS for capex and EBSS for opex where reductions are shared 30% network/70% consumers) and to improve performance compared with service standards (STPIS) and the recently introduced CSIS. The AER publishes annual benchmarking data on all DNSP opex, capex and overall efficiency to show changes in an individual network's productivity over time and how a particular network compares to the 'productivity frontier', that being the best performing DNSP.

The level or productivity improvement is driven by the allocation of risk (where the likelihood of outcomes is known with some certainty) and uncertainty (where outcomes are unknown) that can be assigned between Ausgrid and consumers.

Network productivity is usually approached in a relatively siloed way, with generally separate consideration of ways to improve opex and capex productivity.

The Panel was keen to pursue a more holistic approach to discussion with Ausgrid of both opex and capex productivity. On 10 June 2022 the Panel shared a draft note with Ausgrid on what a holistic

[66] BRH at p.22.

approach might mean and a set of principles for further discussions with Ausgrid as it prepares its initial 2024-29 revenue proposal due in January 2023. On 2 August 2022 Ausgrid responded to the Panel's note and agreed to continuing the discussion on productivity on a holistic basis. Ausgrid provided the Panel with additional information in early August as part of this ongoing dialogue. The current draft of the Panel's Capex and Opex productivity note is found at Appendix F. The Panel and Ausgrid have agreed to continue discussions about productivity after publication of the Draft Plan.

Cyber security – opex and capex

Draft Plan Proposal

The growing risk of a cyber-attack and the potentially huge consequences are highlighted by Ausgrid in its Draft Plan (p.17). Ausgrid proposes significantly increased cyber expenditure compared with the current period:

	2019-24 (FY$24)	2024-29 (FY$24)
Capex	$45.0	$87.0[67]
Opex step change	$0	$18.3

Ausgrid believes that this level of investment is needed to adopt practices and protections in line with Security Profile 3 (SP-3) of the Australian Energy Sector Cyber Security Framework (AESCSF):

On balance, while there is no strict regulatory requirement, we consider Security Profile 3 to be the prudent maturity level for our business[68].

The choice of SP-3 is driven by the Ausgrid Board's Risk Management Framework that results in a very risk averse approach to cyber security risks.

The Panel is waiting Ausgrid's advice on:

- if all the proposed opex and capex will be recurring in future periods or if any of the capex is a one-off investment in uplifting capability in 2024-29, and
- if the proposed capex includes any contingency.

The Panel's discussion on this issue has focussed on the level of security Ausgrid is proposing and the quality of its business case.

Discussion

After considerable debate, the AER approved capex expenditure of $45m FY$24 in the current period. The AER sounded a note of caution about future regulatory proposals around the increased level of rigor required to prove expenditure was prudent and efficient.

Discussion of cyber security risks have snowballed in recent years. The Federal Government has responded with a range of legislation and AEMO is leading the development of the assessment framework for the electricity sector. These developments have provided guidance on different levels of cyber security that may apply to different sectors and considerable discussion around whether there is a legislative or regulatory requirement on the electricity sector to meet a certain level.

[67] The $87m comprises $31m capex and $56m SaaS opex.
[68] Draft Plan 4.1.3 at p.43.

Networks have argued to the AER that they are required to meet the highest level, variously referred to as SP-3 or MIL-3. Ausgrid is proposing expenditure for it to meet SP-3 in 2024-29. It expects to meet 100% SP-2 maturity by 2027.

Recent decisions by the AER have concluded there is no such requirement. The Panel's review of both the Commonwealth legislation and the AEMO led AESCSF have come to the same conclusion.

Recent AER decisions have also emphasised the rigor of the business case and risk analysis required for the proposed expenditure. Table 3 shows the difference on capex and opex for 2024-29 between maintaining SP-1 or 2 and moving to SP-3[69].

Table 3 Cyber security investment forecasts by Security Profile level

SP Level	Opex $FY24m	Direct SCS Capex $FY24m
1	8	24.0
2	17.1	63.0
3	18.3	87.0[70]

The choice between SP-2 and SP-3 was a major discussion in the VoCP engagement. There was agreement that the risks of cyber-attacks are increasing and the potential consequences were very serious. However there was strong division between those who could not see the benefits of the additional investment required for SP-3 and those that did. The Panel believes a contributing factor to this diversity of view was the absence of a clear picture of the risks and benefits for customers in Ausgrid moving to SP-3. Ausgrid acknowledges this difference of views in its Draft Plan (p.43) and the challenge in fully articulating customer benefits in this area. The Panel continues to work with the Ausgrid cyber team as they develop their clear business case and model the reduction in likelihood of risks and the productivity savings from faster restoration that can result from Ausgrid moving to SP-3 maturity. The Panel believes that Ausgrid's approach to this modelling is industry leading.

The Panel understands that cyber maturity is not a static issue as the threat of cyber-attacks are increasing and there is a need to improve cyber preparedness in response to the increased risk. The Panel is not surprised that the Board's Risk Management Framework would adopt this position given the potential consequences of an unauthorised access to the network or prolonged outages as a result of an unauthorised access including the possible non-compliance with Ausgrid's licence condition.

The issues for the Panel are:

- At this stage it does not appear to be mandated by Government, it is unclear that achieving level 3 is necessary to comply with Ausgrid's licence condition and there is no evidence that the levels in AESCSCF will be increased as part of the current review.
- Ausgrid is making progress in quantifying the business case for the additional expenditure for SP-3 rather than maintaining SP-2.

[69] Figures sourced from Ausgrid presentation to the Panel on 5 August 2022.
[70] This is represented in the Draft Plan revenue as $31m for cyber capex and$56m of opex implementation costs due to the Software as a service (SaaS) accounting change see note 2 p.7 Regulatory Appendices.

- The Ausgrid Board's approach is effectively requiring consumers to fund increasing cyber related insurance premiums, as well as increasing amounts for recurring opex and capex expenditure for cyber security.

It appears to the Panel that where nearly all of the risk is being borne by consumers. One of the critical questions that Ausgrid needs to answer is to what extent Ausgrid might prudently bear some of this risk by accepting a lower SP level of protection. A more detailed analysis of the proposed cyber investment is in Appendix G.

Insurance - opex

Draft Plan Proposal

In the Draft plan Ausgrid has included an opex step change of $27.8 m (real) (p.24 Regulatory Appendices). The Panel understands this step-change will be supported by an updated detailed insurance consultant report as part of submission of the revenue proposal in January 2023.

On 31 March 2022 the Panel received a detailed briefing from Ausgrid's Group Treasurer and Head of Insurance about the insurance cost outlooks for the 2024-29 period. Ausgrid also provided a confidential copy of the draft report it had received from Marsh, its insurance consultant.

The Panel understands that insurer capacity is reducing and premiums are rising particularly for general liability (bushfire) insurance and cyber insurance. The Panel was informed that Ausgrid has experienced premium increases in excess of 50% in FY21 and FY22 with smaller increases forecast in FY23. The draft Marsh report concluded that as of March 2022 the best projection for Ausgrid was that its 2024-29 premiums are likely to increase from $14.4m in FY 22 to an annual average (nominal) (exc GST) figure of $26.3m.

The Panel notes that Ausgrid's insurance premiums have risen steeply over the past two years and are forecast to continue rising significantly through to 2029 (p.24 Regulatory Appendices). Ausgrid has previously offered to keep the Panel informed with the progress of its negotiations with global insurers. The Panel will ask Ausgrid to explain how the figures in the Draft Plan and the latest updates compare with the draft Marsh report and what has occurred in its recent discussions with insurers.

Following its review of the draft Marsh report, the Panel considered the actions Ausgrid could take to contain the increases, including higher levels of self-insurance and assumed risk, the use of captives to reduce the risk of self-insurance over time through the build-up of retained reserves from withheld premiums and reduce the higher assumed risk, higher deductibles and variations to levels of cover mandated under Ausgrid's 99 year lease with the NSW Government. On 3 May 2022 the Panel sent a list of questions exploring these issues and testing some of the assumptions in the Marsh report. Ausgrid provided the Panel with its detailed confidential answers on 20 June, and the Panel will provide this to the AER with Ausgrid's consent. The Panel also questioned members of the Ausgrid board about the appropriate allocation of risk between Ausgrid and its customers, allowing the Panel to appreciate that the assumption of additional risk for bushfire liability or cyber threats is outside the Ausgrid Board's risk tolerance[71].

The Panel is concerned that the question of the efficiency and prudency of Ausgrid's proposed insurance step change is not considered by the AER in isolation from other aspects of Ausgrid's Draft Plan. Some of this interconnection is explored in our attached draft productivity note. For example

[71] The Panel's questions to Board members were part of the Panel's scheduled meetings with Ausgrid 21 June 2022.

the Panel was surprised to learn that a higher investment in cyber protection to achieve SP-3 maturity instead of SP-2 would not be reflected in lower insurance premiums. Similarly, Ausgrid advised that despite it having a lower bushfire risk than other networks (given the proportion of its network in the CBD) its network risk profile is not differentiated by lower premiums by insurance providers. The Panel expected that investment in Ausgrid's network as part of its climate change resilience program might again be reflected in lower premiums but was advised that Ausgrid does not separately insure its poles and wires as it is too expensive to insure.

The Panel acknowledges that all distributors are dealing with an insurance industry that is factoring in the cumulative effects of climate change to premium pricing for bushfire liability, increased payouts under cyber insurance and this, in turn, is leading to markedly less attractive coverage terms at significantly greater cost. For distributors with major exposure to bushfire risk and a growing exposure to cyber-security threats, access to functional insurance is vital. Where it cannot be secured customers face higher costs, or exposure to post-event costs through pass through applications. The Panel notes the insurance difficulties for Australian distributors have been apparent for some years and believes the point may soon be reached when some form of intervention by the Commonwealth government is justified to facilitate reliable, adequate and affordable insurance coverage. The Panel intends to review the draft plans being published by the other 5 DNSPs in this current regulatory cycle to look at the relative increases in their insurance premiums and any opex step changes being sought by them.

Cost pass through events

The Draft Plan (p.37 Regulatory Appendices) outlines Ausgrid's intention to put forward the same nominated pass through events as the 2019-24 regulatory proposal:

- Insurer's credit risk;
- Insurance coverage;
- Natural disaster; and
- Terrorism.

Separately Ausgrid has raised with the Panel its concerns that the current pass through mechanism does not adequately reimburse it for a series of storms that form part of a weather event (e.g. East Coast Low) which are disaggregated and then fall below the cost pass through threshold. We understand that as part of its 2024-29 revenue proposal Ausgrid will be seeking an increase in its base storm allowance on the basis of a five year average (2018-23) of revealed costs. The Panel is considering this issue as part of its holistic discussions on productivity and as part of the resilience discussion. Our preliminary position is to support using the five year average to increase the storm allowance whilst maintaining the threshold in the cost pass through mechanism.

Recent AER review of the insurance cap pass through framework

Ausgrid's October 2020 submission to the AER's insurance coverage event application consultation paper supported the AER's intention to change the current insurance cap pass-through framework to an insurance coverage pass-through approach. Ausgrid stated:

This change should deliver a better outcome for both customers and NSPs. In Ausgrid's context, this means applying the 'least cost option', i.e. only paying a reasonable premium in the commercial insurance market for the risk transfer from Ausgrid to the insurance underwriter, rather than paying 'whatever the cost' to fulfil all the insurance layers of Ausgrid's bushfire insurance limit.

Ausgrid's April 2021 submission to the AER's draft Decision gave similar support:

We support the guiding principles underlying the draft guidance and agree that these rely on established regulatory frameworks and good corporate governance and practices.

The Panel is keen to understand how risk continues to be allocated between Ausgrid and customers and where there may be changes to that allocation. The increased cost of insurance premiums for less coverage would appear to allocate greater risk to Ausgrid even though customers will be paying more. As the AER' notes in its Final Guidance note (July 2021) engaging with customers on the allocation of risk is challenging as the subject matter is technical. The AER states at page 12:

While we agree, and appreciate, that some information is commercially sensitive, we are also of the view that NSPs could use the opportunity to have discussions that aim to educate its customers or stakeholders on the detailed issues related to insurance coverage. This will enable consumers to provide input on the high level risk and benefit trade-offs that the NSP is considering as part of its insurance policy and coverage decisions.

Consistent with the AER's guidance note customers should be given the opportunity to carefully consider the benefits and trade-offs, particularly for cyber insurance given that there has been no successful cyber-attack on Ausgrid's network, as well as for bush fire insurance given that Ausgrid has not made any bushfire claims. The Panel believes that consumers need to understand the interaction between the benefits of the level of insurance cover and the impacts on risk including if the higher cyber funding and resilience funding are approved. That will remain the Panel's focus leading up to the January 2023 proposal.

Matters on which the Panel is seeking further information

There are several areas that Ausgrid highlighted in its October 2020 submission on ways that the balance between premiums and insurance cover, deductibles and self-insurance might be more efficiently tailored to the risks faced by Ausgrid in the operation of its network. The Panel is aware that the Ausgrid Board maintains a low risk tolerance when obtaining insurance and its high insurance limits have remained unchanged. Some of these topics were previously raised by the Panel's questions to Ausgrid about the draft Marsh report. The following list of possible actions available to Ausgrid were self-identified by it in the submission to the AER and the Panel is currently seeking an update from Ausgrid about these topics:

1. Given that Ausgrid maintains high deductibles (i.e. excess), comparable to its peers is Ausgrid planning to change the risk tolerance by increasing these deductibles, which would provide significant premium savings as the primary layer is the most expensive insurance layer?
2. Has Ausgrid voluntarily reduced its insurance limits and if so has this led to savings?
3. Does Ausgrid intend to only insure for bushfire risk in selected higher risk geographic regions and exclude the CBD?
4. Ausgrid has never 'self-insured' any layers in its bushfire insurance limit. Given the volatile commercial insurance market and the significant premium increases, will Ausgrid 'self-insure' on some of the layers of its bushfire insurance coverage where premiums are not prudent?
5. What was the saving in premiums or extra insurance cover that Ausgrid achieved as a result of renewing its bushfire insurance limit with the commercial market insurance market early?
6. What is the possible timing for the introduction of beginning the funding of a captive to supplement insurance cover?
7. Ausgrid has been engaging extensively with the Panel on insurance, cyber security, resilience, risk allocation and productivity. In its April submission to the AER Ausgrid

indicated that it supported engaging with customers as part of the development of its regulatory proposals. Is Ausgrid planning to engage directly with customers as part of its 2024-29 revenue determination on the allocation of risk between Ausgrid and customers or is that engagement intended to be with the Panel only?

Trends in ICT/OTI expenditure – opex and capex

As part of the Panel's participation in the discussions with Ausgrid about the technical aspects of its revenue proposal, the Panel observed that proposed ICT and OTI expenditure was being presented in a siloed way separated across different programs of work. On 15 June the Panel sent Ausgrid a request for a consolidated table of all proposed ICT and OTI capex and opex. We advised Ausgrid that our request should also be read in conjunction with our draft note on productivity sharing in Appendix F and in particular the final section where we discuss ways to manage forecasting risk in non-recurring ICT projects.

The reason for the request is to enable the Panel to review the trends in ICT/OTI recurring and non-recurring investment across both the 2019-24 and 2024-29 regulatory periods, including to what extent Ausgrid plans to claim any CESS reward/penalty for actual expenditure cf to allowed expenditure in 2019-24. The Panel notes that the final ADMS and network innovation 2019-24 OTI expenditure is excluded from CESS in the current regulatory period.

The Panel was keen to see the extent to which any opex ICT/OTI spend will be covered in the base year or the subject of a step change and if EBSS is planned to apply.

Our starting point for this discussion for ICT categories was the ICT breakdowns included in Ausgrid's revised revenue proposal for 2019-24[72] and for OTI categories the AER's final decision in table B.4.1 in the AER's final decision on Ausgrid's 2019-24 distribution determination[73]. The Panel asked Ausgrid to add in the new programs across the proposed investment in a new Enterprise Resourcing Planning (ERP) system, customer experience, DER Integration and DOE, data analytics, and innovation (NIAC) in order that a complete holistic picture of trends can be built of ICT and OTI investment over the 10 year period.

Following our request Ausgrid agreed the form of the template with the Panel. On 4 August 2022 Ausgrid provided the completed template to the Panel and we look forward to further discussions with Ausgrid on this issue after the publication of the Draft Plan.

Draft Plan Proposal

Ausgrid's proposed ICT capex investment is $292m (p.16 Regulatory Appendices). As the Draft Plan notes 47% of this capex is for 3 major projects: $73m for ERP, $31m for cyber security capex and $34m for DER Integration. We have discussed cyber security and DER integration in other chapters of this report, so here we make some initial observations about the ERP upgrade proposal. Panel members are aware from other DNSP revenue determinations that other DNSPs have sought large amounts of ICT expenditure to fund the transformation of ERP. In Panel members' experience, despite every effort of customer advocates to encourage DNSPs to look at alternative suppliers than

[72] See https://www.aer.gov.au/system/files/Ausgrid%20-%20Revised%20Proposal%20-%20Revised%20Regulatory%20Proposal%20-%20January%202019.pdf at p.87.
[73] See https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Ausgrid%20distribution%20determination%202019-24%20-%20Attachment%205%20-%20Capital%20expenditure%20-%20April%202019.pdf at p.5-41.

SAP – the SAP S/4HANA cloud based ERP system is the product used by many utilities both in Australia and globally.

By upgrading the ERP Ausgrid is hoping to deliver several benefits:

- *Provide more innovative services offerings, such as dynamic supply and pricing options;*
- *Improve network planning and investment decision-making;*
- *Improve customer experience by supporting simpler internal processes with fewer handovers between teams;*
- *Ensure the ERP supplier is still willing to provide Ausgrid with technical support if needed; and*
- *Improve Ausgrid's data, which will ultimately make it easier for customers to interact with Ausgrid*[74]*.*

As mentioned in chapter 5, the Panel accepts that the innovative service offering and dynamic pricing are very important benefits from the ERP project. The Panel has worked extensively with the Ausgrid ICT and transformation teams to understand how the efficiency benefits of this major upgrade will be shared with customers and how tangible customer benefits will be delivered from the project. Ausgrid has prepared several staff profiles for different areas of the business similar to the Mike case study in the Regulatory Appendices (p.17).

In our most recent discussion on productivity it has become clearer to the Panel that the internal efficiencies that Ausgrid will achieve from ERP will not result in further reductions of staff. Rather they are intended to support the workload of the existing staff. In other words Ausgrid's position is that it has made the transformation in head count ahead of the supporting ICT investments.

The Panel is shifting its focus now to the amount of contingency in the ERP business case as well as the development of strong governance principles around the delivery of non-recurring ICT projects. Ausgrid has offered to develop these ICT governance principles with the Panel to ensure stronger accountability to customers as a continuum between resets. The need for this governance is discussed in our draft Productivity note in Appendix E.

One additional matter the Panel has asked Ausgrid to consider is whether the ERP investment should be depreciated over a longer period than its other ICT investments. The standard asset lives approved for Ausgrid's ICT investments is 5 years[75]. As Ausgrid notes in the Draft Plan (p.50):

Ausgrid's current system has been in place since 1996 and is now due for replacement. Although $143 million may sound like a significant investment, these types of investment are lumpy and infrequent.

The Panel believes that the benefits from the transformation should be available for at least 15 years and that by making an exception to lengthen the asset life of this one ICT project this more properly reflects the costs and delivery of benefits, reinforcing that these types of projects should be infrequent.

[74] Draft Plan at p.50.

[75] AER- Final decision – Ausgrid distribution determination 2019-24 Attachment 4 Regulatory depreciation Table 4.3 at p.4-9 24.

10. Unknowns

While the Panel is pleased with the progress it has made in shaping the Ausgrid revenue proposal for 2024-29, it acknowledges that a number of factors external to the reset will play a role in determining the extent to which customers benefit. These factors are also significant because they will influence the environment into which the reset determination is delivered and so influence the way customers perceive whether they are better off.

Chief amongst the unknowns is the duration of global pressure on energy prices, mainly arising from the conflict in Ukraine. Added to this are the inflationary effects of Covid and higher rates of inflation which are being tackled through higher interest rates.

The Panel also recognises that government policies will impose additional and at this stage unknown costs on customers via charges that are passed to distributors. These are discussed in detail in the following pages.

NSW scheme costs

The Panel acknowledges that, in addition to the existing Climate Change Fund (CCF)[76], four NSW Government strategies will have implications for Ausgrid's 2024-29 revenue reset:

1. the Net Zero strategy;
2. the EVs strategy;
3. the Hydrogen strategy; and
4. the Roadmap.

On 4 November 2021 officers from the Department of Planning, Industry and Environment (DPIE) presented to the Ausgrid/RCP Sustainability and future grid workstream meeting. In that meeting DPIE gave an initial briefing on these four Government policies. There were several issues that the Panel took away from that robust discussion to inform our role within Ausgrid's 2024-29 reset:

- the NSW Government has an ambitious target to reach 50% emissions reductions by 2030;
- the Government intends to accelerate the NSW EV market to achieve 50% EV sales of new cars sold in NSW by 2030:
    - several Government incentives are aimed to encourage demand;
    - the Government would fund the roll out of ultra-fast charging infrastructure between 2021-2025 to reduce driver 'range anxiety'; and
    - minimal additional investment in network assets would be required by NSW distributors as the additional demand from EV charging would not be material to 2030;
- the Hunter Valley and Illawarra are target areas for decarbonisation through the development of clean manufacturing precincts;
- the costs of the Roadmap would be passed through to NSW electricity customers in their retail bills as part of network charges (rather than being funded by Government) and retailers would not be required to separately show the Roadmap costs on customer bills; and

[76] The CCF is a fund administered by the NSW Minister for the Environment including initiatives to support energy efficiency and greenhouse gas emissions reduction and clean/renewable energy generation. See https://www.environment.nsw.gov.au/topics/climate-change/nsw-climate-change-fund.

- Ausgrid would be required to give the first 750 MW installed by hydrogen electrolysers (in areas with spare capacity) by 2030 a 90% discount on NUOS (Network Use of System) charges for 12 years and those hydrogen producers would also be exempt from 90% of Roadmap generation costs.

The Panel understands that 47% of the following costs are to be passed onto Ausgrid's customers (excluding certain exempted hydrogen producers and high emitting companies) under AER approved jurisdictional schemes:

- the cost of contracts for difference for Long Term Energy Service Agreements (LTESAs);
- all network infrastructure costs to connect the generators in the five Renewable Energy Zones (REZs) incurred by networks and also the Scheme Financial Vehicle (SFV);
- all administration costs for several entities including the Consumer Trustee, Financial Trustee, SFV and regulators;
- the cost of instruments used to manage the liquidity facility of the SFV; and
- 90% of NUOS and 90% of Roadmap generation costs otherwise payable by the exempted hydrogen producers.

The REZs will need to be supported by long duration storage costs (whether owned by Government or whether through capacity purchased from private storage operators) and it is unclear if these firming costs also fall within the network investments to be passed on as part of the Roadmap costs or whether they will be funded by the Government.

The only Roadmap modelling results that have been publicly released is a very high level summary of the Aurora modelling. The only cost information provided is in Figure 19 that shows aggregate discounted costs forecasts of $15.4b with no indication of the yearly cost profile. It is not clear what is included in the calculations (e.g. does this include additional augmentation expenditure from NSW distributors in order to connect to the new transmission and firming infrastructure involved in the REZs?)

The Government has advised stakeholders that in the short to medium term the costs of the Roadmap to be collected by network businesses will outweigh the benefits. However, over the longer term the benefits are '*expected to be substantial and diverse …including reduced retail electricity prices and system cost*' [77]. This view was part of the Communications and Engagement Strategy the Department has been engaging on with the Roadmap Consumer Reference Group (CRG). The Draft Strategy notes:

There will be cost impacts for consumers as a result of the NSW Electricity Infrastructure Roadmap. The purpose of this strategy is to ensure consumers understand and accept any impacts related to the Roadmap because of the benefits they will realise over time.

This leads to the proposed Strategic Purpose:

Ensure consumers understand and accept any impacts related to the NSW Electricity Infrastructure Roadmap because of the benefits they will realise over time[78].

As a result of considerable criticism from the CRG it is understood that this strategy will be modified and we await more detail. Nevertheless, the substantive issue remains - while the Government's

[77] ICENI publication prepared for the Office of Energy and Climate Change: *Communication and Engagement Strategy: Benefits and costs of the NSW Electricity Infrastructure Roadmap* (ICENI) at p.5.
[78] ICENI at p.5.

cost benefit analysis of the Roadmap is NPV positive over the long term it will involve considerable short term costs over the 2024-29 period. However, the full details of this modelling have not been published to enable independent assessment of the methodology and results.

In any case that modelling would need to be updated to take account of recent policy and electricity market developments. We doubt current modelling would produce similar wholesale price forecasts.

On 12 November 2021 the Government appointed the AER as the relevant regulator under the Roadmap. Our review of the AER's May 2022 draft Contribution Determination Guideline makes it clear that the AER's role in the oversight of the Roadmap and hydrogen strategy costs will be greatly reduced from its usual role under the NER for major investments of this type. These governance arrangements do not offer the same protections to consumers to ensure prudency and efficiency of expenditure as would apply under the NER. The Panel believes this is even more reason for the Government to be transparent about the modelled costs.

The Panel is aware that many customer advocates have been seeking visibility of the costs and benefits of the Roadmap. The Panel is in a similar position. On 21 June 2022 the Panel received a second briefing on the costs and benefits of the Roadmap from senior staff of the Office of Energy and Climate Change (OECC)[79]. In that meeting the OECC provided no estimate of the costs over the 2024-29 period. It is currently completely unclear to the Panel and to Ausgrid's customers what Ausgrid's 47% share represents in $ terms each year in 2024-29 and hence what impact this will have on customers' bills. The Ausgrid Draft Plan (pp.17 and 60) notes that there will be increases from the Roadmap, but also provides no estimate to customers of the likely impact.

The OECC asserts that part of those costs - namely the costs of difference for LTSEAs - will be offset by movements in the wholesale price. However, the Panel is not able to take any comfort from this given the likely additional external factors impacting the wholesale market. More importantly we have no idea what percentage the LTSEAs represents of the total Roadmap costs to be recovered.

There are very concerning estimates about the potential costs of transmission to be accelerated during the 2024-29 period both as part of the REZs and as part of the ISP (discussed below). The Government's recent announcements indicate that at least $14b in transmission costs will be

[79] The Office is located within the NSW Department of Planning, Industry and Environment.

required and it is unclear who will own these transmission assets and over what period the costs are to be recovered. There is extensive evidence about rising infrastructure costs and supply chain constraints affecting all parts of the economy, Infrastructure Australia's recent report highlighting risks involved in transmission construction. In addition there is the risk of delay, evidenced currently in AusNet Services' protracted efforts to finalise its Western Victorian Networks Project. The Panel appreciates that disputation over transmission line location may result in even higher acquisition costs which customers may have to bear.

Given these circumstances, it is critical that customers, and those like the Panel who represent them in revenue resets, have as much transparency on future costs as possible. Understanding the potential impact on bills of proposed projects and programs is vital, even more so as the range and complexity of them increases. Following the presentation from OECC the Panel wrote to the Director of the OECC seeking further information on the estimated Roadmap costs in order for Ausgrid to be able to meaningfully engage with its customers as part of its 2024-29 engagement. A copy of the Panel's letter is found at Appendix H[80]. The Panel hopes to continue its engagement with the OECC so as to obtain more information on likely costs ahead of its next report.

Additional ISP transmission costs

In the 2022 ISP released by AEMO on 30 June 2022, AEMO lists several committed and anticipated transmission projects as well as five actionable projects in its Optimal Development Path (ODP). The new Federal Minister for Climate Change and Energy, Chris Bowen, has fully endorsed the timing and scope of the 2022 ISP including supporting the urgent construction of all actionable projects as well as the provision of low cost finance under its Rewiring the Nation policy. Several of the actionable projects in the ISP will impose costs on NSW customers. Table 6 from the ISP sets out the actionable projects in the ODP – all except Marinus are completely (New England REZ, Sydney Ring) or substantially (HumeLink and VNI West) in NSW. The indicative costs (-15% to +50%) are:

	2022 ISP Date of commissioning	AER approved (Transgrid portion)	AEMO Estimate of NSW portion
Project Energy Connect	July 2026	$1.82b	
Humelink	July 2026		$3.32b (-15% to +50%)
New England REZ	July 2027		$1.90b (±50%)
Sydney Ring	July 2027		$0.88b (±50%)
VNI West			$1.65b for Option 1 (±30% with an 80% accuracy)[a]
Total		$1.82b	$7.75-11.42b

a. VNI West PADR July 2022 p.38 https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/58ictorian_transmission/vni-west-rit-t/vni-west-project-assessment-draft-report.pdf?la=en

[80] A copy of the Panel letter was forwarded to Ausgrid and the AER. A response was received from the OECC in early August but the Panel has not been able to obtain permission for its publication prior to this report being finalised.

Table 6 Actionable network investments in the optimal development path

Project	Actionable ISP delivery date – to be progressed urgently[Ω]	Description	Actionable framework
HumeLink	July 2026	A 500 kV transmission upgrade connecting Project EnergyConnect and the Snowy Mountains Hydroelectric Scheme to Bannaby. Cost estimates of $330 million (stage 1) and $2,985 million (stage 2).	ISP (RIT-T is complete)
Sydney Ring [¥]	July 2027	High capacity 500 kV transmission network to reinforce supply to Sydney, Newcastle and Wollongong load centres. Cost estimates of $0.9 billion ±50% for northern option, and $2.25 billion ±50% for southern alternative option.	NSW [†]
New England REZ Transmission Link	July 2027	Transmission network augmentations as defined in the New South Wales Electricity Strategy, costing $1.9 billion ±50%.	NSW [†]
Marinus Link	Cable 1: July 2029 Cable 2: July 2031	Two new HVDC cables connecting Victoria and Tasmania, each with 750 MW of transfer capacity and associated alternating current (AC) transmission, costing $2.38 billion ±30% (cable 1) and $1.40 billion ±30% (cable 2). [‡]	ISP (RIT-T is complete)
VNI West	July 2031	A new high capacity 500 kV double-circuit transmission line to connect Western Renewables Link (north of Ballarat) with Project EnergyConnect (at Dinawan) via Kerang, costing $491 million (stage 1) and $2.5 billion* (stage 2).	ISP (RIT-T is in progress)

Ω This actionable ISP delivery date is the optimal ISP timing, and aligns with advice from project proponents as to the earliest practical delivery time under current arrangements. Work needs to commence urgently to manage potential risks to delivery. Earlier delivery could provide additional resilience benefits, and would require additional supporting arrangements to accelerate the timeline
† The New England REZ Transmission Link[59] and Sydney Ring project are actionable NSW projects rather than actionable ISP projects. They will progress under the *Electricity Infrastructure Investment Act 2020* (NSW) rather than the ISP framework.
¥ The northern part of this project is named the *Hunter Transmission Project* and may include the *Waratah Super Battery* and related upgrades.
‡ On 20 June 2022, Marinus Link announced that the cost of the project increased by approximately 8%. The latest costs are shown in this table. AEMO has assessed that this change does not impact on the optimal timing of Marinus Link – see Appendix 6 for more information. The Marinus Link announcement is available at https://www.marinuslink.com.au/2022/06/marinus-link-project-update/.
* Estimates for costs for the New South Wales works on VNI West include estimates provided by Transgrid. As the information provided did not allow AEMO to transparently confirm these classifications, the accuracy and class of the estimates are stated as 'unknown' in this report.

The Panel is keen to understand to what extent the estimated costs for the committed and anticipated ISP Projects will be incurred by Transgrid and then passed to Ausgrid as part of the TUOS (transmission use of system services) to be recovered from Ausgrid's customers. On 31 January 2022 Transgrid submitted its 2023-28 revenue proposal, which notes that the costs of these ISP projects (some according to ISP Framework and some according to the NSW Roadmap framework) are excluded from its proposed capex proposal[81]:

As noted above, we will deliver projects in accordance with the automatic contingent project provisions in the Actionable ISP Rules and the NSW EII Regulations. The costs of these projects are therefore not included in our expenditure forecasts. Approvals are required from AEMO, the NSW Government and the AER before we include any costs of these projects in our transmission prices.

The only indication Ausgrid has of these costs is the recent AER decision on Humelink early works. The majority of this cost impact will be in the current 2019-24 regulatory period[82].

[81] See https://www.aer.gov.au/system/files/Transgrid%20-%202023-28%20Revenue%20Proposal%20-%2031%20Jan%202022%20-%20PUBLIC%20-%20NEW.pdf at p.96.
[82] See p.iv https://www.aer.gov.au/system/files/AER%20-%20Determination%20-%20HumeLink%20-%20August%202022.pdf.

Table 1 HumeLink contingent project – Assessment of forecast expenditure, revenues and bill impact

	Determination
Incremental revenue to be recovered from customers over 2024–25 to 2027–28 ($ nominal)	$71.4 million
Indicative increase in residential electricity bills over 2024–25 to 2027–28	$3 p.a.
Forecast capex to be commissioned for HumeLink Stage 1 ($2017–18)	$321.9 million
Unrecovered revenue within the 2018–23 period to be carried over and recovered over 2023–28 ($2017–18)	$4.1 million

The accuracy of customer engagement in the face of unknown costs

The AER expects high quality consumer engagement for networks to provide the services that meet the needs of their consumers, including a price that is affordable and efficient. As noted above, the AER has set out detailed expectations on customer engagement in the BRH. An increasing feature of customer engagement within revenue resets is networks seeking to consult with its wider customer base on their preferences for investments by networks. For example, in the AER Resilience Note the AER went further requiring networks to

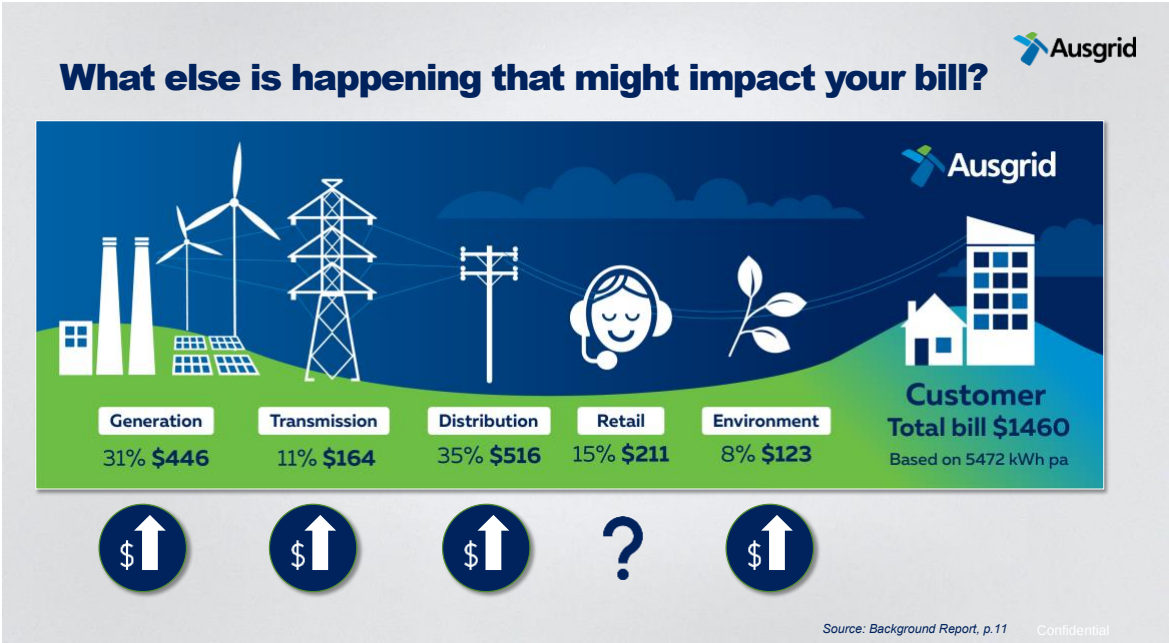
...explain to its customer base that the benefits associated with upfront investment in resilience expenditure to address a localised low probability, high consequence event outweigh the costs[83].

The AER continues to raise the bar on networks with the express aim for consumer preferences to drive the development of regulatory proposals. However, customer preferences are, the Panel believes, fully informed by an understanding of total costs. When unknown costs make up a sizeable proportion of the bill that customers will ultimately face the AER's goal is harder to achieve.

Ausgrid's customer engagement to date on potential bill impacts

The breadth and depth of Ausgrid's engagement with its customers has been discussed earlier. The VoCP's deliberations were supported by an online bill impact tool (the ready reckoner) that Ausgrid developed to calculate indicative bill impacts of long lived capex investment (~50 years), short lived capex investment (~7 years) and opex investment. The Panel members felt this was a very useful tool for the VoCP panellists to allow them to test the sensitivity and an approximate bill impact of some of the investment decisions. The ready reckoner was calculated with increased WACC as part of the revenue base case but the only jurisdictional scheme included was the CCF and the calculations did not include the additional transmission costs. As part of the deliberations Ausgrid was careful to remind customers that there are and would be other concurrent pressures on bills which may influence their decision making. See for example the following slide used in one of the presentations:

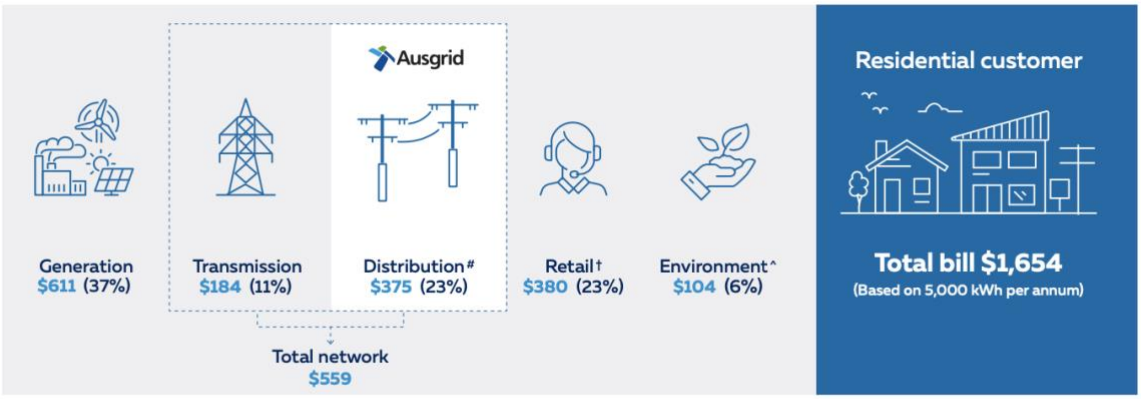
[83] AER Resilience Note at p.13.



This slide clearly showed the current average cost of the CCF jurisdictional scheme to one customer profile under the heading of 'Environment'. Ausgrid was transparent with its customers that the different parts of the cost stack would rise but was not able to inform its customers at the time (early 2022) of what those combined rises were likely to be. This same warning is reflected in several places in the Draft Plan[84].

Ausgrid has updated this supply chain bill impact diagram in its Draft Plan in Figure 1.1.1 (p.12).

Figure 1.1.1 Breakdown of a typical residential customer bill (FY23)



Notes:

Distribution includes NSW Climate Change Fund.
† Retail includes Metering charges.
^ Government environmental schemes.

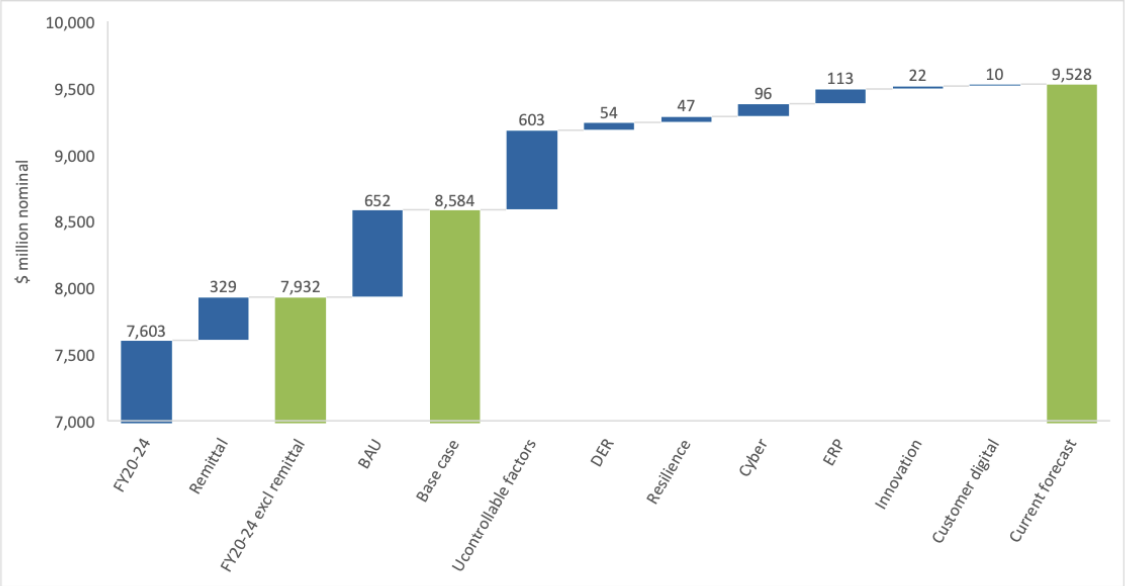
1. Amounts exclude GST.
2. Ausgrid total network charges include distribution plus pass through of transmission costs and the NSW Climate Change Fund. In FY24 our estimate of total network charges is $580.

As the Notes to this Figure make clear Revised Figure 1.1.1 still does not include the additional ISP transmission and Roadmap costs.

[84] See for example pp.11, 16, 18 and 59.

Figure 1 in the introduction to the Regulatory Appendices (p.4) sets out the forecast revenue highlighting WACC, actual inflation, insurance and software accounting changes as the uncontrollable revenue increases.

Figure 1: Forecast building block revenue ($ million, nominal)



Notes:

1. Ausgrid revenue, not total NUOS.
2. 'Remittal' is the amount paid back in 2019-24 for revenue over-recovery in 2014-19. Adding this back to 2019-24 revenue allows comparison of like with like revenue.
3. BAU' shows the increase to revenue under a business as usual scenario, assuming:
   - Actual inflation equals forecast inflation in the current period;
   - Weighted average cost of capital (**WACC**) is the same as current period;
   - Opex is rolled forward with no step changes; and
   - Capex excludes amounts itemised in other steps.
4. 'Uncontrollable factors' include WACC, actual inflation, insurance and software accounting changes. Itemised revenue impacts are based on total expenditure (opex plus capex).

The Panel asked Ausgrid to separate revenue that was outside of Ausgrid's control and the revenue that customers were able to influence during the engagement (referred to as controllable expenditure). This has not been easy and the Panel is aware from our discussions that Ausgrid has sought to present this in a way that is not misleading and as we have noted has highlighted the possible additional costs we discuss in this chapter. The Draft Plan (p.13) estimates the revenue that customers can influence i.e. the controllable revenue will result in a gradual increase in the annual bill to approximately a $38 per annum increase by year 5 (28/29) in residential bills. This is shown in Figure 1.2.1 in the Draft Plan (p.13):

Figure 1.2.1 Drivers of potential increases in household network charges ($ nominal, excl GST)

Notes:

1. Ausgrid total network charges include distribution plus pass through of transmission costs and the NSW Climate Change Fund. In FY24 our estimate of total network charges is $580.

The Draft Plan includes a final table Figure 5.1 (p.59) which sets out the possible indicative bill impacts of the Draft Plan allocating the $9.528b in revenue across customers across the 5 years.

Figure 5.1 Estimated annual impacts of our Draft Plan on customer bills over 2024-29 (nominal)

	Residential		Small business		Large business	
Annual bill change %	**Network share**	**Total bill**	**Network share**	**Total bill**	**Network share**	**Total bill**
2024-25	4.5%	1.5%	6.5%	2.4%	6.7%	Varies by customer size
2025-26	5.4%	1.8%	7.2%	2.7%	8.3%	
2026-27	5.1%	1.7%	5.9%	2.2%	7.2%	
2027-28	3.8%	1.3%	4.7%	1.8%	5.7%	
2028-29	4.5%	1.5%	5.2%	2.0%	6.5%	
Average	**4.7%**	**1.6%**	**5.9%**	**2.2%**	**6.9%**	**N/A**

Note: Assuming everything else being equal, Ausgrid total network charges include distribution plus pass through of transmission costs and the NSW Climate Change Fund. In FY24 our estimate of total network charges is $580.

Ausgrid has confirmed with the Panel that the total revenue of $9.528b includes the costs of the NSW Government CCF (indexed for CPI) but excludes:

- Roadmap costs; and

- Transgrid costs associated with completion of Project Energy Connect and construction of the following 4 ISP projects that are expected to incur costs in the 2024-29 period: Humelink, New England REZ, Sydney Ring and VNI West.

11. Next steps for the Panel

The Panel has plans in place to manage the finalisation of a number of key components of Ausgrid's revenue proposal. We have requested that discussion of some elements of the revenue proposal continue into 2023. We and Ausgrid recognise that some components notably the ones that we have developed frame works for will continue beyond January. In particular, resilience, DER and the general affordability of the Ausgrid proposal given the inflationary environment and the unknowns which we have documented. The Panel will also be commissioning independent research to test and verify what Ausgrid's engagement has revealed.

There are a number of measures that the Panel and Ausgrid have agreed to explore following the publication of the Draft Plan that would assist in reducing the impact of the increased charges reflected in the Draft Plan. Most of these measures have been referred to in this report. They include:

- retaining the current weighted average remaining life depreciation method instead of moving to year by year tracking;
- extending the ERP asset life beyond 5 years;
- increasing the opex productivity factor above 0.5%;
- adding in up to 0.5% productivity for capitalised overheads; and
- accelerating rationalisation of Ausgrid's property portfolio.

The Panel has requested and Ausgrid has agreed that their engagement will continue into 2023. As we noted in chapter 3, this new phase of the engagement will commence upon the publication of Ausgrid's Draft Plan. The Panel is also involved in co-designing this next phase and will continue to observe and support Ausgrid. The Panel is concerned about how Ausgrid will be able to assess customers' ability to pay and support for their proposals given the unknowns and the changing macroeconomic environment. The Panel recognises that all 5 DNSPs face a challenge in this unprecedented environment of fully understanding what customers levels of capacity around affordability are and identifying what a balance point is between price and delivering outcomes that customers value. The challenge faced by the 3 NSW DNSPs is magnified by the unknown scope of State schemes and actionable transmission projects.

12. How else is the Panel influencing Ausgrid's proposal

To this point in time the Panel considers that it has been able to influence Ausgrid's revenue proposal in a number of ways, both generally and specifically.

Identifying customer benefits

In a general sense the Panel has, since its establishment, stressed the need for Ausgrid to include in its proposal commentary about identifiable customer benefits. In this respect the Panel has continued to challenge and push Ausgrid; descriptions of vague benefit at indeterminate points in the future are insufficient. As we have outlined in this report, the Panel has and continues to seek from Ausgrid examples of benefit that customers would recognise 'through their own eyes'. The Panel acknowledges that this is not an easy task for many Ausgrid employees who have never previously been pushed to justify proposals in this way but we believe it is imperative if distribution businesses are to genuinely become and remain customer centric. The Panel notes that Ausgrid has made progress in describing clear customer benefits of its proposed investments and we acknowledge the willingness of Ausgrid staff to meet with us repeatedly as iterations of modelling progress.

Specifically, a number of customer priorities have been illuminated through the customer interviews that the Panel encouraged Ausgrid to initiate. Examples include:

Planned outage management

Planned maintenance is a constant feature of electricity distribution systems, but the way in which the schedule of work is managed will always reflect the network's appreciation of the impact supply interruptions have on customers. The Panel notes Ausgrid's capacity to modify schedules to accommodate special circumstances e.g. Year 12 students required to sit exams in mid-2021 were assisted by the deferral of planned maintenance works at specific education locations. While this decision was made amidst considerable publicity of the need for school-based exams, the Panel continues to push Ausgrid to find ways to both improve the efficiency of its planned maintenance program and make it more responsive to the experience of customers impacted by the program.

- *Planned outage contingencies*
  The interviews with SME's produced a number of insightful revelations as to the effect of the non-negotiable advice on a future outage. A hairdresser recalled the anxiety that an outage notification caused one customer who had scheduled wedding day appointments and feared that they would not be able to find an alternative provider at short notice. The interview encouraged Ausgrid to consider how it might provide greater flexibility in future when advising customers of planned outage work. In another interview a customer suggested that understanding the reason why the outage was required was important and should be added to the advice; not all outages are due to the need to undertake maintenance on the network.

Unplanned outage management

- *Testing customer experiences post-significant event*
  The Panel learnt that Ausgrid has not previously undertaken post-significant event outage surveys of customers to ascertain their satisfaction levels with the management of those outages. The Panel subsequently encouraged Ausgrid to introduce periodic surveys to identify ways its management could be improved to the benefit of customers. Ausgrid advised the Panel it commissioned a survey of customers following the Narrabeen storm

event in December 2021, the first time it has done so following a major event and was pleased to receive a high level of positive feedback.

- *Co-operation between NSW electricity distributors*
  Following a presentation by Ausgrid about its response to major outages caused by weather events and the sharing of distributor resources in those situations, the Panel suggested that customers would be better served by a formal MoU rather than a 'handshake' agreement. The Panel subsequently learned that Ausgrid shared that view and had been working to the same objective. More recently the Panel has been advised that an agreement has been secured, an outcome which is likely to lock in a long-term efficient sharing of resources and limit the pressure for over-investment in resources that are only needed occasionally. The Panel commends Ausgrid for its initiative.

The Panel has given thought to how it might influence Ausgrid into the future. Two proposals are outlined below.

Creating a customer focus continuum

The Panel believes that if customer focussed entities, like the Panel, become a feature of revenue resets into the future, the work undertaken by one can positively influence the work undertaken by a successor. To this end the Panel has discussed providing for a successor panel some advice on what to look for in reviewing 2029-34 investment decisions. An example of the value of this forward thinking is that it might, through an articulation of commitments given about agreed risks associated with some investments, protect future customers from being asked to pay for much higher than anticipated implementation costs. The Panel will consider this approach in more detail in its next report[85].

Holding Ausgrid to earlier commitments

The idea of a continuum works in both directions; by holding Ausgrid to account over commitments delivered in the previous reset the Panel revives the influence of customer advocates involved in that earlier effort. Ausgrid made a series of commitments as part of its 2019-24 revenue proposal and these are detailed below. The Panel's next report will include a review of Ausgrid's progress towards implementing commitments it made for the current reset period:

- Develop a Revised Proposal that is capable of acceptance.
- Sharing and improving internal forecasting approach and cost benefit analysis.
- Explore option analysis to make long term asset decisions in an uncertain environment.
- Share further granularity of customer benefits derived from IT expenditure.
- Support an industry wide review into IT forecasting to improve expenditure assessment.
- Engage with customer representatives on our cyber expenditure and maturity levels.
- Pricing Working Group - co-design tariffs, information and complementary measures.
- Jointly develop policy and regulatory framework submissions.
- Collaboration with AER to improve repex model and drive greater confidence in tool.
- Sign up to the Energy Charter.
- Propose productivity in period from FY21 and long term commitment to achieving and sharing future productivity gains with customers.

[85] The Panel has not at this stage determined to whom it would deliver its advice for the reset and will discuss this with Ausgrid's CCC.

- Deeper engagement in customer strategy and business planning not just regulatory planning.
- Network Innovation Advisory Committee to drive direction of innovation program.
- Capital Expenditure Sharing Scheme exclusions – Innovation program, cyber and Advanced Distribution Management System expenditure.
- Greater focus on non-network solutions, including demand management and work with customers on demand response rule change.
- Deliver improvements in every area of our business with our customers help[86].

How has the process been different from 19-24

As mentioned above some of the key themes in the 2019-24 reset included the need for Ausgrid to:

- continue to significantly reduce its costs;
- improve its investment governance and business case modelling;
- start to repair its relationship with partners, customer advocates, its CCC and its customers;
- continue with innovation in pricing reforms; and
- invest and support the industry leading network innovation committee NIAC.

These themes were highlighted by several submissions from customer advocates to the AER in January and February 2019 following Ausgrid lodging its revised revenue proposal with the AER.

The Panel has been observing progress against all of these themes and we will comment further on this in our next reports.

What we have been observing

The Panel has had access to the Ausgrid Board, senior executives and we have met with in excess of 100 of Ausgrid's staff. Panel members have experienced a willingness from all staff to embrace the demanding challenge from the Panel and to respond to our requests for information and data and to keep revising business cases to strive to adequately quantify and value customer benefits.

Ausgrid has been ambitious in the scope of its engagement framework; it has taken risks in the co-design of the industry leading Resilience Framework and by embracing the industry leading holistic discussion on productivity and it established the Panel to drive cultural change as well as to represent the long-term perspectives of its customers.

The Panel congratulates Ausgrid on the publication of its first Draft Plan. As this report notes there is more work to do to test if Ausgrid's plans and revenue proposal is supported by its customers and delivers their outcomes and preferences. The Panel looks forward to working with Ausgrid as it engages with consumers and shapes its revenue proposal during 2023 to reflect the long-term interests of its customers.

[86] See www.aer.gov.au/system/files/Ausgrid%20-%20Revised%20Proposal%20-%20Revised%20Regulatory%20Proposal%20-%20January%202019.pdf at pp 15-16.

APPENDIX A – LIST OF RESET CUSTOMER PANEL MEETINGS

RCP only meetings

2021: 12 July, 26 July, 9 August, 23 August, 6 September, 20 September, 6 October, 18 October, 1 November, 23 November, 6 December, 20 December.

2022: 24 January, 7 February, 21 February 7 March, 21 March, 4 April, 19 April, 29 April, 13 May, 30 May, 14 June, 27 June, 11 July, 25 July, 8 August, 15 August.

RCP monthly meetings with Ausgrid

2021: 7 July, 6 September, 3 November, 13 December

2022: 1 February, 1 March, 28 March, 27 April, 21 June, 5 July, 2 August

Sustainability and Future Grid work stream

2021: 28 September, 7 October, 4 November, 29 November,

2022: 10 February, 7 April, 5 May, 2 June

Customer Experience/Ausgrid Experience work stream

2021: 15 October, 19 November, 10 December

2022: 24 February, 24 March, 21 April, 16 June

Network Investment work stream

2021: 16 November, 3 December

2022: 17 February, 22 March, 14 April, 13 May, 9 June

Value for Money work stream

2021: 28 September, 29 October, 24 November

2022: 3 March, 31 March, 11 April, 28 April, 27 May

RCP-Ausgrid Resilience sessions and Resilience Framework workshop sessions

2021: 2 September, 19 October, 28 October, 15 December

2022: 17 February, 4 May, 20 May, 3 June, 1 July

Customer Engagement co-design and customer research meetings with Ausgrid, BDO & Nous

2021: 13 July, 3 August, 16 August, 26 October (SME engagement), 21 December (SME)

2022: 8 February

Local government and vegetation management sessions

2021: 14 October

2022: 16 March, 30 June

Public lighting sessions

2021: 7 December

RCP meetings with Ausgrid CCC

2021: 7 September, 1 December

2022: 23 March, 20 July, 11 August

RCP meetings with Ausgrid board and RREC

2021: 1 October

2022: 12 August

Other

2021: KPMG re resilience and climate impact research and preliminary modelling 12 August, 17 September, 21 September, 22 September, 23 September

2022: C&I customer forum 31 May, Insights feedback session 7 June,

APPENDIX B – SOME OF THE CUSTOMER AND CUSTOMER ADVOCATE INTERVIEWS/DEEP DIVES/FOCUS GROUPS THE PANEL OBSERVED

Vulnerable customers

Youth

Vision and hearing impaired

SME

Tenants

Supermarkets

Packaging

Plastic manufacturing

Transport

Water

Meat Abattoir

Health

Solar

Telecommunications

Winery

Sustainable consulting

APPENDIX C – PROGRESS REPORT ON AUSGRID RESILIENCE PARTNERING INITIATIVES

1. Panel Request: Ausgrid to work jointly with other DNSPs on common issues

   Ausgrid update
   - Ausgrid leading the joint DNSP working group on resilience, drafting consultation paper, hosting joint network forum
   - Meeting with other networks (in non-reg year) to discuss common resilience issues and share learnings (CitiPower, Transgrid, Australian Power Institute etc.)
   - Ausgrid leading work with the Energy Charter on preparing a draft Disaster Response Playbook
   - Collaborating on resilience projects via ENA (e.g. probabilistic forecasting tool, resilience ex-ante vs. post-ante review project)

2. Panel Request: Ausgrid to include lived experience of prolonged outages as part of climate impact assessment

   Ausgrid update
   Engaged customers in 4 specific areas where there had been prolonged outages historically

3. Panel Request: Ausgrid to partner more with other essential services and first responders

   Ausgrid update
   - Ausgrid regularly meeting and building relationships with NSW SES, Sydney Water, nbn etc.
   - Building micro-case studies of outages and knock on effects to other essential services during outages to help case for collaboration need to government

4. Panel Request: Ausgrid to build partnerships with government

   Ausgrid update
   - Met with government departments such as DPE, Resilient Sydney, RNSW to build relationships
   - Developed and proposed a draft collaboration model that was picked up by Government and who will be hosting a critical infrastructure roundtable based off model
   - Ausgrid has co-hosted a forum with Endeavour and Resilient Sydney for local government on the topic of resilience

5. Panel Request: Ausgrid to understand what Councils and other large organisations in the network area are doing on resilience so there isn't duplication

   Ausgrid update
   Large organisation and Council gap analysis on resilience plans (and resilience actions)

6. Panel Request: Ausgrid to find co-funding opportunities for resilience investments

   Ausgrid update
   - Proposed co-funding program for aerial bundle cabling and areas most exposed to extreme heat (plus additional resilience benefits)
   - Partnership with non-profit for local resilience plans in two LGA's (and Essential to do plans in its own area).

APPENDIX D – PANEL'S ANALYSIS OF THE AER AND NETWORKS' CECV METHODOLOGIES

The Draft Plan (p.16) identifies:

The increased pace and urgency of the transition to a net zero economy.

as one of the four key challenges and opportunities facing Ausgrid. Ausgrid sees itself having a crucial role in facilitating that transition. As mentioned above, in doing so it proposes 5 key principles to guide its investment (Draft Plan p.44) , one of which is:

Avoid restricting customer exports where efficient to support a cost-effective transition to net zero.

The VoCP recommended that:

Ausgrid should introduce a pro-active and targeted mixed investment plan between $100-$150 million to achieve net zero and minimise barriers for 85% of impacted customers. This investment plan may be offset by the introduction of a two-way tariff system.

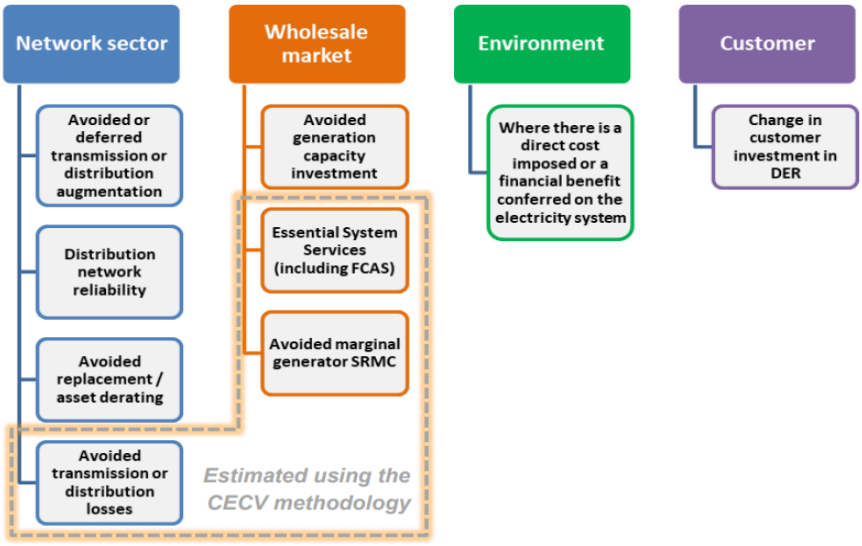
A key factor in the business case for DER integration investment is the value of rooftop solar exports that are constrained because of network constraints. It is a controversial topic with a wide range of views. The AER has recently completed a comprehensive review of the matter referred to as the Customer Export Curtailment Value (CECV) Methodology[87]. It sets out the methodology for how DER should be valued and how those estimates should be used when networks are preparing business cases for DER integration investments. Values were based on a methodology developed by the AER's consultant Oakley Greenwood.

In the course of considering the value, Energy Networks Australia proposed an alternative methodology developed by its consultant, Houston Kemp[88]. The Houston Kemp methodology proposed much higher values than Oakley Greenwood, which would in turn justify much higher levels of DER investment. A major source of the difference is the value streams that are included in the CECV calculation. The diagram below shows what Oakley Greenwood included and what was accepted by the AER. The Houston Kemp approach included wider value streams e.g. avoided or deferred transmission augmentation.

[87] See https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/customer-export-curtailment-value-methodology.

[88] See https://www.aer.gov.au/system/files/ENA%20-%20Submission%20to%20the%20draft%20customer%20export%20curtailment%20value%20methodology%20-%20May%202022.pdf.

Figure 1.3: DER value streams provided by AER guidance



Each consultant provided a critique of the other's methodology, both claiming fundamental problems in the other. In the end, the AER accepted the Oakley Greenwood approach. This is the approach the Panel prefers following our evaluation of the two approaches. The Houston Kemp approach argues that increased DER reduces the investment costs of utility scale generation and transmission infrastructure. They use the investment costs of the Central West Orana REZ to assign ~$30/MWh value to its CECV value. To accept that you would have to believe that the NSW Government will scale back the size of its Roadmap to reflect more DER in the distribution network. We do not believe that is the case. The NSW Government has made a political commitment to the Roadmap. Similarly the Federal Government has made a political commitment to support the building of all the ISP actionable projects that just happen to be centred in NSW.

We understand that Ausgrid's business case modelling initially used the higher Houston Kemp dispatch values and that the AER is open to Ausgrid including additional values for avoided generation and transmission investment, but that the modelling required to justify these additional value streams is quite onerous. Ausgrid is now re-running its business case modelling using the AER dispatch values and examining the potential to include avoided generation and investment values. We look forward to reviewing sample business cases to fully understand the impact of the different dispatch values and any other potential value streams.

APPENDIX E – PANEL CAPEX GOVERNANCE NOTE

Introduction

The RCP proposes a two-stage process for its review of Ausgrid's planned 2024-29 capex.

The purpose of this review approach is to instil confidence in the RCP that capital investment proposals for the next reset period are well-considered and reflect customers' expectations for prudent, efficient investment anchored in clear consumer benefit.

This approach is intended to be sufficiently flexible to consider a range of categories of capital investment, including long-term asset replacement, augmentation to meet capacity or changed network need (such as DER integration), ICT and other non-network requirements.

Stage 1: RCP gains confidence on the robustness of the capex governance framework

There was considerable debate in the reset process for the current 2019-24 period around how effectively the Ausgrid capex governance framework was for ensuring the right projects were chosen and the efficient project cost was developed. After much discussion, the AER concluded in its Final Decision[89]:

> "*Overall, we consider that Ausgrid's overarching cost-benefit analysis framework provides a solid basis to forecast the expected costs and benefits of required repex programs and projects. Its modelling also provides information to help target programs and projects, and to identify assets with the highest level of risk*."

Nevertheless, there were numerous examples in the AER's Final Decision on capex where the cost benefit analysis provided by Ausgrid was found to be insufficient e.g., ICT[90], property[91] and operational technology and innovation projects[92].

Stage 1 would involve the RCP reviewing Ausgrid's current investment governance framework to give confidence that it will produce a 'prudent and efficient' capital proposal:

A. Governance structure

- Role of Board - how the capital investment strategy is linked to the overall company strategy, setting a company-wide risk appetite framework
- Clear links between organisational strategies and expected outcomes with the hierarchy of capital programmes and individual projects, with cascaded key performance indicators across the inputs, in-process and outcomes of each level.
- A clear and well-articulated hierarchy of decision-making and accountability for the investment programme delivery and performance.
- Strategy development linked with the 5- and 1- year planning processes

[89] AER Ausgrid Final Decision 2019-24 Attachment 5 Capital Expenditure April 2019 p.39. See https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Ausgrid%20distribution%20determination%202019-24%20-%20Attachment%205%20-%20Capital%20expenditure%20-%20April%202019.pdf.

[90] Op cit p.41-42; while the AER did not find the methodology failures to be material, there is still a need to improve the framework.

[91] Op cit pp.42-44.

[92] Op cit pp.50-54.

- Statements on the approach to intergenerational equity and sustainability
- Transparent application of top-down vs bottom-up assessment by Ausgrid
- Application of robust post implementations review at project and programme level

B. Application of an effective investment framework hierarchy
   - Overarching strategies and objectives with measurable outcomes, including those through a consumer lens
   - Investment programmes (parcels of projects) with a common objective demonstrating optimisation and efficiency
   - Identify work that is a departure from BAU and/or is a new programme of works
   - Projects - identify one-off and recurring costs
   - Project prioritisation, recognising limited resource availability

C. Prudent asset management strategy
   - Asset management objectives developed and linked through to organizational objectives and strategic KPIs
   - Decision framework for maintenance vs replacement
   - Split the assessment of failure from the consideration of responses[93]
   - Compliance obligations
   - Prudency - evidence of need

D. Features of a robust project / programme proposal
   - Project selection criteria e.g., what is the customer preference/value that the expenditure is addressing? (What's in it for the customer ?)
   - What are the key performance indicators for the project (input, process & outcome)?
   - Is any of the expenditure the result of a *validated and unavoidable* regulatory obligation?
   - Cost benefit analysis methodology including selection and evaluation of options, and approach to selecting the preferred option
   - Consistency in measuring costs and benefits and in decision rules e.g., NPV? NPC? Cost/benefit ratio?
   - What are the criteria for rejection of a project (which may vary by project development stage)?
   - Risk analysis framework
   - Adopt findings of post investment reviews of recent projects to assess implementation e.g., on budget/on time? lessons learnt and applied in revised framework?

E. Consistency with the AER capex expenditure criteria
   - forecasting methodology

[93] See https://www.aer.gov.au/system/files/D19-2978%20-%20AER%20-Industry%20practice%20application%20note%20Asset%20replacement%20planning%20-%2025%20January%202019.pdf.

- for the various categories - augmentation, replacement, connections, non-network, operational technology and innovation capex and capitalised overheads
- treatment of contingency

We would expect the AER staff to also be involved in these discussions.

Stage 2 - Evaluation of capex budget and selected projects

Our approach here will be consistent with the AER's approach to the evaluation of capex with a combination of 'top-down' and 'bottom-up' approaches. Examples of threshold factors that RCP will want to consider in relation to proposed capex for 2024-19 include:

a) Confirmation that the proposed expenditure has been prepared consistently with the internal capex governance framework

b) How does this project meet the higher-order strategy / programme objectives and KPIs?

c) Is the expenditure consistent with AER guidance/regulatory framework for that expenditure?

d) Distinguish between recurrent and non-recurrent expenditure

Other factors that RCP will consider include:

e) Assessment of overall forecasting methodology and key assumptions e.g., demand/customer numbers and regulatory obligations (service standards)

f) The use of an 'assumptions workbook' that articulates and nominates the source of any assumptions made or data sources that are used in the forecasting or value calculations.

g) Past capex performance - comparison to the AER allowance and the actuals/forecast spent in 2019-24 and reasons for underspend or overspend of actuals/forecast compared to allowance

h) How the proposed expenditure impacts on forecast capex productivity

i) What is the whole expenditure on that activity across both opex and capex?

j) If there is a range - what is the reason for the difference between the low and the high range?

k) Selection of a range of projects across each capex category for a 'deep dive' to understand their economic justification – how the capex governance framework has been applied

During engagement on the 2019-24 capex programme, there was also discussion around the concept that Ausgrid should not consider that there is an unlimited capex budget. This led to the concept of 'the fish that John West rejects' being projects that may exceed the hurdle rate but are not necessary to build were Ausgrid to take a risk weighted approach to evaluation.

An example was Ausgrid's decision to not include capital in 2019-24 for replacement of fluid-filled cables. Ausgrid decided instead to take on the risk that these lines may fail during the period which would require diversion of capital from other projects included in the capex allowance.

The RCP considers that a number of projects in the 'the fish that John West rejects' bucket is one indicator of the robustness of the capex governance framework.

RCP

September 2021

APPENDIX F – PANEL CAPEX AND OPEX PRODUCTIVITY NOTE

A holistic approach to productivity sharing between Ausgrid and its customers

Purpose

AER regulation of electricity networks is designed to replicate what happens in a 'workably competitive market'. This means that, like businesses in a competitive market, regulated networks should continually seek to improve their efficiency and consumers should benefit from this. It is fundamental to the achievement of the NEO.

The AER seeks to achieve the 'workably competitive' outcome through incentive-based regulation. Networks have access to a range of schemes that incentivise networks to spend less than their AER allowances (CESS for capex and EBSS for opex where reductions are shared 30% network/70% consumers) and improve performance compared with service standards (STPIS) and the recently introduced CSIS. The AER publishes annual benchmarking data on all DNSP opex, capex and overall efficiency to show changes in an individual network's productivity over time and how a particular network compares to the 'productivity frontier' ie the best performing DNSP.

The level or productivity improvement is driven by the allocation of risk (where the likelihood of outcomes is known with some certainty) and uncertainty (where outcomes are unknown) that can be assigned between Ausgrid and consumers.

Network productivity is usually approached in a relatively siloed way, with generally separate consideration of ways to improve opex and capex productivity.

The RCP is keen to pursue a more holistic approach to discussion with Ausgrid of both opex and capex productivity. The purpose of this note is to provide our initial thoughts on what a holistic approach might mean and a set of principles for further discussions with Ausgrid as it prepares its initial 2024-29 revenue proposal due in January 2023.

Context

The AER's 2021 DNSP Benchmarking Report (covering 2020)[94] showed that Ausgrid was bottom of the table for all DNSPs for overall multifactor total productivity (despite reasonable improvement over the previous 5 years driven by improved opex productivity) and capex productivity (no change since 2006). Despite the opex improvement, it was still near the bottom in opex productivity in 2020.

While Ausgrid has some legitimate concerns about the methodology used by the AER, adjusting for that is unlikely to significantly improve its relative position. Capital productivity for DNSPs in NSW, Queensland and Tasmania is disadvantaged by the long tail legacy of large investment during 2005-2015 to meet various State imposed reliability standards.

In 2018 the AER required DNSPs to achieve a mandated 0.5% annual improvement in opex productivity. This requirement is designed to reflect the improvement expected by a prudent and efficient network operating at the frontier. It is not meant to cover any 'catch-up' that a network needs to do to get to that frontier – something that Ausgrid has a lot to do. In the current 2019-24 reset period, Ausgrid has committed to a 1% annual improvement in 2020-24 which should help the 'catch-up'. The debate is around whether a rate higher than 0.5% should continue to be Ausgrid's

[94] See https://www.aer.gov.au/system/files/Distribution%20-%20Report%20-%20AER.pdf.

target for some or all of 2024-29 to increase that 'catch-up' given other networks are not standing still.

There is no corresponding requirement for capex productivity with the incentive left to CESS. The AER considers that the revealed costs basis to opex productivity is not applicable to capex because capex is less recurrent. It is difficult to agree on specific indicators for measurement of current capex performance that are not overly influenced by the legacy of past investment decisions. It is also difficult to know whether consistent underspend in capex allowances is the result of efficiency or deferral. The AER relies more on assessing the information provided by the network, along with various tools e.g. repex model and guidelines to assess prudent and efficient expenditure in various categories.

Despite these difficulties, the RCP believes that:

- the interdependencies between capex and opex, and
- increasing risk and uncertainty around weather related and cyber security events

suggest a holistic approach to how these productivity measures are set and applied could lead to improved consumer outcomes compared with focussing on each in isolation. The RCP supports a nuanced discussion of how the various productivity measures interact with each other and how that influences the allocation of risk between Ausgrid and its customers.

What do we mean by a 'holistic' approach?

While the substitutability of capex and opex has long been recognised, it seems that its scope has expanded in recent years and will continue to expand in the near future e.g.:

- in house (capex) vs third party (opex) ICT and cyber along with changing accounting rules on what is opex and what is capex
- ICT capex to deliver operational efficiencies and service improvements e.g. ADMS
- capex vs opex resilience expenditure
- ICT capex expenditure to enable better visibility on network DER capacity to optimise future DER capex.

Our approach is meant to reflect the interdependencies between capex and opex and suggests that a totex approach to productivity might be more appropriate. Relevant issues include:

- ICT expenditure in the current period should lead to improved opex productivity in 2024-29 – is this a factor in arguing for more than 0.5%?
- Resilience capex in the next period may lower opex expenditure given the increased resilience may reduce opex as a result of weather related events – but is this a factor in arguing for more than 0.5%?
- Why should the 0.5% productivity factor apply to opex overheads and not capex overheads?
- More productive maintenance practices could mean lower capex required in the next period as plant and equipment will last longer.
- A move to more cost reflective pricing to improve asset utilisation combined with a robust governance framework for capex business case evaluation may mean a lower capex requirement.
- There may be a case for Ausgrid to argue that the current incentive framework is not sufficiently flexible to manage uncertainty associated with resilience and cyber security.

Guiding principles to frame the discussion

We propose the following principles:

1. Network efficiencies should not come at the expense of safety nor enabling the network to meet its distribution licence obligations on network performance
2. Ausgrid should continue to be incentivised through all existing mechanisms
3. Productivity targets should be stretch and decided in a broader context. (This is especially true for the 2024-29 period when input costs will be rising and bills will be rising)
4. Consumers should be willing to accept at least some share of agreed increased risk/uncertainty from weather related events and cyber with that share informed by an understanding of the party best able to manage that risk/uncertainty
5. NIAC expenditure should remain excluded from EBSS and CESS to encourage innovation and trials to support staged investments
6. CESS does not apply to specific resilience capex above what would be allowed under the AER's repex model
7. EBSS does not apply to opex step changes associated with resilience
8. Non-recurring ICT investment should be covered by CESS and EBSS, however Ausgrid needs to show how the forecast benefits and efficiencies have been realised on a project basis in the following regulatory period
9. Networks should strive to deliver customer outcomes; increase grid utilisation and maximise non network solutions by taking advantage of all aspects of the regulatory framework. A holistic qualitative review of other factors relevant to customers' confidence in the final revenue proposal can also inform a discussion of the opex productivity factor. Examples of these factors include:
    - Ausgrid's approach to BAU customer engagement and engagement for the regulatory proposal and demonstration of that engagement shaping investment decisions
    - Stakeholder confidence (including the AER) in Ausgrid's investment business case modelling and expenditure governance framework
    - Extent of Ausgrid's ambition for cost reflective tariff reform to improve grid utilisation and
    - how well the proposed expenditure supports a cohesive forward looking strategy

Ausgrid has agreed with all the principles with the exception of 3. We contend that the regulatory framework is designed to replicate what would occur in a workably competitive market where stretch targets are everyday business. Firms quickly lose their competitive position without achieving stretch targets on their costs.

Ausgrid argue that the setting of 'stretch targets' should consider whether a network is absorbing cost increases, which is part of what we referred to as the "broader context".

We agree with Ausgrid that the role of ICT transformation capex is critical in opex stretch targets given the business case for these projects is driving opex cost savings, the debate then is one of 'is the ICT capex simply required to achieve the 0.5%? What is the incentive on Ausgrid to propose additional ICT capex that allows a >0.5% opex productivity factor, particularly in the current external environment with heightened affordability concerns?

Opex Productivity

There are two aspects to this discussion:

(i) Is the base year opex, 'not materially inefficient' – if it is not, then the AER provides an alternative (lower) base year opex[95]

(ii) Whether and if so by how much, the annual productivity improvement should be more than the minimum 0.5% to allow for catch-up to the frontier network.

(i) Base year opex

Under the base year methodology used by the AER, a network is considered 'not materially inefficient' if it is at or above a benchmark comparison score of 0.75 ie part of the upper quartile (adjusted for OEFs)[96]. This reflects the AER's conservative approach to setting a benchmark comparison point where a network that is 20-25% less efficient than the frontier network is still judged 'not materially inefficient'. If the AER judges that Ausgrid's base year (2022/23) is above the 'not materially inefficient' benchmark, then it will provide an alternative opex allowance that is lower than the base year and all of this lower cost/improvement on productivity will accrue to consumers. Ausgrid believes that the AER will judge its FY 23 base year as 'not materially inefficient'.

(ii) Expected level of productivity improvement

The AER's decision on the 2019-24 allowed revenue was done at the time of the AER's review of opex productivity that led to a required minimum of 0.5% pa. In the current period Ausgrid committed to opex productivity of zero in year 1 (due to legacy employment obligations) and 1% in each of years 2-5 equivalent to 0.85% annually. This equated to $45m to bring total allowed opex to $2.3b ($18/19)[97].
The AER BRH expectation is[98]:

> "…for electricity, using a forecast no less than the AER's preferred productivity growth forecast, which is currently 0.5% per year for electricity distribution."

(iii) The annual productivity improvement and the role of 'catch-up'

If the AER does judge that Ausgrid is 'not materially inefficient', the discussion becomes one of whether the 2024-29 productivity factor should be higher than the minimum 0.5%. All benefits from the productivity factor accrue to consumers. All cost reductions above the productivity factor are shared 30% (network)/70% (consumers). Our starting position for this discussion is that there is an arguable case for it to be higher than 0.5% on the basis that:

- despite the considerable improvement since 2015, Ausgrid was still in the bottom quartile in the latest AER results for 2020;

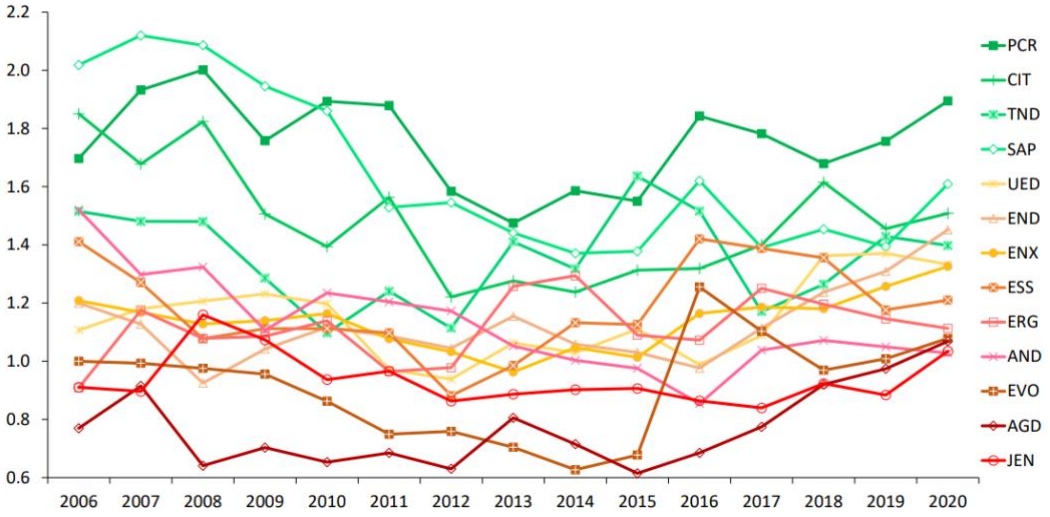
[95] A recent example is the Draft Decision on Jemena for 2021-26. See https://www.aer.gov.au/system/files/AER%20-%20Draft%20decision%20-%20Jemena%20distribution%20determination%202021-26%20-%20Attachment%206%20-%20Operating%20expenditure%20-%20September%202020.pdf.

[96] We note Ausgrid's concerns about the AER's application of OEFs that disadvantages its relative position and this may also be relevant to a holistic approach.

[97] See p.45 https://www.aer.gov.au/system/files/AER%20-%20Final%20decision%20-%20Ausgrid%20distribution%20determination%202019-24%20-%20Overview%20-%20April%202019.pdf .

[98] AER BRH at p.27.

Figure 11 DNSP opex multilateral partial factor productivity indexes, 2006–20



- Ausgrid has shown that it is possible in the current period;
- it has major capex investment in the current period e.g. SAP upgrade and ADMS, that is designed to lower opex in future periods; we discuss ICT PIRs below to provide transparency around actual vs forecast opex benefits; and
- it needs a sustained level of productivity above the minimum 0.5% pa to 'catch-up' to the frontier network and improve its poor ranking.

In response Ausgrid has argued that:

- the significant level of improvement since 2015 makes improvement beyond the required minimum of 0.5% harder to achieve in the future;

- the improvement post 2020 means that its relative position in the 2021 and 2022 benchmarking reports will show improvement;
- the most efficient DNSPs at the cost frontier have achieved that position through load/customer growth factors rather than falls in the real level of opex; and

- Ausgrid is absorbing a range of costs in its base cost – so far this includes increased GSL payments following a change in IPART reliability standards and payments, and higher recruitment of apprentices and graduates to mitigate skills shortages. These additional costs are equivalent to 0.3%/year increase in productivity.

There are two areas where the level of opex and capex risk and uncertainty has increased during the current period – weather related events and cyber security – that will influence the discussion on whether it should be higher than 0.5%. While there is general agreement that the risk of these events will increase, there is considerable uncertainty around when such an event will occur, how long it will last and the seriousness of the consequences.

The regulatory framework provides some mechanisms to allow Ausgrid to mitigate these risks including:

- increase in opex (e.g. through a step change for insurance or other new opex expenditure) and capex (through increased capex for resilience including cyber);
- the pass-through mechanism for 'positive change events' which can cover capex and opex (the predominant component of pass-through costs) for an event that costs more than 1% of the annual revenue requirement;
- a base year storm cost allowance - $6.4m in 2017/18 the base year for 2019-24[99]; and
- Opex/capex for NIAC to trial possible ex ante solutions consistent with the AER resilience guidance note.

To the extent that Ausgrid absorbs costs in base year opex rather than seeking step changes, this may enable Ausgrid to make a case for the opex productivity factor to be closer to 0.5%. If Ausgrid seeks step changes, then they will be assessed on their merits.

Ausgrid argue that there are limits on the effectiveness of the insurance market and pass-through mechanism. The RCP would argue that simply increasing resilience capex can be a blunt and inefficient approach to addressing risk and uncertainty.

The limits of the insurance market

The insurance market capacity has shrunk because of the market's uncertainty on the impact of weather related and cyber events. Some risks and uncertainties are becoming simply uninsurable. Where insurance is available, premiums have increased significantly. The industry update in the recent draft Marsh report presented to the RCP also highlighted the increasing problem of estimating insurance costs five years hence. The market is now so volatile that even making an estimate a year or two ahead is tricky.

This suggests that use of the step change mechanism may not address all the increase in risk and leads to a discussion of how that increase in risk should be allocated between Ausgrid and consumers. This is a reason for supporting a factor closer to 0.5%.

The limits of cost pass through and STPIS methodology

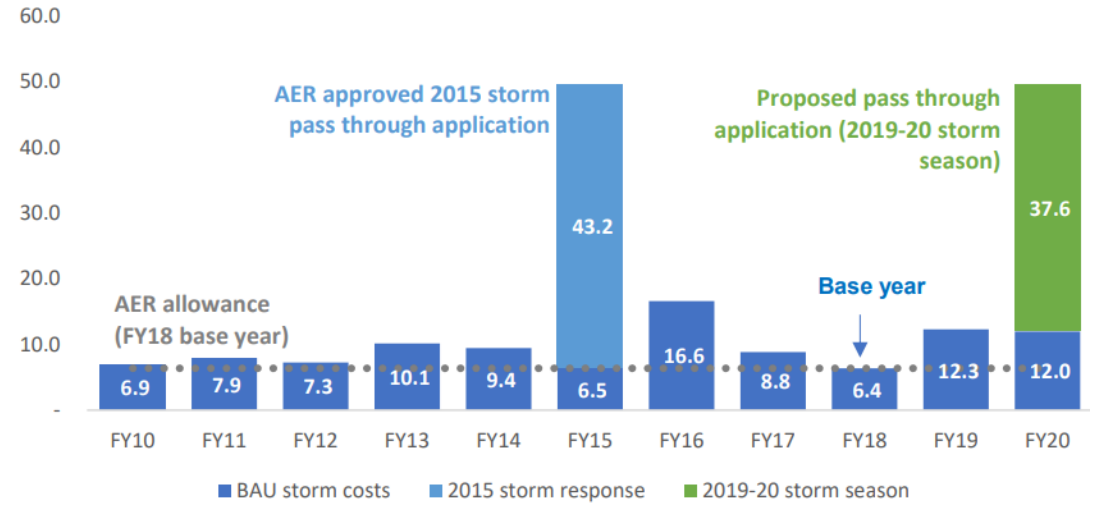
Weather related incidents are expected to increase in frequency, but there is uncertainty about the probability of these more frequent incidents each having a cost greater than the 1% trigger. Ausgrid has also claimed that the design of the cost pass through mechanism means that it is self-funding an

[99] Ausgrid has advised the Panel that it believes that the storm allowance in the current regulatory period is lower than its actual storm costs. The Draft Plan notes that Ausgrid intends to use the average of 18-23 for the 24-29 period rather than a single year as it believes this will be more representative of the costs it faces.

increased number of Major Event Days (MEDs). Ausgrid is also claiming that it is being disadvantaged by the STPIS scheme from the way in which MEDs from weather related events impact the STPIS calculations[100]. We are unaware of any data that might suggest Ausgrid is more affected in this matter than other DNSPs.

Ausgrid's application[101] for a cost pass through for the 2019/20 summer storms covered four separate storms over the November to February period. The application was for $37.6m – the amount above the BAU storm costs in 2019/20 (p.3):

Figure 1 Historical and FY20 storm response costs ($ nominal)



The AER rejected Ausgrid's argument that all the storms were connected and because of that only one of the February storms met the pass through requirement under the rules. This led to the AER allowing $26.3m (nominal) cost pass through with $18.9m in the current period. Ausgrid had to bear the costs of the other three storms within its existing opex allowance. An increase in the base storm allowance to reflect the increased risk, would address, at least in part, Ausgrid's concerns about the exclusion of MEDs in STPIS.

If there is no increase in the base storm allowance then the cost pass through mechanism may not address all the increase in risk and leads to a discussion of how that increase in risk should be allocated between Ausgrid and consumers. Another factor supporting 0.5%. (add comments on any proposed increase in the storm allowance using the average of 5 years to support an increase)

Increasing capex

The AER's Resilience Note[102] sets out guidance on what a network is required to provide to justify prudent and efficient resilience opex and capex spend. It needs to show:

[100] Ausgrid did not raise this issue in its 9 March 2022 submission to the AER as part of the AER's review of the STPIS scheme. Ausgrid has advised the Panel that it has raised this concern informally with the AER outside of its review of incentive schemes.

[101] See https://www.aer.gov.au/system/files/Ausgrid%20-%202019-20%20Storm%20season%20pass%20through%20application%20-%2031%20July%202020.pdf.

[102] See https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/aer-note-on-network-resilience.

- a causal relationship between the proposed expenditure and the expected increase in extreme weather events;
- proposed expenditure is required to maintain service levels and is based on option(s) likely to achieve greatest net benefit; and
- consumers have been fully informed of different resilience expenditure options.

So it is simply not a matter of reducing opex risk by open ended capex resilience expenditure. They have to be considered together in assessing an opex productivity factor.

Capex Productivity

The AER's capex benchmarking is less relevant to assessing Ausgrid's relative capex efficiency, given the historical capex over investment in NSW to meet former State Government imposed reliability standards. RCP is keen to explore with Ausgrid what alternative metrics to benchmark capex efficiency might include. For example:

- Capex overheads
- Trend by capex category - any evidence of capex efficiency by category vs previous periods
- Benchmarking repex unit rates
- Capital evaluation and governance framework
- Movements in RAB and line length per customer
- Trends in SADI/SAFI/raw data
- Extent of Ausgrid's ambition for cost reflective tariff reform to improve grid utilisation
- How CESS is calculated

As context for this discussion, the table below shows AER data on comparator network utilisation:

	2006	**2015**	**2020**
Ausgrid	0.53	0.29	0.34
Energex	0.50	0.39	0.43
Endeavour	0.65	0.44	0.53
Jemena	0.57	0.53	0.58
United	0.65	0.57	0.65
DNSP average	**0.57**	**0.45**	**0.49**

This table shows AER data on regulatory service life of major equipment categories:

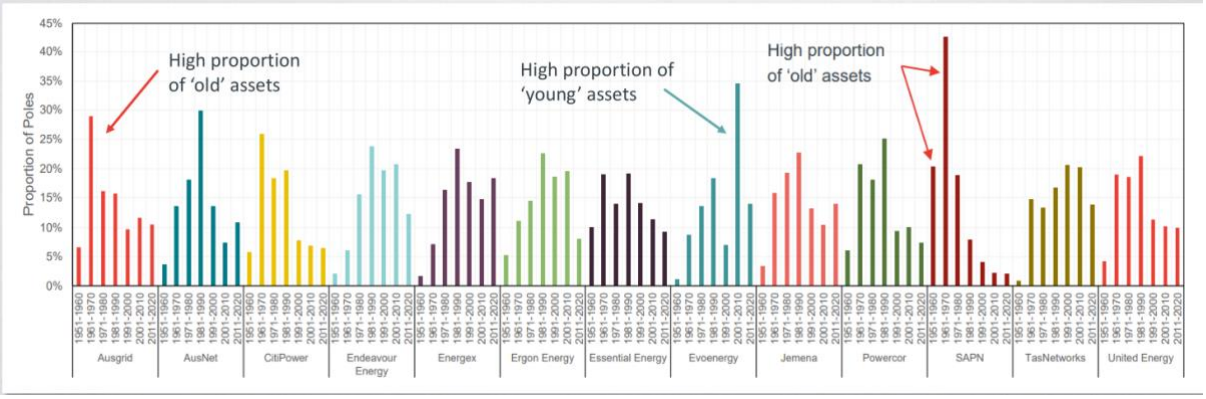
	Overhead lines <33Kv (wires and poles)		**Distribution substations and transformers**		**Zone substations and transformers**	
	2006	2020	2006	2020	2006	2020
Ausgrid	14	14	23	16	21	15
Energex	24	13	14	11	22	16
Endeavour	12	13	7	11	13	9
Jemena	32	28	21	28	28	23
United	14	15	14	15	36	39
DNSP av	**25**	**26**	**23**	**21**	**25**	**23**

While the limitations of the data are well recognised (e.g. increased DER lowers asset utilisation, newer assets take time to be fully utilised, influence of obligation to connect), it is reasonable to conclude that this data suggests that Ausgrid has relatively lower utilisation from a similarly or

slightly older asset base to its likely peers. This suggests there should be scope for driving assets harder and improving capex efficiency.

Ausgrid's response was to:

- propose an alternative utilisation measure based on capacity utilisation which shows considerably higher utilisation than Energex but still a fall for Ausgrid from ~61% in 2006 to ~42% in 2020; and
- highlight that at least for poles, Ausgrid has a high proportion of older assets so any discussion of asset age should look beyond the averages.



Overall, our discussions so far indicate we need to get a better understanding of the Ausgrid asset base and efficiency, how this drives the Ausgrid capex programme and what is the forecast of asset age and utilisation by 2029. We look forward to this information being provided.

Here are some initial ideas about how we might consider capex productivity improvements – and how some form of target might be included in the 2024-29 proposal:

(i) Capex overheads;
(ii) Trends in capex category – repex;
(iii) Capital evaluation framework and governance structure;
(iv) Review of how Ausgrid applies CESS;
(v) Allocation of risk between ex ante capex and ex post opex; and
(vi) Staging of projects.

(i) <u>Capex overheads</u>

Under the Ausgrid cost allocation methodology approved by the AER[103], 'overheads' are allocated to opex and capex according to the shared cost allocation methodology. To the extent that costs such as ICT or finance or HR are allocated between opex and capex it seems reasonable to expect that a 0.5% productivity factor should be applied to that which is allocated to capex as it currently does to that which is allocated to opex.

Ausgrid has indicated they will engage further on this topic after publication of the Draft Plan.

[103] See https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/cost-allocation-method/Ausgrid-cost-allocation-method-2014.

(ii) Trends by capex category – repex

Ausgrid has developed a much more sophisticated modelling approach for its proposed repex expenditure. We have had an initial briefing on the approach and look forward to further discussions. Two forecasting methods have been applied:

(a) Cost benefit analysis – informed by the development of a Customer Value Index to show the CBA results across the entire population of assets within each asset class.

Figure 2. CBA Ratio associated with Customer Value Index

As an asset deteriorates its risk increases with time as does the customer benefit and CBA ratio. Any asset with a CBA ratio greater than 1 has a customer Value index of 7 or above. The CBA ratio is used to support replacement as well as prioritising individual replacements. Assets in CVI 10 are the highest priority for replacement.

(b) Top down evaluation

Validating the reasonableness of the forecast uses a range of evaluation methods – historical trend, age based assessment (age profile to mean age at replacement to assess risk) and AER repex model.

The numbers are still being finalised but preliminary forecasts suggest expenditure below what the AER repex model would suggest. We look forward to further discussions to fully understand the potential impact of this reduced expenditure as an indicator of improved capex productivity.

(iii) Capital evaluation framework and governance structure

The Expenditure Forecast Methodology (EFM) outlines the approach Ausgrid takes to capital evaluation. The draft EFM says (p.16):

> "As part of this process, we prioritise our programs and projects from highest to lowest net present value (NPV). This process allows us to compare the benefits and costs of projects across our business and develop a risk adjusted prioritised investment plan (PIP)."

This discussion would look into the PIP plan to see the extent of the projects in 'the fish that John West rejects' bucket to understand how capital constraints and risk allocation drive capital productivity.

(iv) How Ausgrid apply CESS

The recent AER Discussion Paper[104] on incentive schemes highlighted the concern that consumers have around the difficulty of assessing whether underspend is the result of efficiency or deferral. We think there is an opportunity for a more explicit agreement on how Ausgrid will apply CESS that goes beyond the general provisions in the AER capital expenditure incentive guideline. We consider two periods:

Current period 2019-24

A more transparent assessment of the CESS benefit has two aspects:

(a) Where actual capex is lower than allowed capex because of deferral rather than efficiency gains

We are unlikely to support a CESS benefit applying to reductions in capex for reasons such as Covid delays, protected industrial action during EBA negotiations and the internal application of banking covenants which had the effect of delaying capex spend.

(b) Where actual capex differs from allowed capex because of inefficient project implementation

Take the example of Stages 1 and 2 of ADMS. Due to forecasting risk Stages 1 and 2 of the ADMS project were excluded from CESS in the current period. This is a blunt way to respond to forecasting risk and in the case of ADMS, consumers are paying all of the significant increase over forecast (to the extent that total capex spend is within allowance).

Next period 2024-29

(a) Managing forecasting risk for ICT and cyber

We should discuss alternative methods of addressing forecasting risk for major ICT and cyber e.g. through level of contingency and how contingency risk is shared to bring this expenditure back into CESS to better manage the forecasting risk.

(b) Managing forecasting risk for resilience

For the 2024-29 period we would propose that CESS does not apply to specific resilience capex above what would be allowed under the current AER repex model. Consider the following stylised example:

- the current repex model supports the replacement of one pole out of every twenty;
- based on a business case for additional resilience expenditure, the AER approves expenditure on an additional two poles (total three) in every twenty in a particular part of the Ausgrid network; and
- during 2024-29 only two in twenty poles are replaced.

[104] See Chapter 5 in https://www.aer.gov.au/system/files/AER%20-%20Review%20of%20expenditure%20incentive%20schemes%20-%20discussion%20paper%20-%20%20December%202021.pdf.

In this case the resilience capex associated with the third pole replacement which did not occur, would be returned to consumers and not be subject to CESS.

In the case where there are significant weather related events leading to replacement of more than three in every twenty poles, then this would be dealt with through the pass through mechanism. Though we do recognise the limitations of this mechanism discussed above.

(v) Allocation of risk between ex ante capex and ex post opex

In theory the higher the level of resilience capex the lower the probability of a pass-through event. But theory may not apply in practice e.g. the resilience capex may be spent in the wrong locations with weather related events impacting on areas that did not benefit from increased resilience capex.

This is a discussion around how to allocate capex vs opex risk and what impact that will have on opex productivity (e.g. lower resilience capex, support for factor closer to 0.5%?) and capex productivity (higher resilience capex, support for factor higher than 0.5%?).

(vi) Staging of projects

In relation to new capex programmes including resilience, cyber and DER integration, the RCP believes that in addition to meeting the criteria in the AER's Expenditure Forecast Assessment Guidelines and other approaches referred to in section 4.1 of the BRH (including evidence of Ausgrid pursuing efficient non network solutions in place of network solutions), Ausgrid should pursue a staged investment approach wherever possible where there is a high level of uncertainty in project net benefits. An example would be the approach to community batteries – NIAC trial in 2019-24, limited pilot in 2024-29 and more extensive rollout post 2029.

This staged approach would allow Ausgrid to take advantage of improved technology overtime. Ausgrid should continue to invest in and support the NIAC and the important role it plays in identifying investments to meet the increased risks of weather and cyber events by trialling and developing proof of concept for new technology in one regulatory period before a more extensive roll out of solutions in the subsequent periods. RCP encourages Ausgrid to share the learnings of its trials and pilots with other networks.

Non-recurring ICT investments (opex and capex)

In RCP's experience, networks are investing more in recurring and major non-recurring ICT investments as part of their digital transformation. In the 2019-24 period customers are funding stages 1 and 2 of the ADMS project. In 2024-29 Ausgrid is seeking large amounts of expenditure for an upgrade of its SAP system[105] ($143m)as well as for stage 3 ADMS ($14m). In each case Ausgrid has forecast benefits from the investment including improved service outcomes for customers as well as operational efficiencies.

Given the significant overrun in cost and delivery timetable for stages 1 and 2 ADMS, the RCP is looking for improvements in the investment governance and accountability for these large non-recurring ICT investments. We propose that Ausgrid needs to do a PIR of each material non-recurring ICT project to identify how the benefits have been realised and shared with customers. Our suggestion for the scope of the PIR is an analysis of:

[105] $143m in total being $73m in capex and $70m in opex due to the SaaS accounting change. See Note 3 at p.7 Regulatory Appendices.

- Benefits (efficiency and increased performance) claimed vs to benefits realised;
- Costs forecast vs to costs incurred;
- Time forecast vs to actual project delivery;
- Lessons learned to be factored into next ICT project to improve Ausgrid forecasts of benefits, costs and delivery;
- Approaches to managing forecasting risk for future projects; and
- Opex/capex efficiency being passed on in the subsequent regulatory period.

The RCP will be undertaking a review of a sample of ICT PIRs as part of its preparation of its report on the Draft Plan.

Ausgrid has offered to develop principles for ICT governance accountability and the Panel looks forward to engaging on this following publication of the Draft Plan.

Where the operational efficiencies are not captured in the opex base year for the following regulatory period then this could be accounted for by either:

1. a negative step change or
2. an increase in the productivity factor above 0.5%.

In the case of the SAP upgrade Ausgrid has recently suggested to the RCP that the internal efficiency productivity benefits are to support FTE reductions made in the current regulatory period.

RCP
4 August 2022

APPENDIX G – PANEL'S ANALYSIS OF THE CYBER SECURITY INVESTMENT

Draft Plan Proposal

The growing risk of a cyber-attack and the potentially huge consequences are highlighted. Ausgrid proposes significantly increased cyber expenditure compared with the current period:

	2019-24 ($FY24)	2024-29 (FY$24)
Capex	$45	$87.0[106]
Opex step change	$0	$18.3

Ausgrid believes that this level of investment is needed to adopt practices and protections in line with Security Profile 3 (SP-3) of the Australian Energy Sector Cyber Security Framework (AESCSF):

On balance, while there is no strict regulatory requirement, we consider Security Profile 3 to be the prudent maturity level for our business[107].

The choice of SP-3 is driven by the Ausgrid Board's Risk Management Framework that results in a very risk averse approach to cyber security risks.

The Panel is waiting Ausgrid's advice on:

- if all the proposed opex and capex will be recurring in future periods or if any of the capex is a one-off investment in uplifting capability in 2024-29, and
- if the proposed capex includes any contingency.

The Panel's discussion on this issue focusses on the level of security Ausgrid is proposing and the quality of their business case. We leave it to the AER to decide if the level of proposed expenditure is 'prudent and efficient'

Cyber security investment in the current 2019-24 period

This is the first time there was a serious level of engagement in developing the proposed expenditure level. Cyber security risks were increasingly identified as important. The first Commonwealth Government cyber legislation – Security of Critical infrastructure Act – came into effect in July 2018 and cyber obligations were included as part of Ausgrid's Distributor Licence Conditions[108]. The relevant infrastructure licence condition[109] is:

[106] The $87m comprises $31m capex and $56m Saas opex.
[107] Draft Plan 4.1.3 at p.43.
[108] See Ausgrid Revised Regulatory Proposal at p.117.
[109] Distributor's licence under the Electricity Supply Act 1995 issued to the Ausgrid partnership by the Minister for Industry, Resources and Energy on 28 November 2016.

9.2 The *Licence Holder*:

(a) must, by using best industry practice for electricity network control systems, ensure that operation and control of its *distribution system*, including all associated ICT infrastructure, can be accessed, operated and controlled only from within Australia, and that its *distribution system* is not connected to any other infrastructure or network which could enable it to be controlled or operated by persons outside Australia;

(b) must notify the *Commonwealth Representative* if it enters into a contract under which it outsources the operation and control of its *distribution system*, including any associated ICT infrastructure; and

(c) will be taken to have satisfied condition 9.2(a) for the period of 12 months after the date of this *Licence* if the *Licence Holder* undertakes the steps that are required to be undertaken in that 12 month period as set out in an implementation plan approved by the *Minister*.

During the engagement on Ausgrid's 2019-24 revised revenue proposal, notwithstanding the terms of the licence condition and the Commonwealth legislation, customer advocates and the AER expressed uncertainty about the efficiency of the proposed additional $19.6m investment and also the customer benefits[110]. Ausgrid's proposed program was to deliver investments to deliver:

- additional capability to increase level of maturity and meet industry practice; and
- uplift, enhancement or refresh of existing capability.

Ultimately customer advocates and the AER accepted Ausgrid's request for the additional $19.6m investment in 2019-24 with some caveats:

1. the expenditure was excluded from CESS;
2. Ausgrid agreed that the expenditure would be reviewed by Ausgrid's Technology Review Committee – one of its customer committees;
3. the AER found that Ausgrid had not demonstrated its additional cyber security capex program against the capex criteria[111];
4. whilst Ausgrid demonstrated a need for cyber investment it did not establish the consumer benefit of the expenditure (despite an expert report from Ernst and Young); and
5. there is room for disagreement on what Ausgrid needs to do to satisfy its state licence requirement to meet 'best industry practice'.

In accepting Ausgrid's 2019-24 proposed expenditure, the AER sounded the following note of caution for future regulatory proposals:

In the case where EY's expectation of best industry practice in the future exceeds what is realistically required, Ausgrid's forecast will represent costs that will be above prudent and efficient costs[112]*.*

Does Ausgrid have an obligation to meet external legislative or regulatory requirements?

Commonwealth Government legislation

Ausgrid is subject to legislated cybersecurity obligations under the following Commonwealth Acts:

- the *Security of Critical Infrastructure Act* 2018 (SOCI),
- the Security Legislation Amendment (Critical Infrastructure) Act 2021 (SLACI); and

[110] Ausgrid had sought $19m in its original revenue proposal.

[111] Despite this the AER approved Ausgrid's overall capex program including the additional cyber security noting: "*However this does not change our position on Ausgrid's capex forecast overall as we do not consider this program has a material effect on the overall capex forecast."* See AER Final decision at p.5-54.

[112] AER Final decision at p.5-54.

- the Security Legislation Amendment (Critical Infrastructure Protection Act) 2022 (SLACIP).

Ausgrid has confirmed in meetings with the Panel that it is currently compliant with the SOCI and the SLACI but is yet to comply with the increased cyber obligations under the SLACIP and is in discussions with the Department about what this involves and to what extent those obligations apply to Ausgrid. At this stage there is no clear answer.

The Panel understands that whilst the 3 levels of cyber protection maturity are often referred to as requirements under the SOCI and SLACI, only SP-1 is mandated as the bare minimum level for compliance for all entities. We are also aware that the Commonwealth was considering which industries/businesses would be mandated at the higher SP-2 or SP-3 level but this has not yet occurred. The Panel's understanding is:

- SP-1 - is the entry level and all businesses/organisations have to meet this;
- SP-2 - the Commonwealth is in discussions with energy businesses about mandating SP-2 for energy but this has not yet occurred; and
- SP-3 - is the highest level of maturity and gives the greatest protection and is being considered for a small subset of critical industries who will be classified as a System of National Significance (SONS) under the SLACIP which may apply to Parliament, defence and banks.

The Panel understands that the Department of Home Affairs has recently classified Ausgrid's network as a SONS but has stopped short of mandating SP-3. The Panel has concluded that Ausgrid is not yet required by legislation to invest to achieve SP-3 level and Ausgrid agrees with this conclusion.

Australian Energy Sector Cyber Security Framework (AESCSF)

The AESCSF, initially developed in 2018, is a cyber security framework that has been developed and tailored to the Australian energy sector. It is a collaboration with industry and government stakeholders, including the Australian Energy Market Operator (AEMO), Australian Cyber Security Centre (ACSC), Cyber and Infrastructure Security Centre (CISC), and representatives from Australian energy organisations[113]. The Framework's purpose is to enable Participants to assess, evaluate, prioritise, and improve their cyber security capability and maturity.

It is currently under review with a revised version due in late 2022. Ausgrid has advised the Panel that one possible outcome of the review will be the lifting of the maturity levels so that what is currently SP-2 might be closer to SP-3 in the revised framework to achieve continuous improvement and that additional practices may be added to each level. The Panel has asked Ausgrid to keep it updated about this review and any possible lifting of maturity levels.

The AESCSF includes two key components: a criticality assessment as well as a cyber security capability and maturity self-assessment. There is a specific electricity distribution criticality assessment tool (CAT E-DNSP) that Ausgrid uses to determine its criticality rating. Ausgrid advised the Panel that the result of the application by it of the CAT E-DNSP to its network leads automatically to a high criticality rating supporting SP-3 due to the factors in included in the CATE-DNSP[114].

The AESCSF refers to 2 different types of security capability and maturity. These are Maturity Indicator Level (MIL) and the SP. The MILs derive from the leading international cyber maturity

[113] See https://aemo.com.au/en/initiatives/major-programs/cyber-security/aescsf-framework-and-resources.
[114] The relevant factors supporting this assessment are Ausgrid customers (NMIs) being greater than 2m; GWh distributed on Ausgrid's network greater than 25,000 and Ausgrid's critical and commercial customers exceeding 7,500.

model developed in the United States known as the C2M2. The locally designed AESCSF builds on the C2M2 by including both MILs and SP levels as well as positive practices consistent with a maturity and bad practices known as anti-patterns which are evidence of poor maturity for that level. The AESCSF operates as a cumulative framework including 282 practices and anti-patterns spread across the three levels. See Table 1[115]:

Table 1 indicates which SP an organisation in the electricity sub-sector should achieve based on their criticality (as determined by the E-CAT).

Security Profile (SP)	Participant criticality	Practices and anti-patterns			Total required to achieve SP
		MIL-1	MIL-2	MIL-3	
Security Profile 1 (SP-1)	Low	57	27	4	88
Security Profile 2 (SP-2)	Medium	0	94	18	200 (112+88 from SP-1)
Security Profile 3 (SP-3)	High	0	0	82	282 (82+200 from SP-2)

Table 1: Target State Maturity and Security Profiles

Ausgrid argues that it has appropriately applied the relevant CAT E-DNSP to its network, correctly concluded that its self-assessed critical rating is high and that it should therefore be targeting the SP-3 practices under the AESCSF. However, the Panel does not believe that this conclusively answers the question whether investment targeting SP-3 is mandated. Indeed, the overview of the AESCSCF supports the Panel's view:

The CAT should be treated as general guidance only. Results obtained from the CAT do not indicate that an entity has obligations under, or is compliant with applicable Commonwealth (Cth) legislation[116].

Ausgrid's current maturity level?

Ausgrid has confirmed with the Panel that AEMO has assessed Ausgrid's maturity as of July 2022 as 36% of SP-2 when measured against the MIL-2 practices and anti-patterns in the AESCSF. The Panel has been advised that the most recent external specialist advice that Ausgrid has received to benchmark its maturity was from Capgemini in November 2021. Ausgrid is aiming to achieve 100% of SP-2 maturity in 2027 and then 100% of the SP-3 in 2029.

The Panel is aware that each DNSP will be developing its cyber security maturity individually in accordance with their own risk assessments and individual Board strategic priorities. In some cases the Commonwealth and State obligations are being imposed on DNSPs at different times, which also means that maturity levels will differ between DNSPs.

The AER's view

The AER has since considered this question as part of the draft decision for AusNet Services 2021-26 and in the draft decision on the APA VTS gas transmission network. These decisions have informed

[115] See AESCSF Framework Overview at p.9.
[116] See p.3 https://aemo.com.au/-/media/files/initiatives/cyber-security/aescsf/aescsf-framework-overview.pdf?la=en.

the Panel's views and are showing Ausgrid what the AER expects to see to support cyber expenditure.

AusNet Services (draft Decision 2022-27 September 2020)

AusNet was seeking capex of $19.8m and an opex step change of $4.7m ($FY21) to meet MIL3 following its self-assessment under the AESCSF Cybersecurity Capability Maturity Model. AusNet argued that it anticipated that AEMO would impose MIL3 as a regulatory obligation sometime during 2021-26.

Given the confidential nature of this issue, only limited information is provided in AusNet's proposal and the AER's Draft Decision to reject the proposal for MIL3. The AER based on advice from AEMO's Chief Security Officer, concluded that the timing was uncertain and in the absence of that certainty MIL3 is:

…not yet a proven regulatory obligation ad therefore not a compliance obligation'[117]*.*

And that:

We consider MIL2 is sufficient for a distribution network[118]*.*

Given that a majority of its capex is related to reaching MIL3 the AER did not allocate specific capital to cyber.

… we do not consider an additional adjustment for cyber security capex is required as we consider our overall capex substitute is reasonable.

The opex step change was also rejected as not efficient based on advice from EMCa:

In its assessment EMCa did not consider that the proposed cyber security step change was warranted, although it noted that with escalating threats from cyber-attacks it is prudent for AusNet Services to improve its cyber security posture. We have not included this step change in our alternative estimate as while we consider it prudent for businesses to meet the standards set by the AESCSF, we do not consider AusNet Services proposed approach and cost to achieve and maintain this standard is efficient[119]*.*

AusNet's final proposal that a 'major new cyber event… that is not considered an act of terrorism' be a pass through event was not accepted by the AER[120]. The AER considered that while major cyber events cannot be completely ruled out, to allow a pass through would provide no incentive in AusNet to proactively mitigate that risk occurring nor the extent of the damage that may be caused. AusNet has a regulatory obligation to ensure its systems are sufficiently robust and resilient to withstand cyber-threats.

This risk should be largely borne by the network service provider, who is best placed to manage it, rather than consumers. We consider accepting the broadly defined proposed major cyber event is

[117] See p.6.57 opex chapter.
[118] See AER - Draft decision - AusNet Services distribution determination 2021-26 - Attachment 5 - Capital expenditure - September 2020.pdf at p.28.
[119] See AER – Draft Decision - AusNet Services Distribution determination 2021-26 - Attachment 6 – Operating expenditure - September 2020 at p.55.
[120] See AER Final Decision – AusNet Services distribution determination 2021-26 – Attachment 15 Pass through events – April 2021 at pp 5-13-5-14.

likely to have the effect of passing AusNet Services' cyber-security risk to consumers and erode its incentives to manage this risk efficiently and prudently.

The AER confirmed its view that the nominated 'terrorism' pass through event could include cyber-terrorism.

APA VTS access arrangements 2023-2027

More recently the AER released its draft decision in the APA VTS access arrangements for 2023-2027. The AER concluded that APA's risk assessment failed to show the risks are 'material' under the legislation:

APA have submitted a plan to upgrade its security arrangements but it has not demonstrated that the existing security arrangements are insufficient to manage the current level of risk. The lack of a substantive risk analysis as contemplated by the Bill Exposure Draft and now as required by the Act means that we are unable to determine that the proposed expenditure for the physical security and program parts of the SoCI project is prudent and efficient. We therefore do not approve the physical security and program components and have made a replacement forecast of $0[121].

The AER's draft decision sets out what it believes a network needs to show to justify expenditure under the SoCI:

We consider that in its revised proposal APA will need to submit a risk analysis supported by relevant evidence to show that each of the risks proposed to be managed is a material risk as contemplated by the SOCI Bill, how the proposed reduction in the current level of risk meets the requirement of 'so far as it is reasonably practicable' (SFAIRP), and that the proposed risk reduction is efficient in meeting the SFAIRP requirement[122].

Essential Energy cost pass through application March 2021

In February 2019, the NSW Government amended Essential Energy's licence conditions as a result of Essential's network being classified under the Commonwealth legislation. The specific critical infrastructure licence conditions required Essential Energy to prepare a plan setting out how it is to comply, for approval by IPART. In March 2021 the AER approved Essential's cost pass through decision. The AER's role in the case of Essential's cyber security plans was more limited as it was a cost pass through application.

Ausgrid's proposal for 2024-29

Cost difference between SP-2 and SP-3

Ausgrid has told the Panel that it is keen to pursue SP-3 level protection, even if it isn't mandated, in order to meet the Board's risk appetite that Ausgrid follow best industry practice SFAIRP to protect the network and avoid prolonged outages. In addition, Ausgrid has indicated that the increased digital transformation of its network, such as ICT for greater DER integration and dynamic pricing reforms, requires higher levels of cyber maturity to maintain the same levels of protection. The Draft Plan (p.43) asserts:

[121] See AER- Draft decision – APA VTS gas access arrangement 2023-27 – Attachment 5 – Capital expenditure – June 2022 at pp 43-44.
[122] See AER- Draft decision – APA VTS at p.44.

We want to deliver an experience for our customers that takes advantage of digital technologies while still maintaining a reliable network service with robust protections against the growing risk of cyber security breaches.

However, to date the Panel has not seen any modelling or evidence to support this view.

Ausgrid has costed indicative expenditure to meet all three of the SP levels. The draft opex and capex numbers below were provided to RCP on 19 May 2022 and subsequently updated in August 2022 exclude overheads and present the standard control service (SCS) component only i.e. the direct SCS cyber capex.

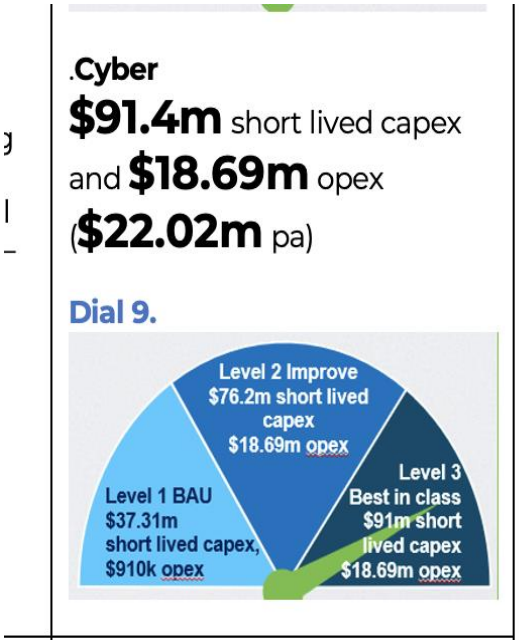
SP Level	Opex $FY24m	Direct SCS Capex $FY24m
1	8	24.0
2	17.1	63.0
3	18.3	87.0[123]

Customer feedback

Given the AER's decision on AusNet Services and that Ausgrid aims to be at 100% SP-2 by 2027, the RCP's advice to Ausgrid was that proposed 2024-29 expenditure should be to maintain SP-2. When the Panel discussed the form of engagement with the VoCP on this matter with Ausgrid, we recommended that Ausgrid did not use the terminology 'best in class' when referring to SP-3. The Panel did not support Ausgrid being given a blank check to spend whatever other unregulated businesses might choose to spend if it cannot establish the benefit to customers in terms of lowering the risk.

As part of the deep engagement with the VoCP, Ausgrid asked about their willingness to support its proposed investment in cyber. Following strong feedback on the need for cyber investment, Ausgrid asked if the VoCP supported Ausgrid investing to achieve SP-3 maturity. Ausgrid proposed a dial (dial 9)[124] showing the costs of investing in level 1, 2 and 3, with level 3 described as 'best in class.'

[123] This is represented in the Draft Plan revenue as $31m for cyber capex and$56m of opex implementation costs due to the SaaS accounting change see note 2 p.7 Regulatory Appendices.
[124] P. 10 Ausgrid response VoCP Day 7.



Several Panel members observed the VoCP's discussions about this issue on 4 June 2022. The views in the room were divided and the debate between panellists on this topic and the drafting of the VoCP's recommendation was observed by the Ausgrid CEO and the Chair of the Ausgrid board. We observed that customers agreed that:

- the risk of a cyber-attack was real and increasing;
- the potential consequences of a successful cyber-attack are very serious;
- all customers are becoming more dependent on electricity as part of the transition and electrification of transport;
- the minimum investment needed was to achieve level 2.

Ultimately the majority of the VoCP concluded that it could not recommend investment for level 3 or 'best in class' as they did not understand what additional benefit customers would receive from the additional investment. This is reflected in the final VoCP recommendation 6:

Investment of $2.96/pa as a base, giving Ausgrid the option to go to the AER to shift up to greater investment (example $3.30 p/a) if Ausgrid can show that it's needed or there are more benefits in order to protect the grid.

We note that the only minority report in the VoCP recommendations is in relation to cyber investment, where a minority supported 'best in class' investment in cyber security giving the following rationale:

Our rationale is based on the scale of current cyber-attacks, as well as the significant costs of even just one day of no energy. This could include financial costs and costs to lives. Ausgrid needs the best people to protect against the best cyber attackers and emerging technology and approaches for attacks.

Panel view

The Panel understands that cyber maturity is not a static issue as the threat of cyber-attacks are increasing and there is a need to improve cyber preparedness in response to the increased risk. The Panel is not surprised that the Board's Risk Management Framework would adopt this position given the potential consequences of an unauthorised access to the network or prolonged outages as a

result of an unauthorised access including the possible non-compliance with Ausgrid's licence condition.

The issues for the Panel are:

- At this stage it does not appear to be mandated by Government, it is unclear that achieving level 3 is necessary to comply with Ausgrid's licence condition and there is no evidence that the levels in AESCSCF will be increased as part of the current review.
- Ausgrid is making progress in quantifying the business case for the additional expenditure for SP-3 rather than maintaining SP-2.
- The Ausgrid Board's approach is effectively requiring consumers to fund increasing cyber related insurance premiums, as well as increasing amounts for recurring opex and capex expenditure for cyber security.

It appears to the Panel that where nearly all of the risk is being borne by consumers. One of the critical questions that Ausgrid needs to answer is to what extent Ausgrid might prudently bear some of this risk by accepting a lower SP level of protection.

APPENDIX H – PANEL LETTER TO NSW PLANNING & ENVIRONMENT DEPT ON ROADMAP COSTS

29 June 2022

…….
…….
Department of Planning, Industry & Environment
4 Parramatta Square
12 Darcy Street
PARRAMATTA 2150

Dear …

On behalf of the Ausgrid Reset Customer Panel I wish to express my thanks for the presentation provided to us on 21 June on the New South Wales Roadmap.

The Roadmap is significant in many ways because it intersects with the mission of the RCP. Our work, including our observation of the customer engagement program we have co-designed with Ausgrid, is familiarising us with the breadth of customer aspirations, some of which touch on the NSW Government's Net Zero objective.

The RCP's larger task is to help shape Ausgrid's 2024-2029 revenue proposal by ensuring it accurately reflects the needs and expectations of customers in a manner enabling acceptance by the AER. To achieve this the Panel seeks to ensure customers have been presented with appropriate information required to understand costs to be incurred over the period, and make informed decisions regarding how Ausgrid should proceed. This aligns with the guidance on best-practice customer engagement provided by the AER in its BRH, notably its aim of seeking 'to encourage networks to better engage and have consumer preferences drive the development of regulatory proposals.'

As mentioned at the meeting, the RCP believes that knowledge of the Roadmap costs will influence the views of customers in this engagement process which has the following key milestones:

- Submission of the regulatory proposal in January 2023
- Publication of the AER Draft Decision in September 2023
- Submission of the revised regulatory proposal in December 2023
- Publication of the AER's Final Decision in April 2024

The RCP's understanding is that the only costs consumers will know prior to the completion of engagement on the 2024-29 reset consumer engagement process in October 2023 is the 2023/24 cost provided in February 2023. The RCP is concerned that this lack of information on 2024-29 estimated Roadmap costs will have the following unintended consequences on the revenue reset process:

If the Roadmap costs are material they will alter customer expectations and preferences as expressed to the RCP and require them to be substantially recalibrated after the AER's draft revenue submission deadline of 31 January 2023.
Further to the above point customers have expressed a range of sentiments relating to the forthcoming reset period including an interest in seeing the network become more resilient,

understandable given the rising incidence of climate related extended outages. The RCP has consulted broadly and acknowledges the viewpoints of local councils, Resilience NSW and a range of community representatives which all reinforce this perspective. To assist the formulation of a proposal in respect of resilience related expenditure that can be accommodated by the AER under the NER, the RCP is developing a Resilience Investment Framework with Ausgrid. A key element of the framework is an accurate appreciation of customer willingness to pay, an insight that is referenced to total network costs they are likely to face. The more significant any Roadmap costs, the less likely customers may be to fund resilience investment, especially in the current high inflation environment.

Ausgrid, like other distributors, has a prerogative as to how costs imposed on it will be shared across its customer base through the tariff structure it adopts. The RCP and Ausgrid's Pricing Working Group have been consulting with Ausgrid on its proposed Tariff Structure Statement (TSS) to ensure this allocation in 2024-29 is both efficient and equitable. However, the absence of critical advice on the quantum of Roadmap costs means this work, including accurate customer impact modelling, cannot proceed as anticipated. One potentially significant consequence is the pricing for different consumer classes may end up being much more inequitable once Roadmap costs are allocated.

We recognise that the Roadmap will continue to evolve between now and early 2023. However, the timeframe in which Ausgrid has to develop its draft revenue proposal, and the time available to the RCP to ascertain accurate customer views is fixed. Quantifying an estimate of the likely Roadmap costs for 2024-2029 at the earliest opportunity will better inform the revenue proposal process and increase the likelihood of an informed, fair and equitable outcome for Ausgrid's 1.8 million customers.

The RCP would like to work closely with your office to ascertain the likely costs arising from the Roadmap initiative and will make itself available to further discuss the above concerns at the earliest opportunity.

Yours sincerely

Tony Robinson
Chair
Ausgrid Reset Customer Panel

cc: Ausgrid, AER, & AER Customer Challenge Panel