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Transgrid Advisory Council

Tuesday 5 October 2021

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Welcome and introductions

Brian Salter, Acting Chief Executive Officer

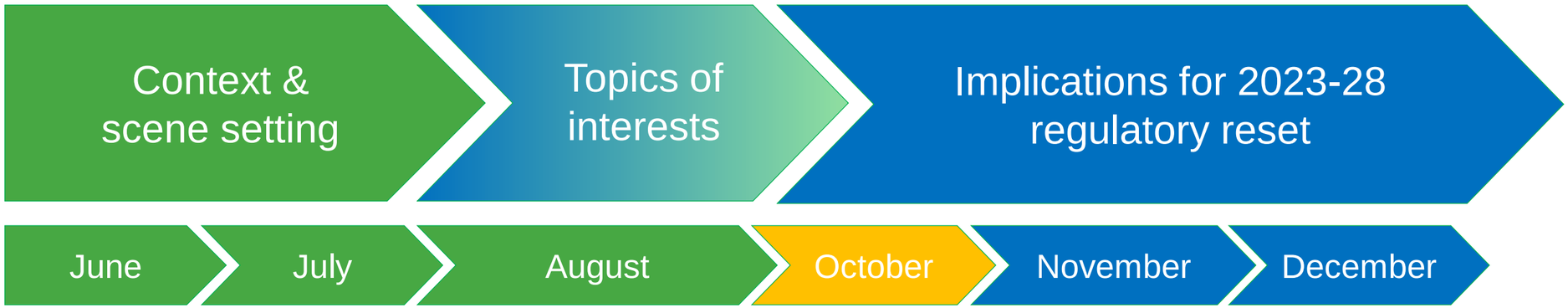
Catherine O’Neill, Stakeholder Engagement Lead

5 October 2021

Meeting Agenda

	Agenda Item	Presenter	Overview
9:30am	Welcome and introduction	Brian Salter, Acting CEO	Welcome CEO update
9:50am	Preliminary Revenue Proposal: Customer outcomes and operational challenges	Stephanie McDougall, Head of Regulation	
10:50am	Break – 10 mins		
11:00am	Preliminary Revenue Proposal: Forecast expenditure, revenue, prices	Stephanie McDougall, Head of Regulation	
11:30am	Customer research	Catherine O'Neill, Stakeholder Engagement Lead	Phase 2 outcomes Phase 3 plans
11:50am	Next steps	Catherine O'Neill, Stakeholder Engagement Lead	
12:00pm	Meeting close		

Revenue Reset: 2021 Consultation timeline



June	July	August	October	November	December
Network Vision, TAPR	**Deep Dive:** Expenditure drivers Proposal narrative	Affordability, pricing, risk management & reliability	**Deep Dive:** Reset building blocks: opex & capex forecasts	Draft Proposal - early insights, Feedback on building blocks	**Deep Dive:** Refined forecasts reflecting feedback	**31 Jan 2022** **Regulatory Proposal** to AER
	Online	Online	Online	Melbourne	Sydney	

Preliminary Regulatory Proposal: Customer outcomes and operational challenges

Stephanie McDougall, Head of Regulation

Outcomes for consumers

Deliver customer savings

Transmission price savings:

- $16.90 p.a. residential
- $61.20 p.a. small business

Ensure safety security and reliability

- Replace & upgrade assets
- Meet strong demand growth
- Maintain power quality
- Improve network resilience
- Enhance cyber and physical security

Lead the transition

- Project EnergyConnect
- Queensland - NSW Interconnector
- Victoria to NSW Interconnector
- HumeLink
- Other ISP projects as needed

Meet rapid load growth

- Western Sydney
- North West Slopes
- Bathurst, Orange, Parkes
- Beryl, Vineyard and Broken Hill

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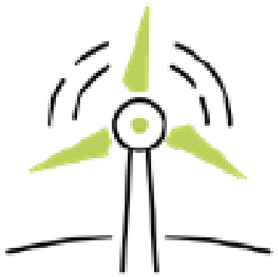
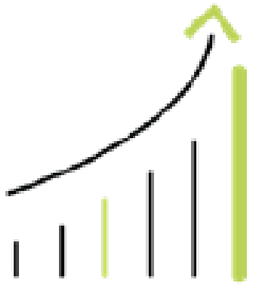
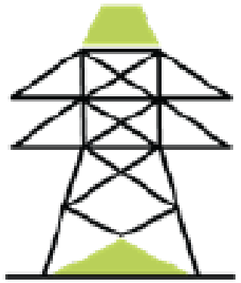
Operational challenges in the 2023-28 period



Changing generation mix



Economic conditions



Maintaining asset condition

Cyber security

Climate change

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Changing generation mix

The change in the generation mix is increasing the operational complexity of maintaining network stability and security.

More network congestion

Investments to relive congestion in Wagga substation and Wagga north capacity

Shortfalls in system strength and inertia

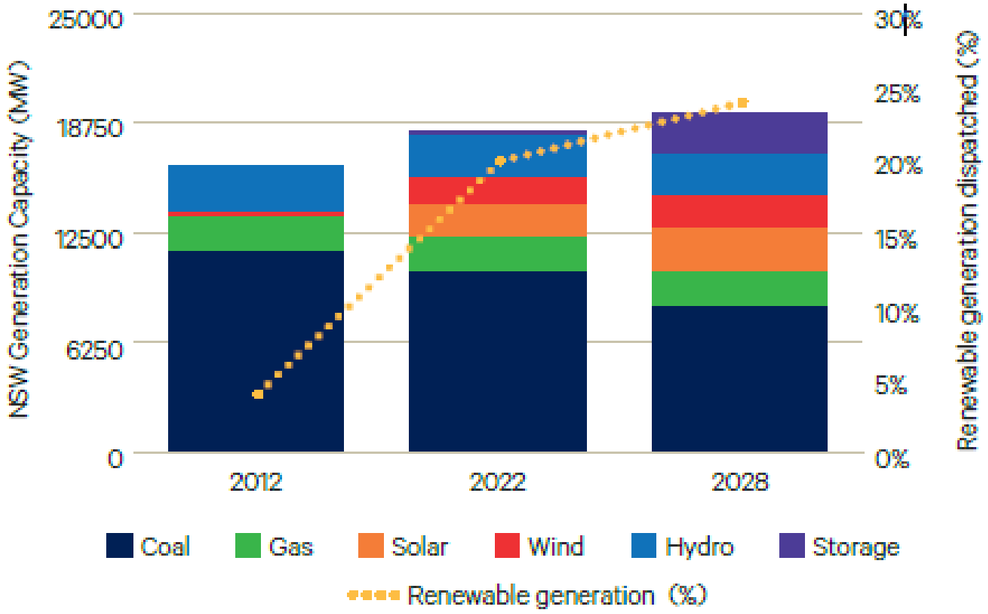
Contingent projects for system strength and inertia

Increasing fault levels

Augex to improve fault levels in Southern NSW

Decreasing minimum demand

Augex to address voltage issues in Southern NSW and greater Sydney area



Economic conditions

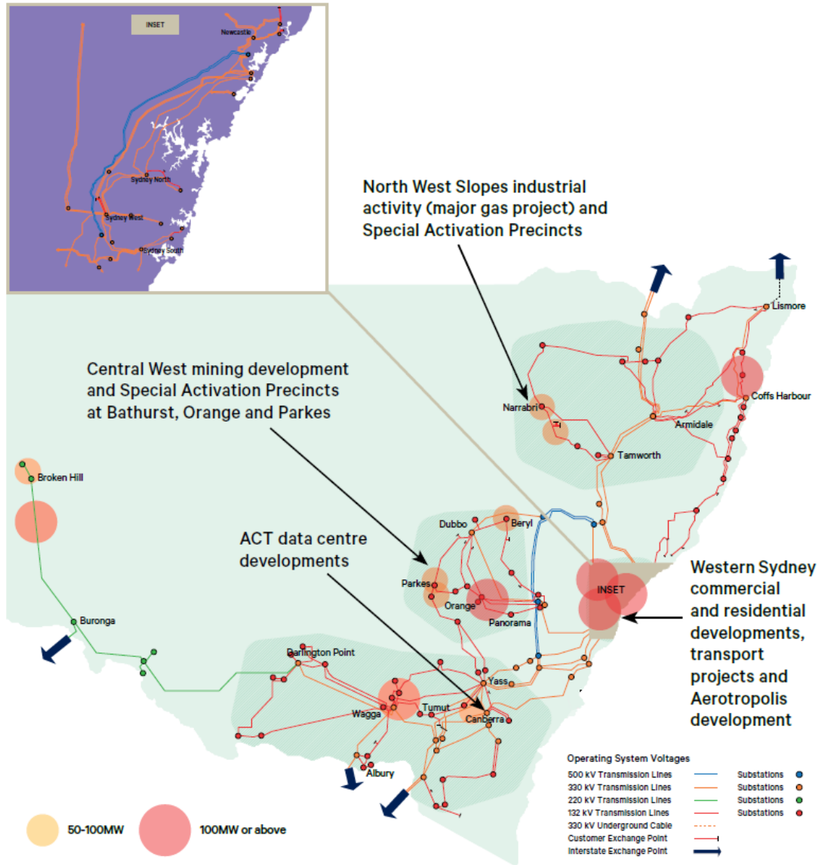
Economic growth forecast to return to trend with strong maximum demand growth expected in some regions.

Investment is needed to address growth from commercial and industrial developments, data centres, mine expansions:

Western Sydney
Data centres, commercial and residential growth

North West Slopes
Industrial loads and underlying demand growth (contingent project – RIT-T underway)

Bathurst Orange and Parkes
Mine expansion and industrial loads (contingent project – RIT-T underway)

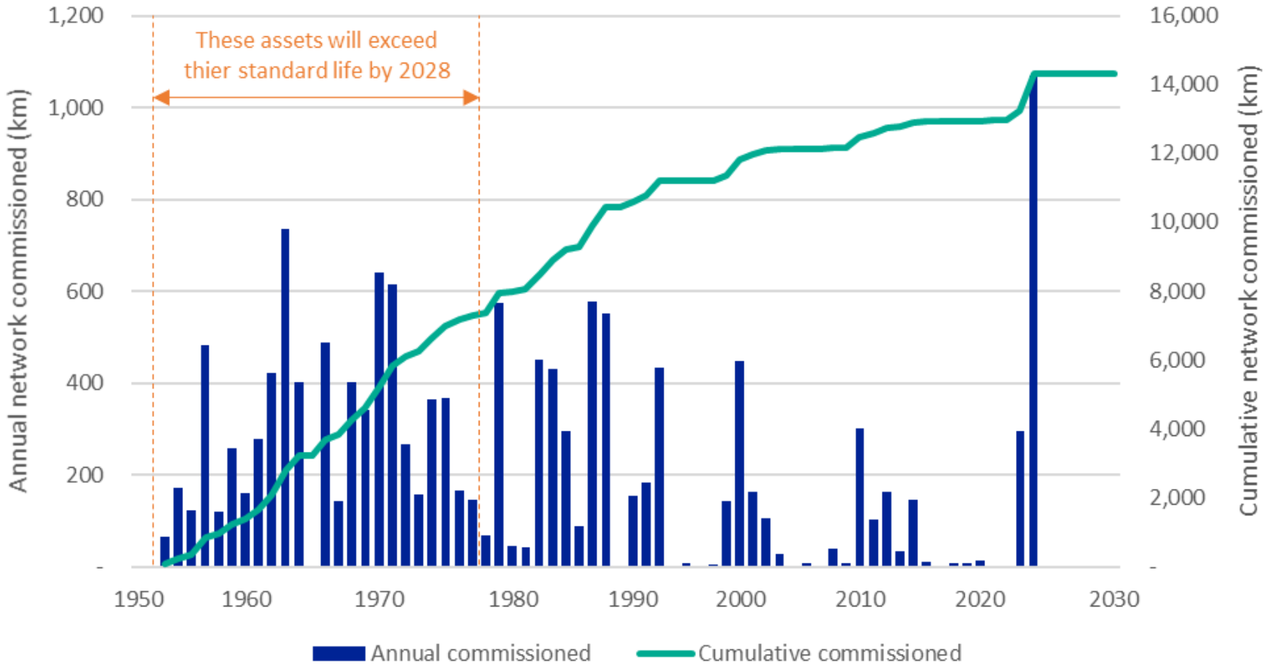


Maintaining asset condition

Our asset base is continuing to age and decline in condition – 40 per cent of our network was commissioned before 1970.

Investment is needed to maintain long-term asset condition to:

- manage network risk, and
- maintain performance levels.



Cyber and physical security

The Australian Government is introducing new obligations that we will need to comply with during the next period.

We have proposed investment to protect our network from cyber and physical infrastructure threats and maintain the security and reliability of our network

New cyber and physical security obligations:

Security of Critical Infrastructure Act

Security Legislation Amendment (Critical Infrastructure) Bill 2020, introduced to Federal Parliament on 10 December 2020

Australian Government is considering a proposal to increase security and resilience

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Climate change

The frequency, intensity and duration of climate-driven extreme weather events are increasing.

GHD found we are leaders improving our network resilience

- We are are already responding to climate change by replacing assets with more resilient alternatives.
- We will continue this in the next period including by replacing deteriorated timber poles with concrete or steel poles.

Break – 10 minutes

Preliminary Regulatory Proposal: Forecast expenditure, revenue and prices

Stephanie McDougall, Head of Regulation

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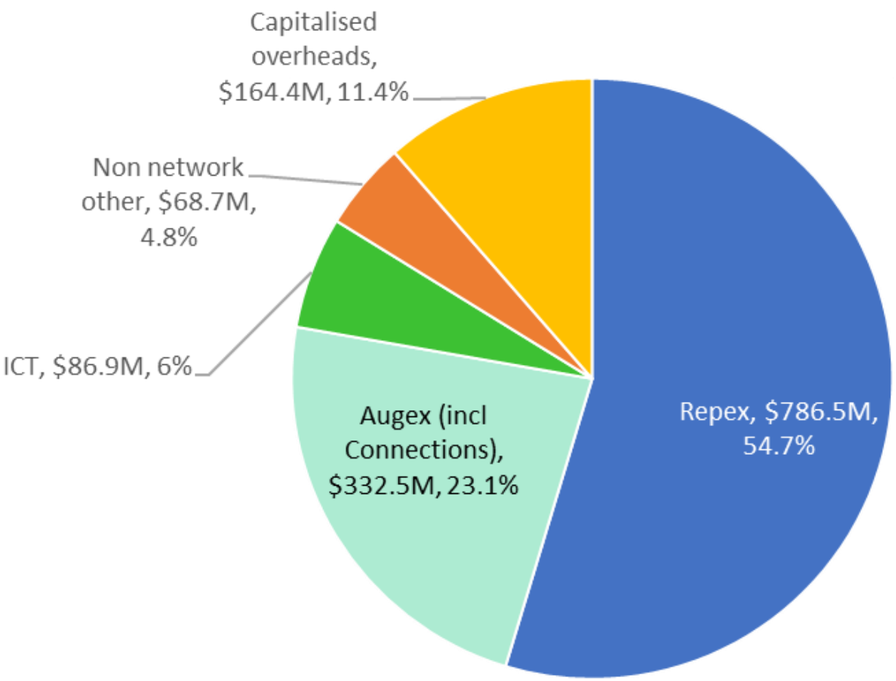
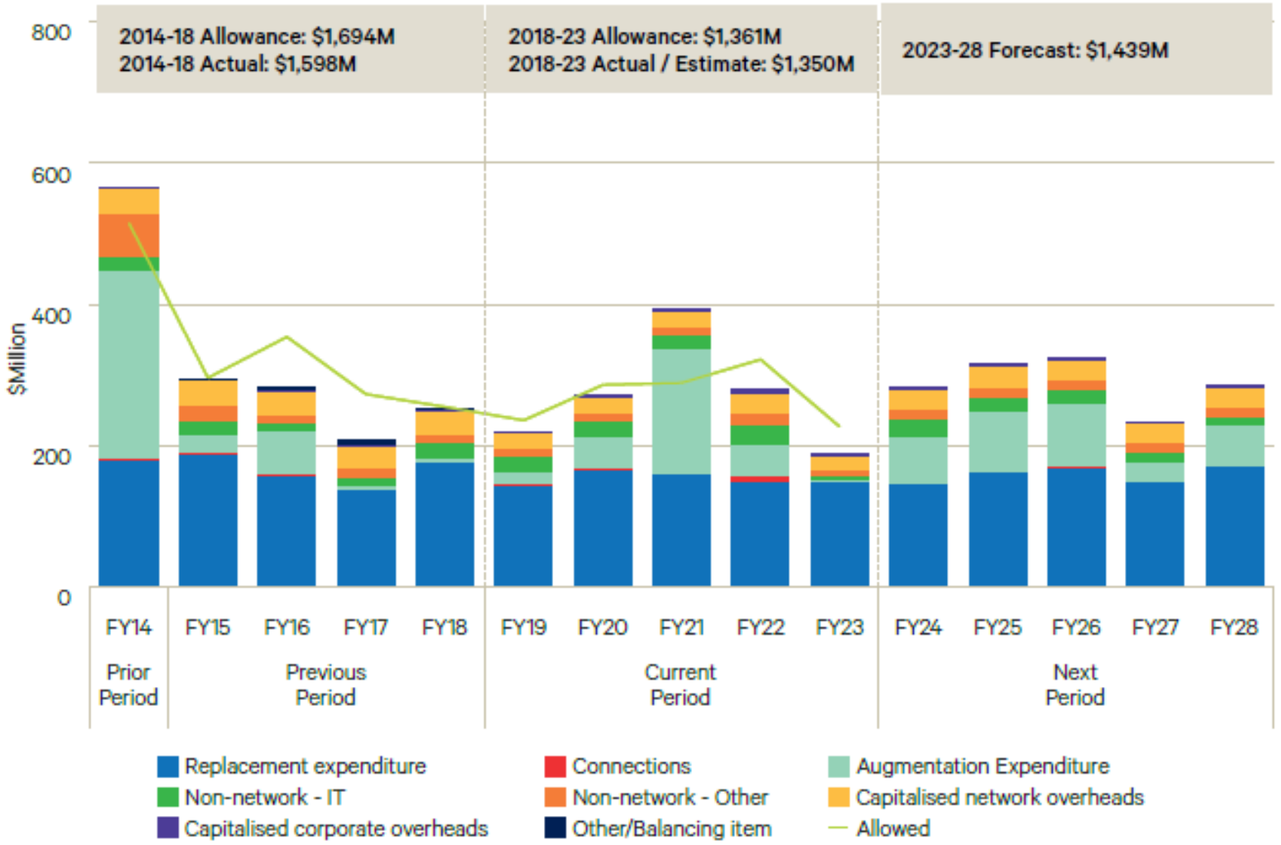
2023-28 forecast capex

Forecast 2023-28 capex of $1,439 million is $89 million or 7 per cent higher than 2018-23 estimated capex of $1,350 million.

2023-28 forecast capex by subcategory



Capex trends compared to the AER allowance, excluding pre-approved capex and ISP Projects



2023-28 forecast capex – driver of increase

Capex by sub-category	Total 2018-23 $M	Total 2023-28 $M	Driver of change in capex
Replacement capex Repex	756.8	786.5	Replace aging assets resulting in increased condition-related issues
Augmentation expenditure (Augex)	301.3	332.5	Meet strong local load growth, maintain compliance (voltage / fault levels) and relieve congestion
Information & communication technology (ICT)	94.3	86.9	Replace applications and systems at end of life and implement new technology. *Partially offset by changes to accounting standards (expense some ICT capex in the next period).*
Property	12.8	20.8	Increase office and depot spaces to support increased network operations
Fleet, plant and equipment	42.6	47.9	Increase fleet for growth in staff and contractors undertaking work on the network
Capitalised overheads	142.4	164.4	Support a larger capital works program
Total	**1,350.2**	**1,439.0**	**An increase of $89 million or 7 per cent**

Projects not currently included in Augex forecast

Major Projects undergoing a RIT-T

We will include the RIT-T preferred option in our Revised Revenue Proposal.

1. **Supply to North West Slopes Area project**

   Indicative cost: $155 million

   Driver: Locational demand (new industrial growth - Narrabri Gas) and underlying demand growth

2. **Supply to Bathurst Orange and Parkes (stage 1)**

   Indicative cost: $107 million

   Driver: Locational demand (mine expansion at Orange, new mines in the Bathurst and Parkes and industrial load growth at the Parkes Special \Activation Precinct.)

Strategic Property

We will reassess status once we understand status in AEMO's 2022 Draft ISP

1. **Strategic easement acquisition for supply to Sydney from the south**

   Indicative cost: $278 million

   Driver: Corridor for a future 500kV double circuit transmission line to be installed from South Creek to Bannaby.

   Required for the 'Reinforcing Sydney, Newcastle and Wollongong Supply' project, which is a future project in AEMO's 2020 ISP.

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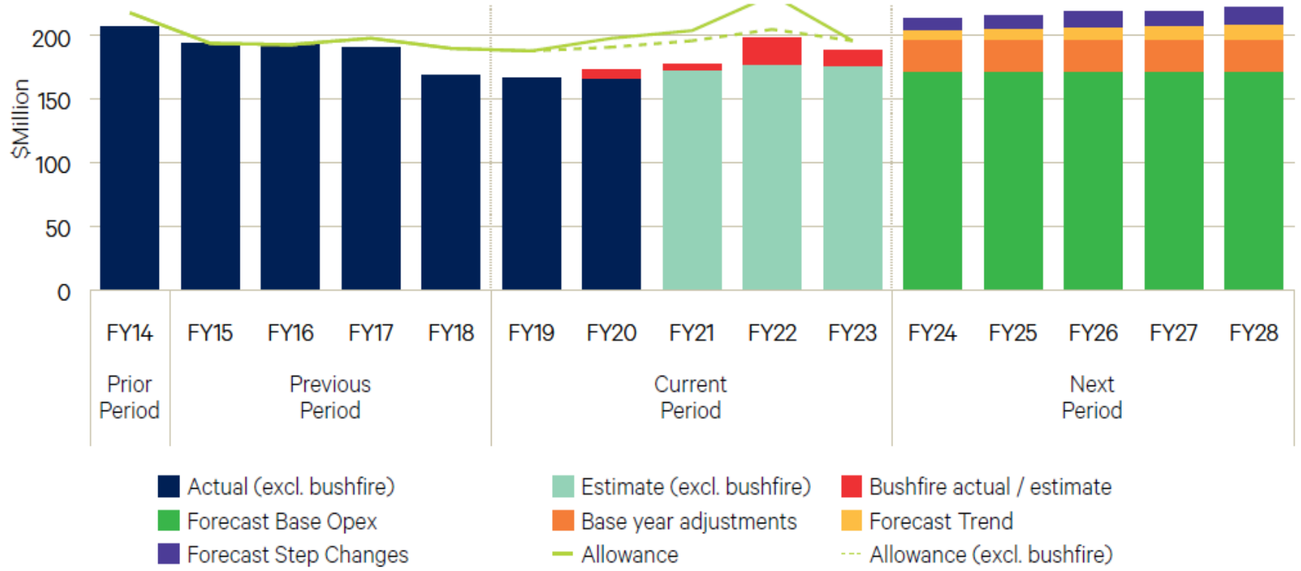
2023-28 forecast opex

Increased opex needed to support growth in our network and meet the costs of externally driven changes.

- Forecast using AER's base-step-trend
- 2023-28 forecast opex is $1,109.6 million
  - $205.2 million or 23% higher than 2018-23 estimated opex
- Increase in opex is driven by:
  1. changes in accounting standards
  2. network growth from Project EnergyConnect
  3. step-changes for externally driven costs:
     - increases in insurance premiums
     - new cyber and physical security requirements, and
     - requirements to undertake ISP preparatory activities.

Historical and forecast opex



2023-28 Revenue

We expect our revenue to decrease by 3.2% or $128.3 million compared to the 2018-23 period.

The key drivers of reduction in revenue are:

- lower return on capital, driven by a lower rate of return
- lower projected corporate income tax, and
- lower revenue adjustments.

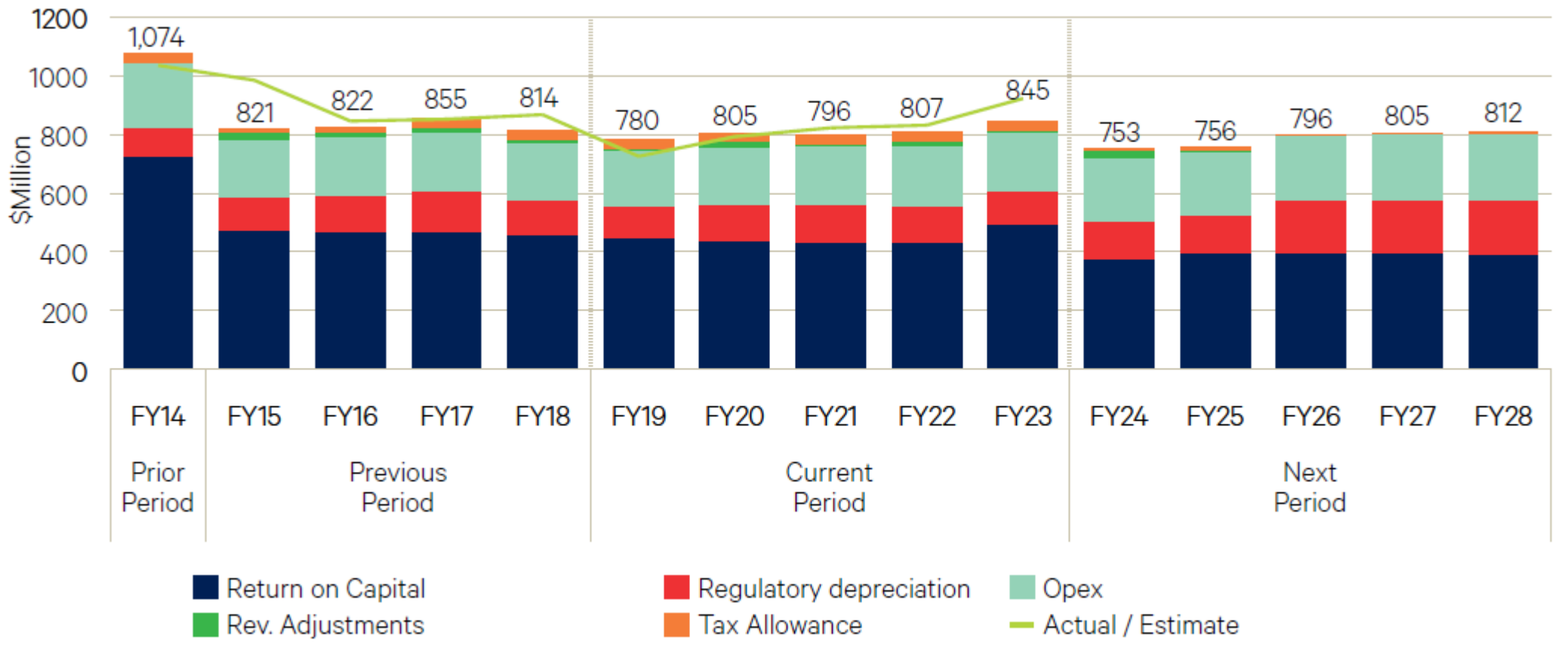
Rate of Return

2018-23: 6.2% p.a.

2023-28: 4.4% p.a.

-1.8% p.a.

2023-28 forecast revenue by building block



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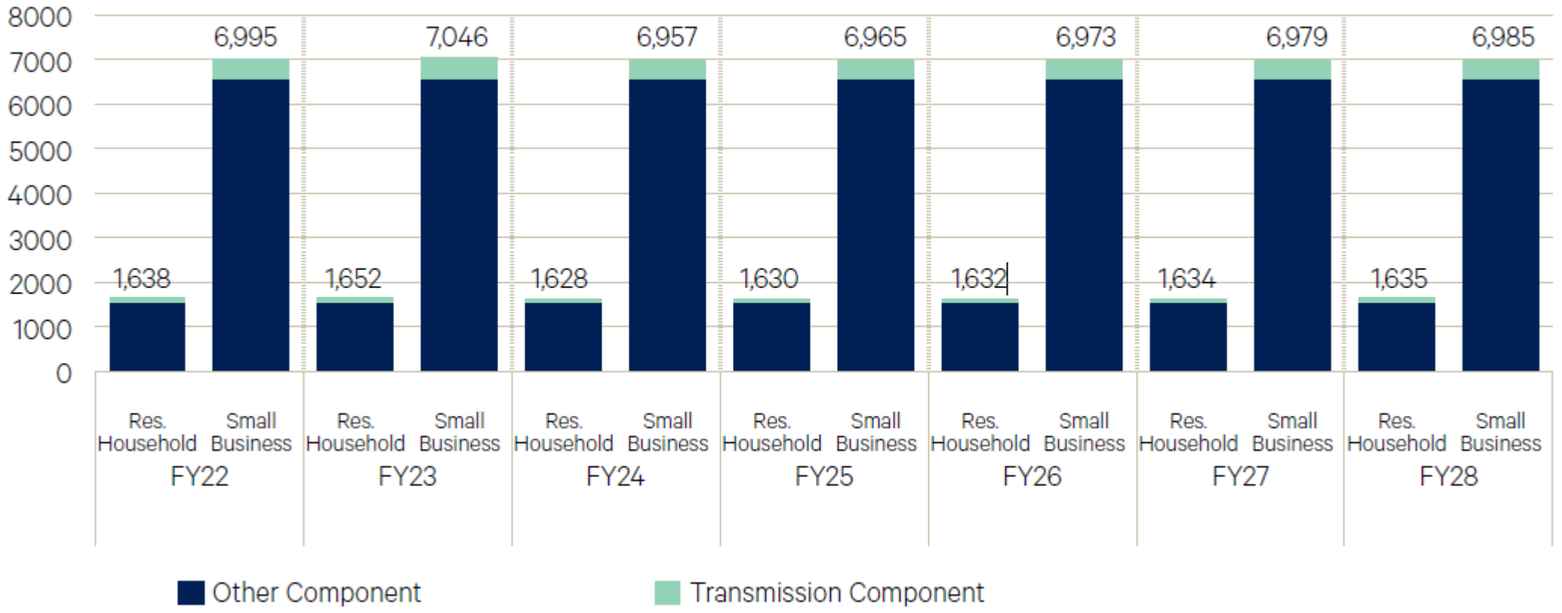
2023-28 Prices

The transmission component of residential household and small business bills is expected to reduce by $16.90, and $61.20 p.a. respectively.



Electricity supply chain	Proportion of total residential household bill %	Proportion of total small business bill %
Generation	28	24
Transmission	**7**	**8**
Distribution	22	28
Retail and other	15	12
Environmental policies	28	29

Source: AcilAllen, TransGrid TUOS as a proportion of residential and small business electricity bills, 14 September 2021

Notes:

1 The indicative bill uses average bill information published by the AER and the AEMC and assumes that the non-transmission components of the bill stay constant in real dollars.

2023-28 Contingent Projects

Including projects as contingent ensures that customers only pay for them if and when they proceed.

We have two categories of contingent projects:

1. **Standard contingent projects**

   We have identified 15 contingent projects, with an indicative total cost of c. $4 billion. The key drivers are:

   - system inertia and strength requirements
   - expected demand growth, and
   - expected new generation connection.

2. **NSW Renewable Energy Zones (REZ)**

   REZ projects declared by the NSW Government

Proposed contingent project	Total indicative cost estimate ($M)
New England REZ	2,398
South Western NSW REZ	1,466
Central West Orana REZ	673
Hunter region REZ	259
Illawarra region REZ	259
Total	5,054

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2023-28 Actionable and future ISP projects

We have listed future or Actionable ISP projects although will rely on the automatic contingent project process under the Actionable ISP Rules for these projects.

AEMO's 2020 ISP identifies the following future and Actionable ISP projects. We will updated based on AEMO's draft 2022 ISP, (expected in December 2021).

ISP Projects	2023-28 indicative cost ($M)	Total indicative cost ($M)
Actionable ISP projects		
HumeLink	1,117	3,434
VNI West	1,672[1]	4,220
Future ISP projects		
QNI (Medium / Large)	157[2]	4,219
Supply to Sydney from the North	911	911
Supply to Sydney from the South	2,336	2,336
Total	6,192	15,120

Notes: 1. Includes NSW and VIC components. 2. Includes NSW and QLD components.

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Customer Research Findings
Phase 2

Catherine O’Neill, Stakeholder Engagement Lead

Research method

1. Explore	Discussion board over three days	32 customers
2. Prioritise	Online survey for residential and SME	>1400 customers
3. Test	Focus Groups in metro and regions	6 groups

Phase 1: Explore - findings

1.

Reliability and affordability

Reliability and affordability remain of greatest importance to customers

2.

Research and innovation

Strong preference to improve research and innovation. Saw it as a means for climate change mitigation

3.

Preference for reduced emissions

Customers had strong preference for energy industry to reduce emissions. Some customers felt powerless to contribution to emissions reduction

4.

Mixed views on investment timing

Customers had mixed views whether to investment in renewables now or over 10 years to manage risk of technology obsolescence

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Phase 2: Prioritise

What: 15 min online survey

When: 17th – 30th August

Who: Main or joint household and small-to-medium business energy decision makers within the TransGrid Transmission Network

Sampling Frame

Consumer Type/ Location	Sydney	Canberra	Coastal (Inc. Newcastle, Wollongong and Byron Bay)	Regional (inc. Dubbo and Wagga Wagga)
Residential	733	71	71	299
Small to Medium Business (1-199 employees)	196	28	20	87
Total Consumers		**1505**		

Considerations in sampling and data weighting were also given to ensure:

- A representative mix of business industries and sizes
- Representation of residential consumers who speak a language other than English at home (n=221)
- Representation of residential consumers from the Indigenous community (n=28)

Phase 2: Prioritise - findings

1. **Healthcare, cost of living and economy** were prioritised by small business and residential customers in short term

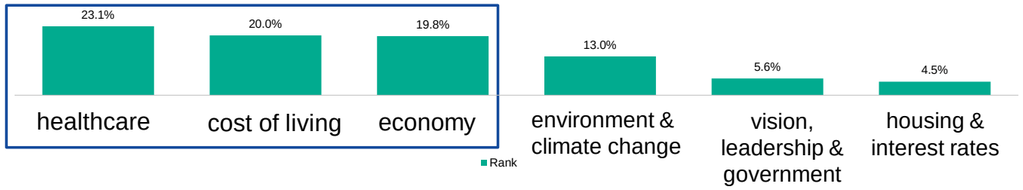
2. **Environment and climate change** were prioritised in the future for residential customers, but small business customers prioritised cost of living and economic investment in short-term and long-term

3. **Invest to improve affordability** was first priority for residential and small business customers with preference for investment to be front-loaded

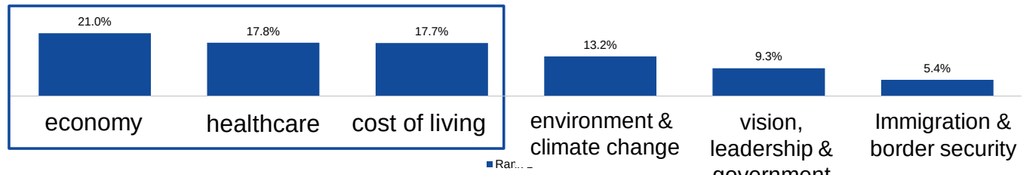
4. **Willingness to pay to reduce emissions** 57% of residential consumers would pay $25 or more on their quarterly bills and 50% of small business consumers would pay $40-50 on top of monthly bills

Priorities for Australia now and in future

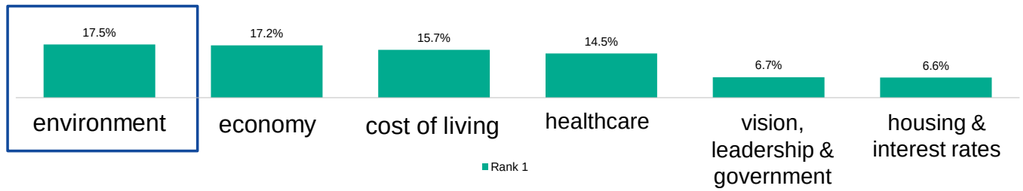
Residential consumers - CURRENT



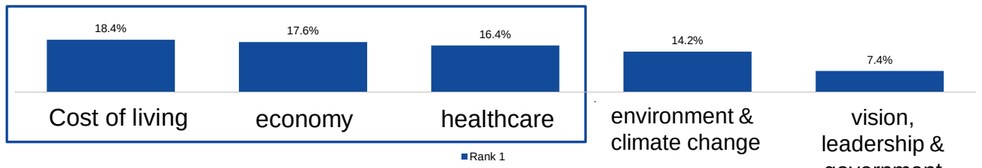
SMB consumers - FUTURE



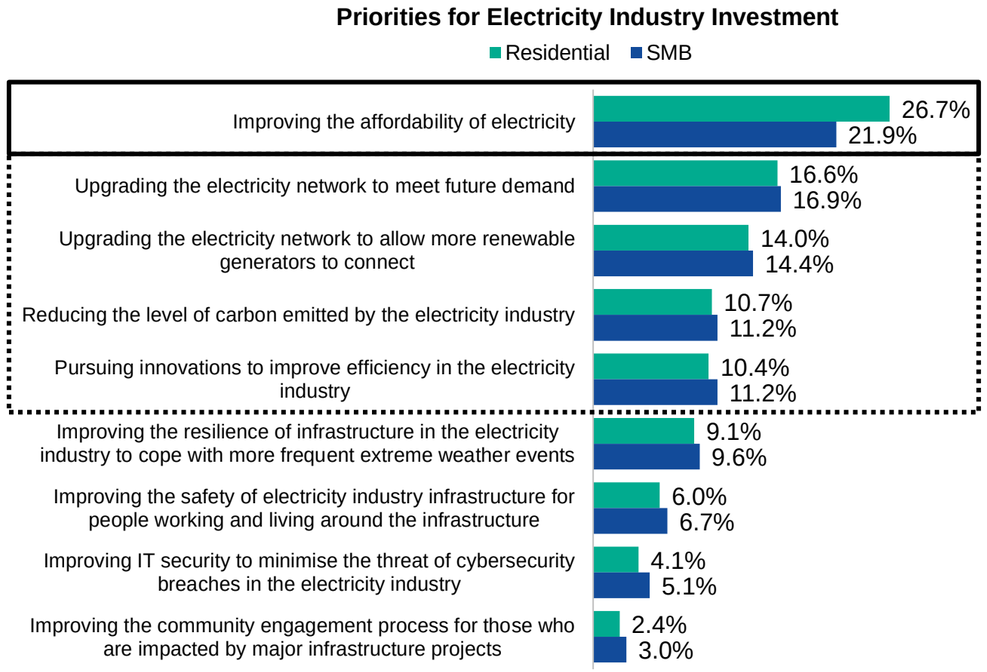
Residential consumers - FUTURE

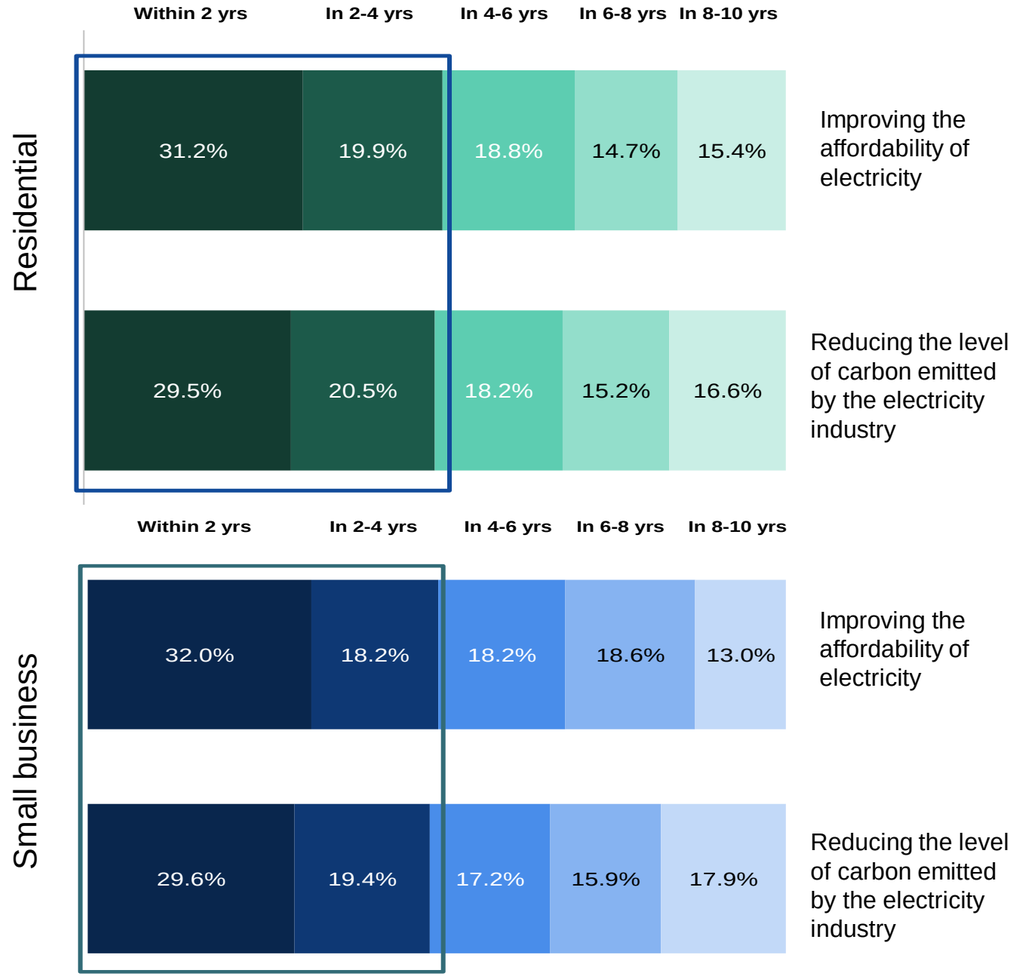


SMB consumers - FUTURE

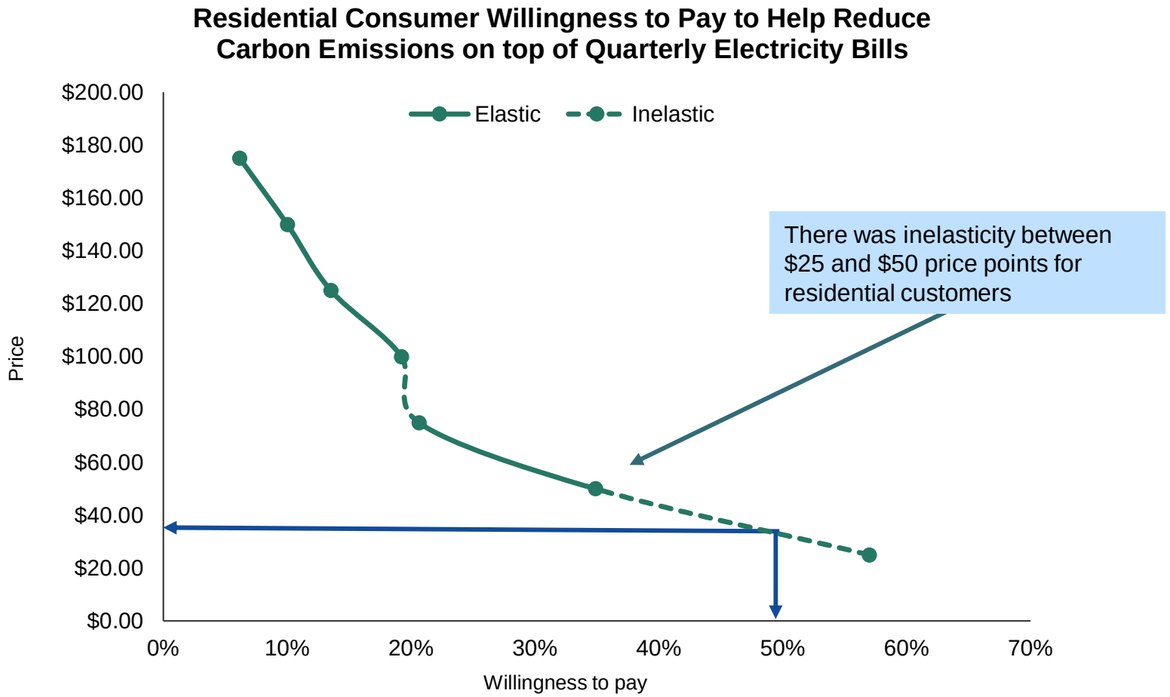


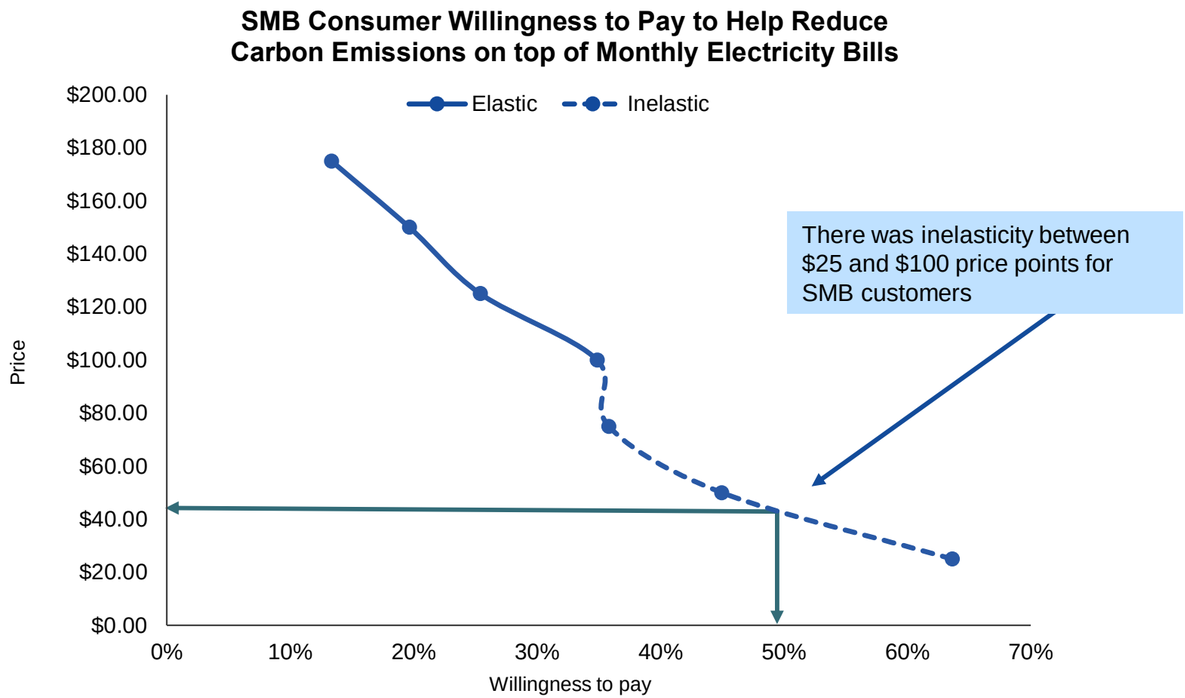
How investment in energy industry should be targeted





Willingness to pay for emissions reduction





Indicative timeline

Discussion board development, recruitment	✓	July
Conduct discussion boards	✓	Late July
Summary report and draft questionnaire	✓	Early August
Field work and reporting	✓	Mid - late August
Discussion guide development & recruitment		Early Oct
Conduct groups		Mid October
Final report		31 October

- Explore ~2 weeks
- Prioritise ~5 weeks
- Test ~9 weeks

Next steps

Next TAC meeting

	TAC meetings
17 June	TAC: Setting the scene
22 July	TAC: Expenditure drivers
30 July	Customer research feedback
19 August	TAC: Topics of interest
14 Sept	Deep Dive – HumeLink
29 Sept	Deep Dive – Energy Vision
5 Oct	TAC: Reset building blocks
7 Oct	Customer research feedback
3 Nov	TAC: Reset proposal overview
1 Dec	TAC: Draft proposal

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Transgrid Advisory Council

5 October 2021

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