

ElectraNet Revenue Proposal 2022 Public Forum

31 March 2022



Outline

1. Context
2. Customer engagement
3. Revenue Proposal overview



1.0

Context

Overview

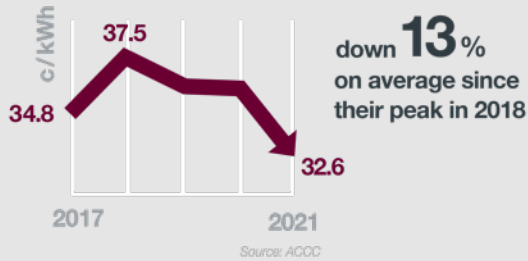
- SA remains at the forefront of the global energy transformation
 - Renewables are displacing traditional sources
 - Pushing the power system beyond its limits
- Increased role for transmission
 - Interconnection, system services, control schemes being delivered now
- These investments come at a cost but drive down overall prices
- Meeting the evolving needs of our customers into the future
 - Ongoing focus on managing ageing network
 - Targeted investments in technology & security
 - Maintaining and operating an increasingly complex network amid external cost pressures



South Australia's transforming power system

Retail power prices

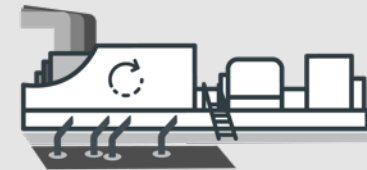
have decreased over the past 5 years



First AEMO Integrated System Plan
June 2018



ElectraNet Dalrymple battery is first grid forming battery in Australia



ElectraNet synchronous condensers begin operation

2021

2020

2019

2018

2017

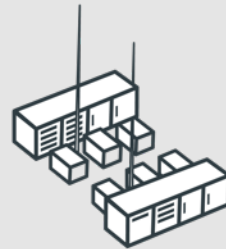
2016



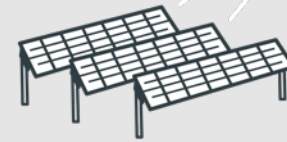
Coal fired generation ceased
May 2016



Statewide blackout
September 2016



World's largest battery Hornsdale Power



Connection of first grid scale solar plant at Bungala



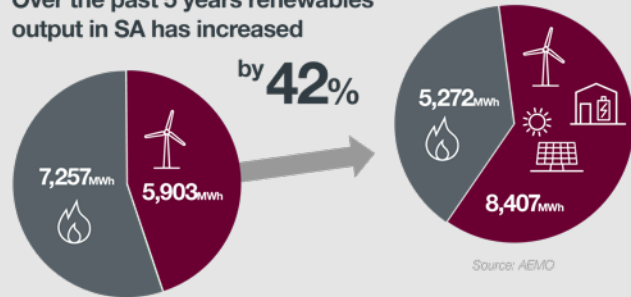
Negative system demand reached
November 2021



Regulatory approval for new interconnector to NSW Project EnergyConnect
June 2021

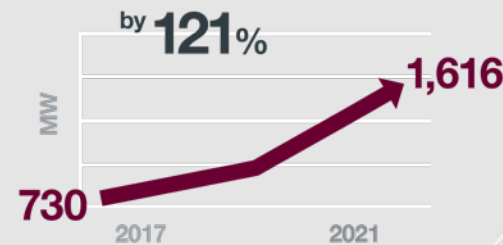
Renewables are replacing gas

Over the past 5 years renewables output in SA has increased

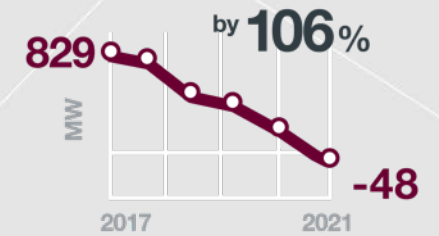


A grid in transition

Rooftop PV installation has increased over the past 5 years



Minimum grid demand has decreased over the past 5 years

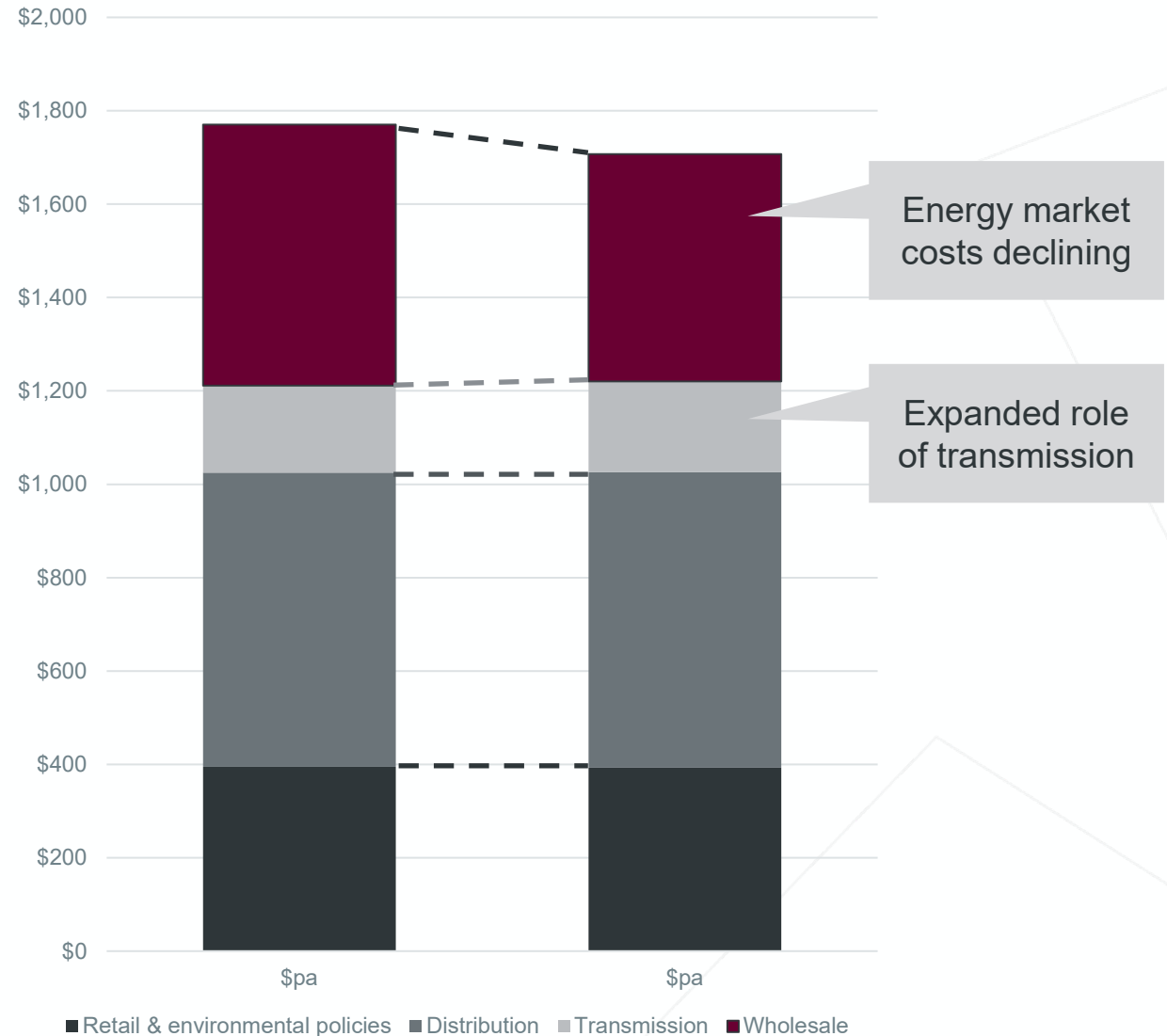


The role of transmission is changing

- The transmission network is playing a greater role:
 - Stronger interconnection
 - System services (system strength, inertia, frequency control, emergency control schemes)
- Investments support energy transition and drive down overall electricity prices

Transmission component of cost is growing to drive overall price reductions

The evolving role of transmission

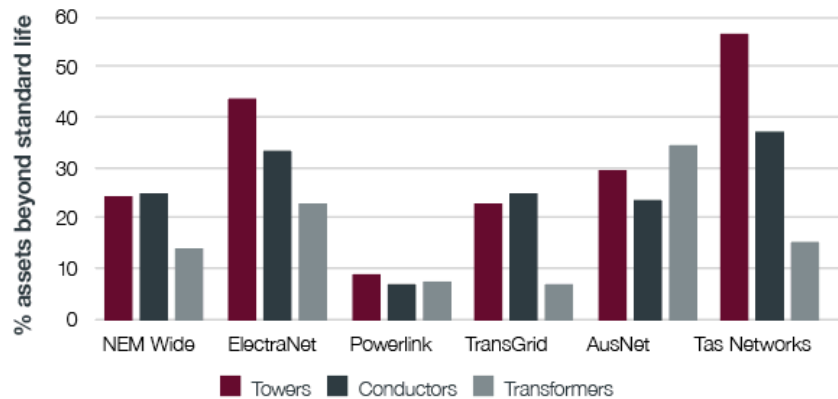


Ongoing challenges of South Australia's transmission network

These factors mean efficient transmission costs are higher in SA

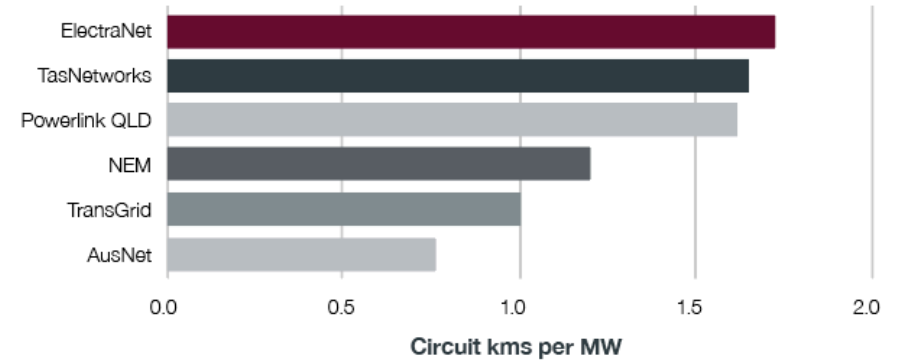
1 Age Profile

South Australia has one of the oldest transmission networks in the NEM. Over 40% of transmission towers, 30% of conductors and 20% of transformers are beyond their standard asset life and require increasing maintenance.



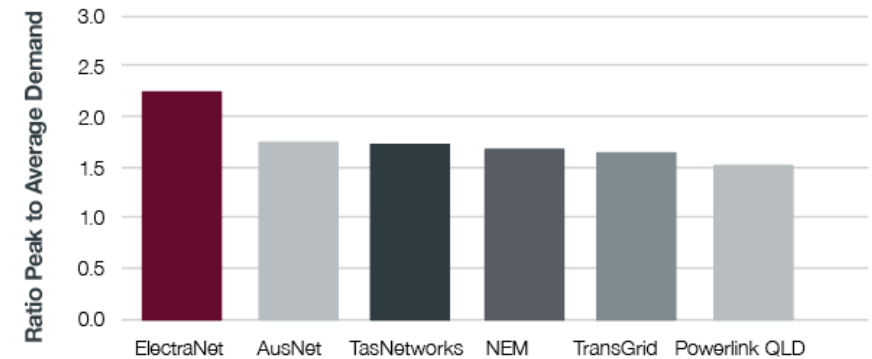
2 Geographic Spread

South Australia has the longest network per unit of peak demand in the NEM. It requires more assets to supply a thinly spread population.



3 Peakiness of Demand

South Australia has the highest ratio of peak demand to average demand in the NEM. This leads to higher costs per unit of energy transmitted. With average demand declining, this effect is increasing.



Despite these challenges, the AER's benchmarking shows we have remained the most efficient mainland TNSP since reporting began in 2006 in total productivity terms

2.0

Customer Engagement

Our Overall Approach

Key benefits of ongoing engagement:

- Improved understanding of customer perspectives
- More targeted expenditure plans
- Greater trust and confidence, with 'no surprises'
- Improved value of transmission services

Network Vision

The Network Vision is developed in collaboration with our customers and stakeholders to help shape our directions and priorities for the transmission network.



Preliminary Revenue Proposal

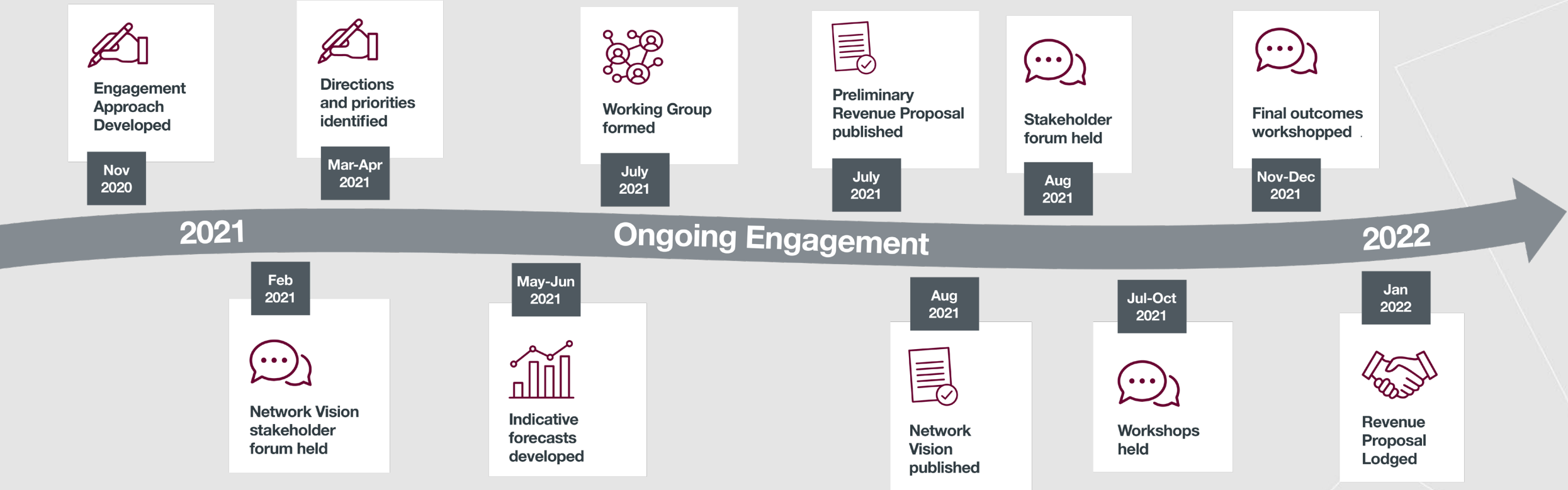
The purpose of the Preliminary Revenue Proposal is to give our stakeholders the information they need to make meaningful contributions to our Revenue Proposal.

Revenue Proposal

Our final expenditure plans and priorities shaped by stakeholder input.

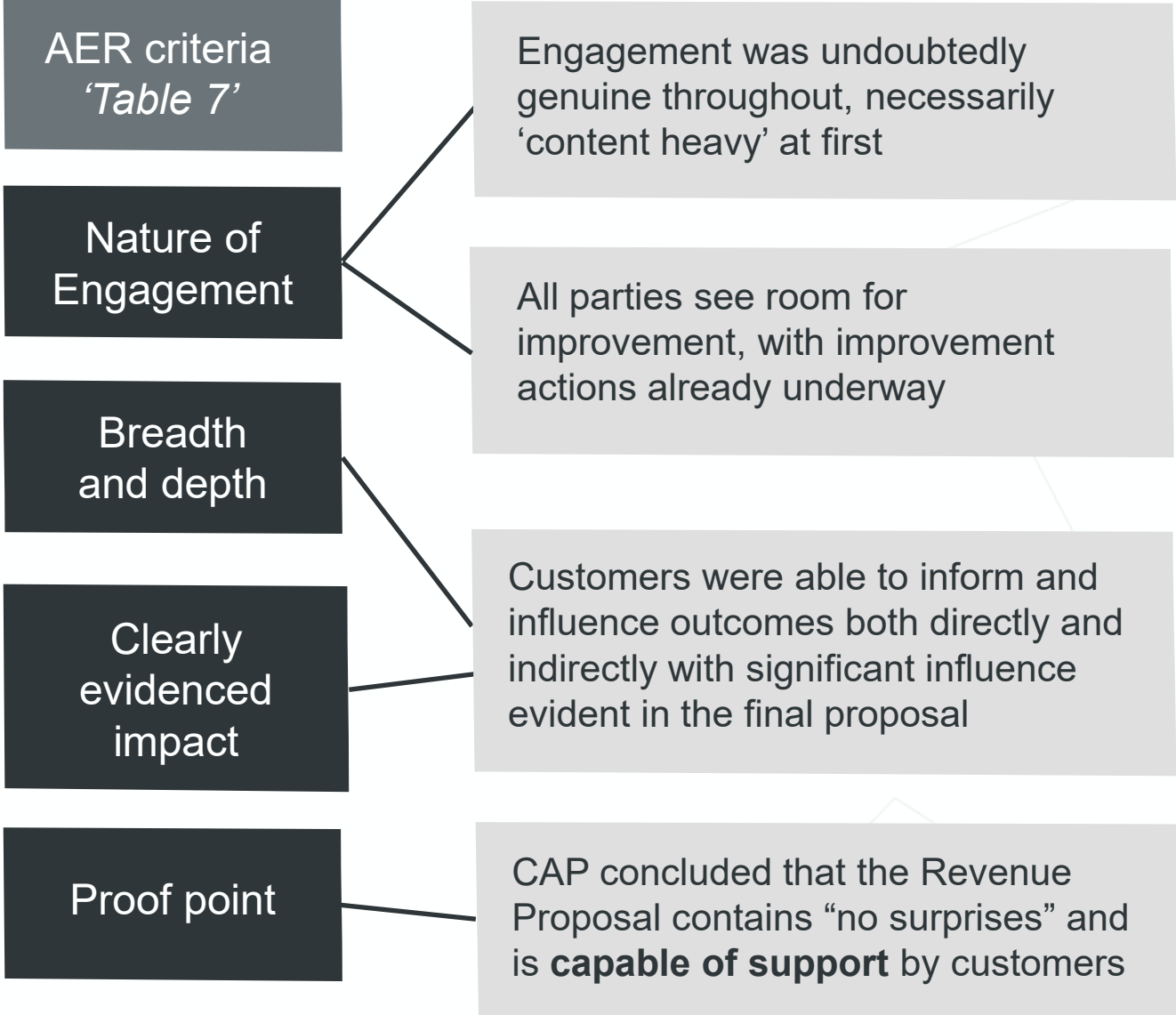


Engagement Journey



Engagement Outcomes

FY2024-28	Preliminary Revenue Proposal	Change	Revenue Proposal
Capex \$m*	842*	-98	742
Opex \$m*	590*	-19	571
Revenue \$m (smoothed)	1,799	-90	1,709
Price impact % ('Po' in FY24)	5	-4.2	0.8



3.0

Revenue Proposal Overview

Revenue Proposal at a glance



Transmission Prices

↑0.8%
increase in real transmission prices in 2024 to 3.2 c/kWh

↑\$5p.a.
(\$nom) Increase in transmission component of household electricity bills in 2024, largely driven by RAB growth in the current period and ongoing falls in energy use

Transmission Revenue

↓1.7%
real reduction in annual revenue in 2024 to \$342m and no real growth for the next four years



Operating Expenditure*

↑9%
increase in operating expenditure in 2024 to \$571m

Rate of Return

↓21%
decrease in regulated rate of return from 5.43% to 4.29% based on current market data and parameters



Regulated Asset Base

↓1.6%
real decrease in RAB over the five years to 2028 following an increase of 26.4% over the current regulatory period

Capital Expenditure*

↓47%
drop in overall capex in 2024 - 2028 to \$742m

↓18%
drop in underlying capex (excluding AEMO's ISP projects) to \$636m

Changes shown from current regulatory period.

**These figures exclude the impact of recent accounting treatment changes requiring us to report intangible assets as Opex. All figures in this document are presented in real terms as at June 2023 unless otherwise indicated. In contrast our Preliminary Revenue Proposal was presented in real terms as at December 2023. Some values from the PRP are converted to June terms in this document for comparison. Tables may not add due to rounding.*

We apply a risk-based approach to capital planning

The Consumer Advisory Panel was satisfied that our risk-based capital planning framework is robust, and that we have given sufficient focus to reducing capital expenditure in our Revenue Proposal

Asset Management Objectives:



Safety of People

Ensure the safety of staff, contractors, and the public.



Power system security and resilience

Ensure the network is resilient and operates within acceptable parameters in the face of electrical, physical, or cyber disruption, and continues to enable the transition to a low carbon emissions future.



Affordability and reliability

Reduce the overall cost of electricity to customers by removing network constraints, operating the network, and delivering our capital and maintenance works as efficiently as possible, while maintaining safety and reliability.



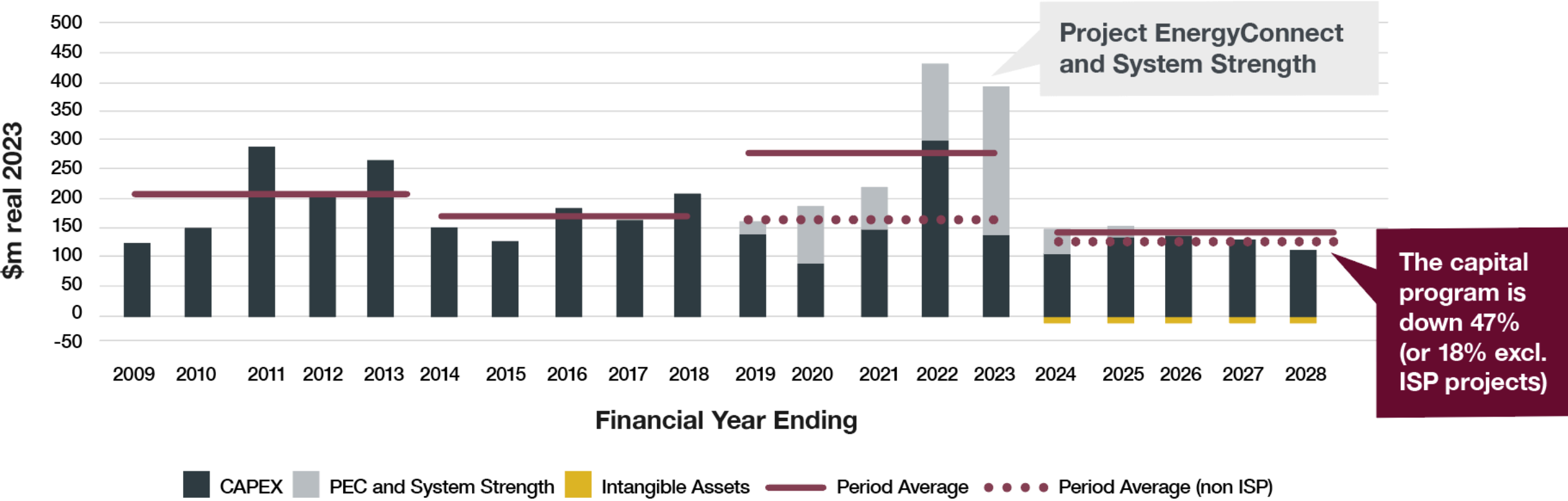
Protect the environment

Ensure the environmental impact of network operations are minimised.

These objectives were developed in consultation with ElectraNet's Consumer Advisory Panel and are consistent with the National Electricity Objective and the capital expenditure objectives set out in the National Electricity Rules

Capital Expenditure Forecast

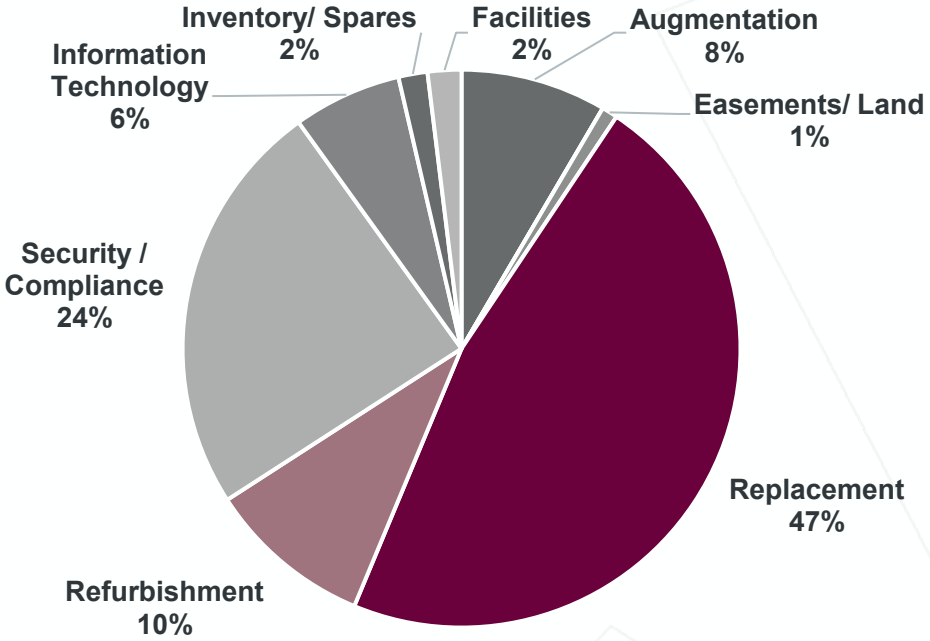
Following delivery of major energy transition projects, we are returning to a smaller program focused on managing the ageing network.



Capital Expenditure Forecast

The capital program is largely driven by replacement/ refurbishment (54%) and security/ compliance (24%) requirements

Category (\$m FY23)	FY19-FY23 forecast	FY24-FY28 forecast (unadjusted)	FY24-FY28 forecast (adjusted*)
Augmentation	407	59	59
Connection	3	0	0
Easements/ Land	6	6	6
Replacement	538	339	327
Refurbishment	92	67	67
Security / Compliance	268	176	168
Information Technology	79	70	44
Inventory/ Spares	12	12	12
Facilities	13	14	14
Total	1,421	742	696



*Reflects accounting treatment changes requiring intangible assets to be reported as opex

Major capital projects

1 Project EnergyConnect – \$59m

This is the final phase of Project EnergyConnect, which will connect South Australia's transmission network to New South Wales, paving the way for reduced wholesale electricity prices due to increased competition and also enabling increases in the use of renewable generation in South Australia.

2 Hummocks to Ardrossan West Line Rebuild – \$32m

Our routine condition assessment indicates that the transmission line between Hummocks and Ardrossan West is in need of substantial work. The most efficient option is to replace the line.

5 Transmission Tower Anti-Climb Installation – \$22m

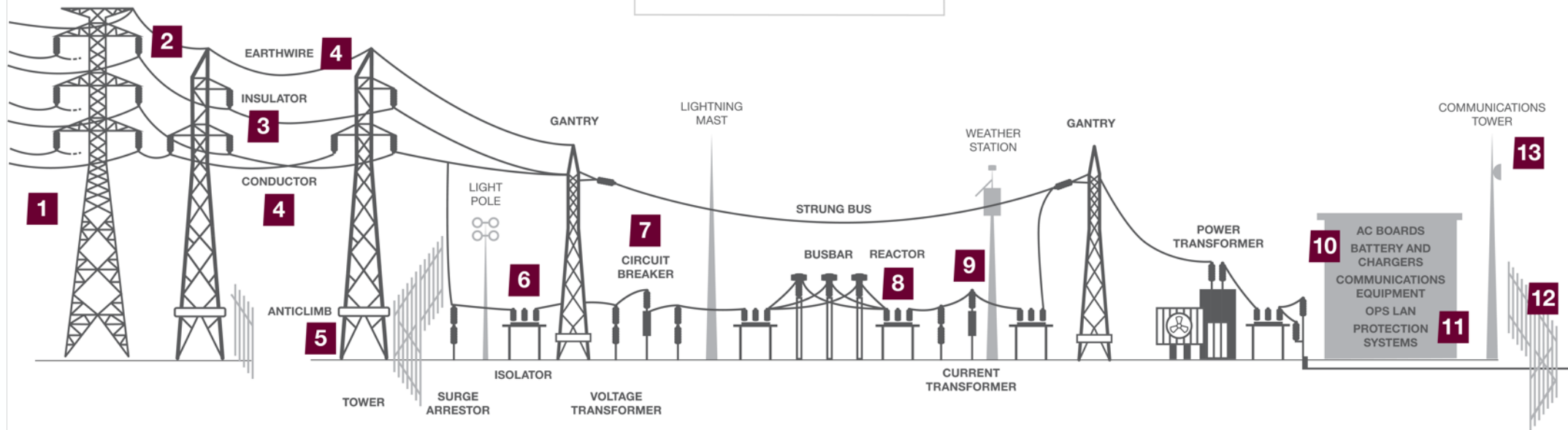
Many of our older transmission towers are not fitted with anti climb equipment that is now standard. For public safety reasons we propose to install this equipment on towers in locations most at risk of unauthorised climbing. We are taking a phased approach over multiple regulatory periods.

10 Substation Technology System Cybersecurity Uplift – \$16m

With the rising risk of cyber attack this project is to upgrade computer systems in our substations as part of a broader program of upgrading substation security.

11 Wide Area Monitoring Scheme – \$14m

We will install phasor measurement units at various sites around the network as AEMO requires. These devices will increase the speed with which we and AEMO receive network information and, in turn, allow us to manage the network more efficiently.



3 Transmission Line Insulation System Replacement – \$33m

4 Line Conductor and Earthwire Refurbishment – \$27m

6 Isolator Unit Asset Replacement – \$43m

7 Circuit Breakers Unit Asset Replacement – \$15m

9 Instrument Transformer Unit Asset Replacement – \$18m

We have several replacement programs to replace key asset components, based on asset condition and risk. These are staged asset replacement programs conducted over multiple regulatory periods.

8 Transmission Network Voltage Control – \$54m

Increased use of electronic devices and falling minimum demand levels due to increased use of solar is causing dynamic and static reactive power devices on the network to reach the limit of their ability to keep voltage levels within applicable limits. We propose to install several reactors to rectify this problem.

12 Substation Perimeter Intrusion and Motion Detection Security – \$12m

This project forms part of a broader program of improving the physical and cyber security of our substations.

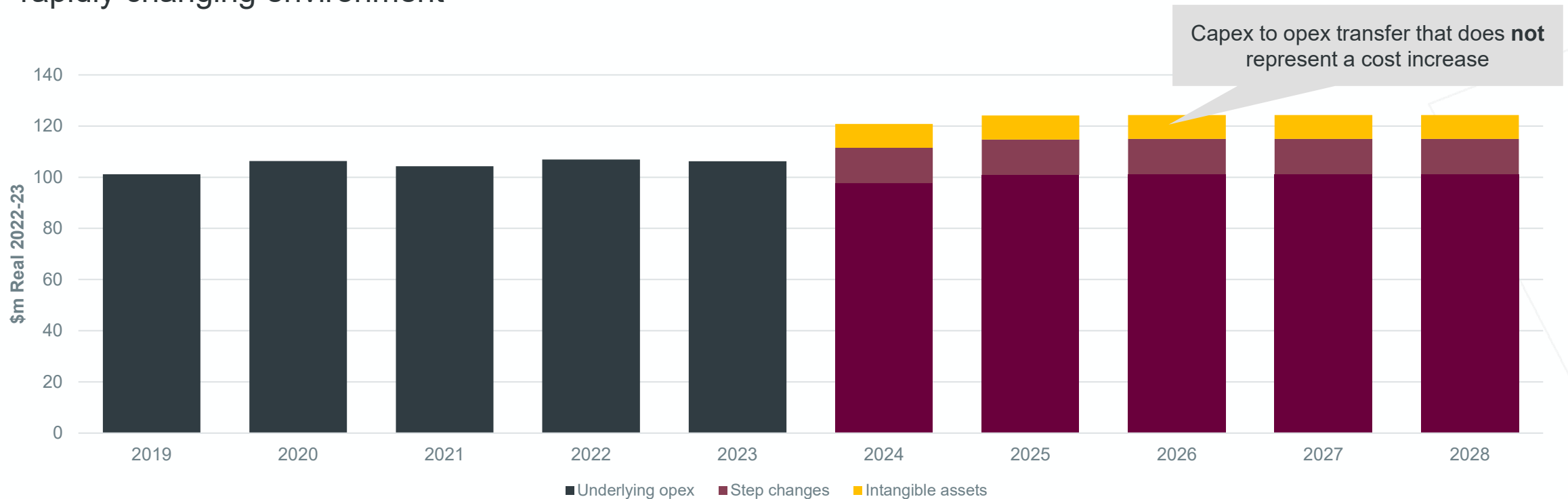
13 Telecommunications Asset Replacement – \$11m

ElectraNet operates a substantial telecommunications network which is used to operate the transmission network efficiently and to ensure substations and other assets can be accessed for maintenance safely. This project is the next stage in the ongoing replacement of end of life assets in this broader network.



Operating Expenditure Forecast

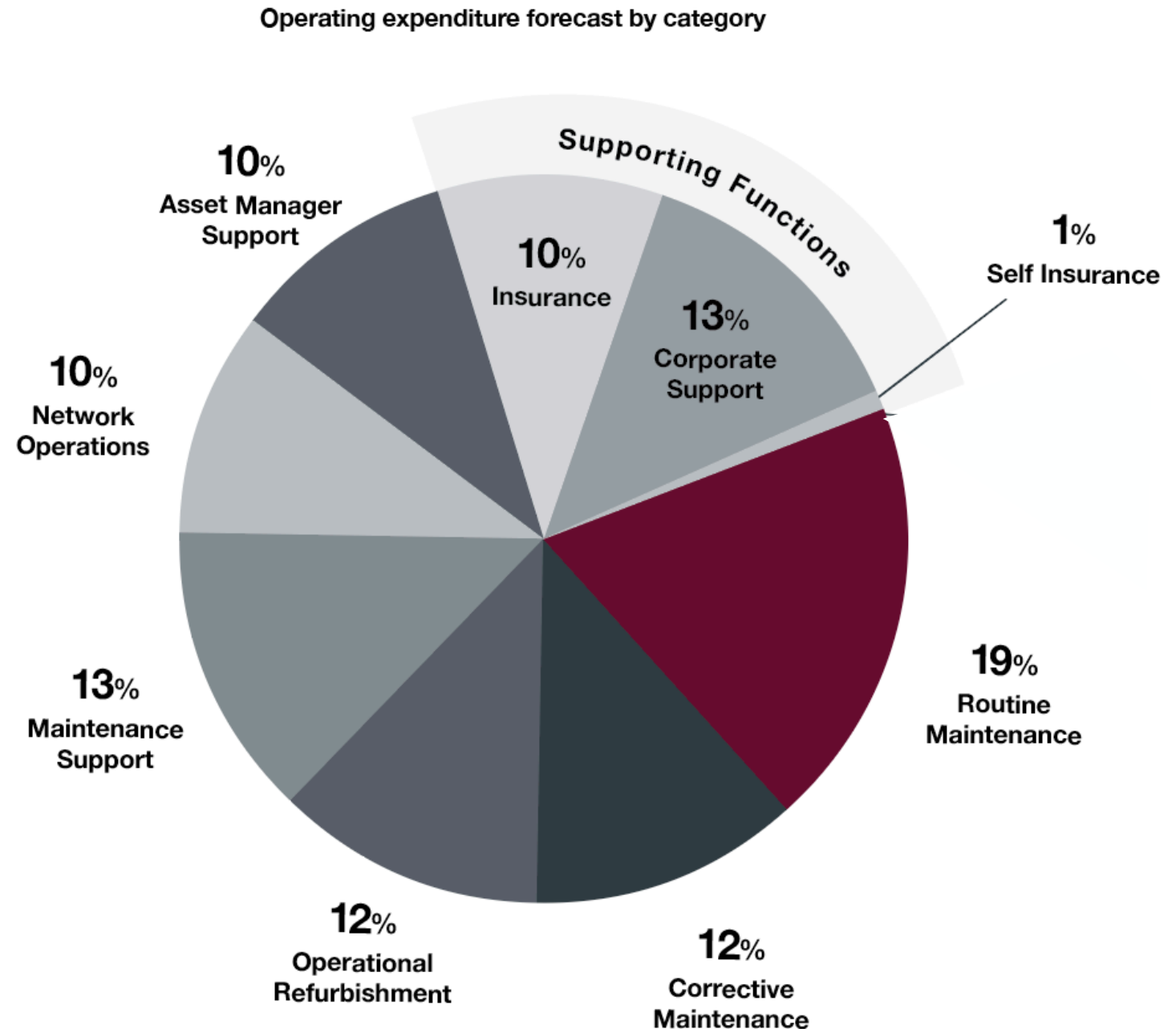
Our operating expenditure program is focused on managing and operating the network efficiently in a rapidly changing environment



- Externally imposed step changes are driving up costs by 9%, including insurance and cyber compliance costs which are being driven up externally
- Transfer of intangible asset expenditure from capital to operating expenditure (under accounting standards) adds a further 9%

Operating Expenditure Forecast breakdown

- Over three quarters of our operating costs are directly associated with the operation and maintenance of the network
- The balance comprises various supporting functions

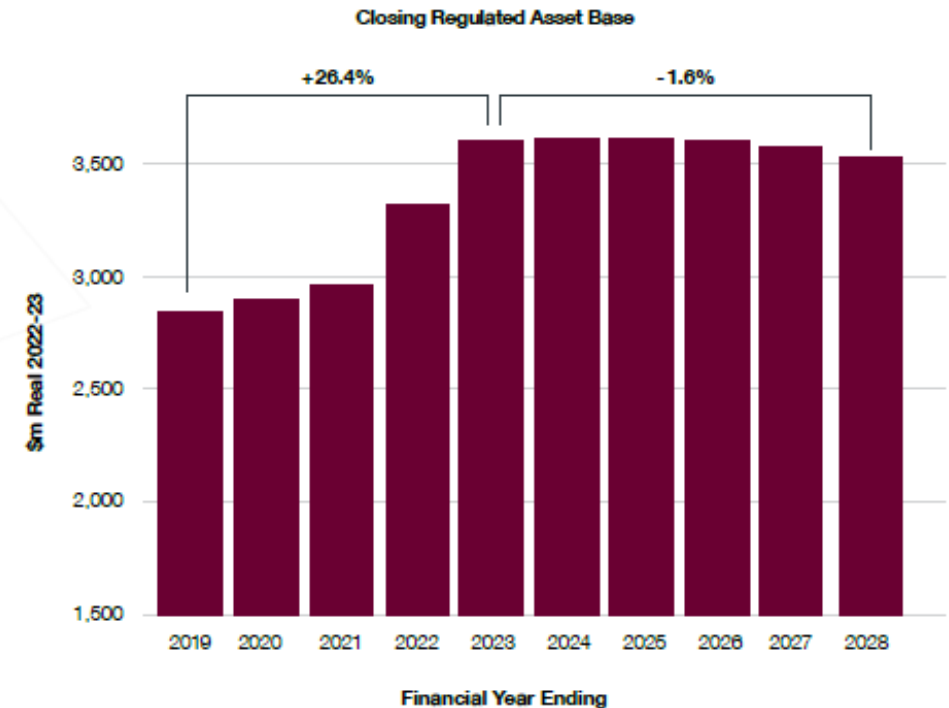


Revenue 'Building Blocks'

Revenue Component	2019-23 Forecast	2024-28 Forecast	Comments
Return on Capital	802	753	Reflects a lower rate of return applied to an increased Regulatory Asset Base
Return of Capital (regulatory depreciation)	307	341	Reflects the size of the Regulatory Asset Base
Operating Expenditure	500	627 ²	Forecast developed using the base step trend approach
Revenue Adjustments	-4	-11	Reflects EBSS and CESS payments
Net Tax Allowance	41	0	Reflects the new AER methodology - including the diminishing value method
Annual Building Block Revenue Requirement	1,646	1,709	

² Exceeds \$571m above because it includes debt raising costs of ~\$9m and intangible assets of ~\$46m.

EBSS - Efficiency Benefit Scheme CESS - Capital Expenditure Sharing Scheme

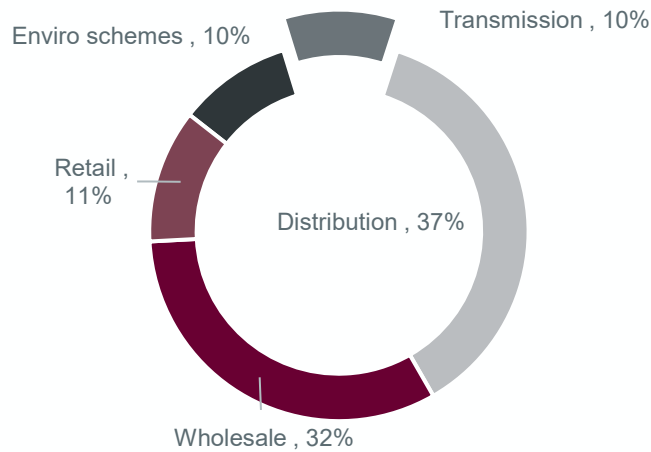


The Regulated Asset Base is declining in real terms over the coming regulatory period based on the reduced capital program

Transmission Prices

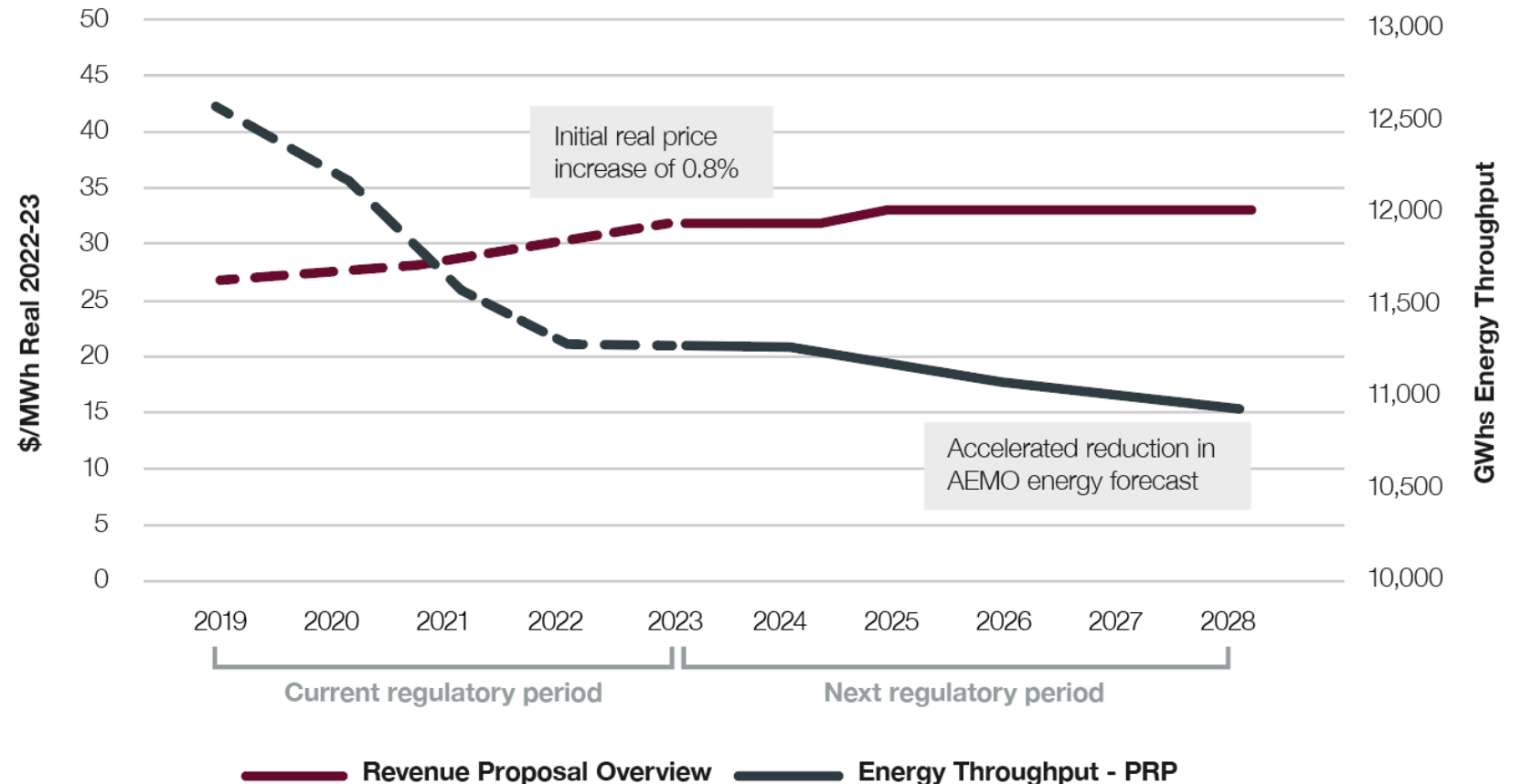
While revenue is falling, average transmission prices are forecast to rise slightly due to declining energy consumption from the grid

Household electricity bill breakdown



Transmission comprises a small but important part of electricity costs, helping to drive prices down overall

Forecast Transmission Prices



Risks for customers

Risks

There are two key risk areas for customers in relation to this Revenue Proposal.

Risk 2

Our Revenue may be insufficient to adequately manage the network

Risk of underinvestment

Our customers benefit when we invest in the network, thus ensuring an ongoing safe, secure and reliable electricity supply. By the same token there is a risk associated with under investment. Deferring investment would allow for lower prices right now, but, as was pointed out by Energy Consumers Australia during our engagement process, this really just transfers the cost to future years. Too little investment creates risks to supply reliability, security and affordability in the short term and also increases the amount of investment required in future.

Given the importance of transmission services, the consequences of under investment tend to outweigh the risk of over investment.

Risk 1

Our actual revenue requirement may exceed that forecast in this Revenue Proposal

The National Electricity Rules place a substantial onus on us to identify an efficient revenue requirement and they limit the circumstances in which this may be changed. Therefore, most of the revenue risk is with ElectraNet. However, there are some circumstances in which our revenue, and therefore the transmission prices our customers pay, might increase. These include:



Cost pass through events

Each of the nominated pass through events relate to risks that our customers bear. For instance, if we were to fall victim to a terror event our customers may experience electricity supply disruptions.

While treating these issues as pass through events places the risk on our customers, this is preferable to the alternative because, this way, customers will only bear the cost of these risks if they occur. Given the uncertainties inherent with them, this is more efficient than providing an upfront allowance in our building block costs.



Additional services

We are currently working to respond to a shortfall in Fast Frequency Response services in South Australia declared by AEMO. This could potentially result in additional service costs being passed to customers in the coming regulatory period.

Should this be confirmed in the coming months we will endeavour to reflect these costs as necessary in our Revised Revenue Proposal, for example as a Network Support allowance.



Increases in interest rates or other financial market changes

Under the current guideline our rate of return will be reset each year to reflect prevailing conditions in financial markets. This is important to ensure our investors are fairly compensated for their investment, and therefore to ensure that future investment is possible. At the time of writing this Revenue Proposal Australia has enjoyed an extended period of low interest rates and benign financial markets. If these conditions change the cost we incur in financing our business will increase as will the prices our customers pay.



Contingent and actionable ISP projects

The power system is changing rapidly as Australia transitions to a low emissions future. This means that there is significant uncertainty about the size and timing of some projects. This uncertainty is dealt with through the contingent project mechanism and, in more recent years, through the actionable ISP mechanism. Either of these might lead to increases in our capital expenditure, our RAB and, therefore, transmission prices. If they do, though, it will be because the AER, AEMO and others have determined that the relevant projects are in the long term interests of electricity customers, so their cost will be more than outweighed by other benefits.

Thank You

Rainer Korte – Chief Executive

Simon Appleby – Group Executive Asset Management

Jeremy Tustin – Manager Regulation and Investment Planning