

Agenda

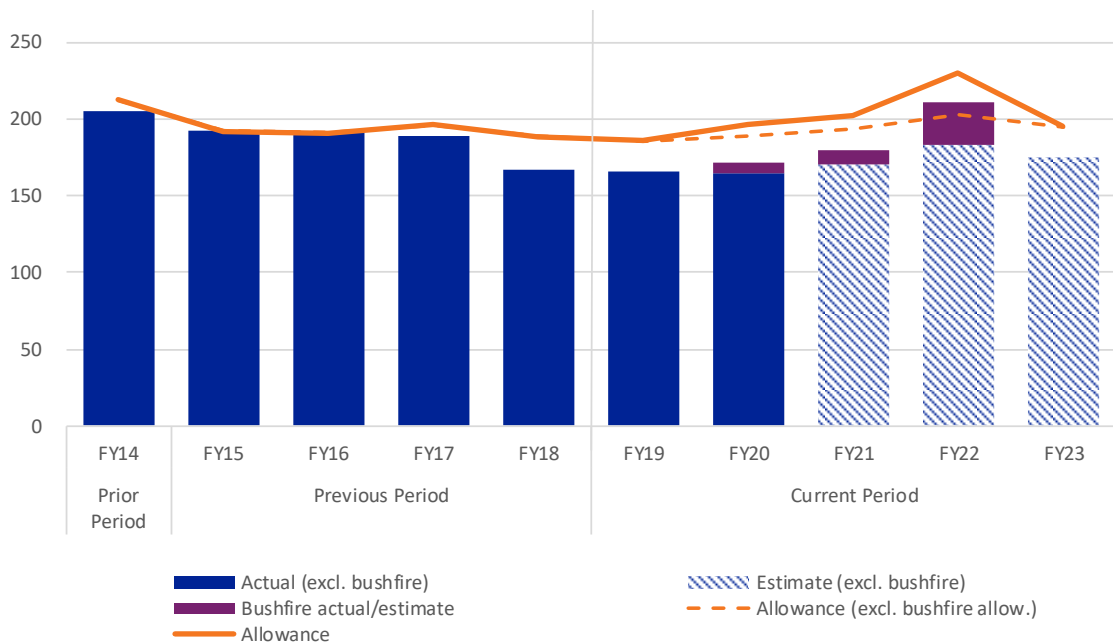
1. Current period opex and customer outcomes
2. Current period capex and customer outcomes
3. Drivers of expenditure in the next regulatory period
4. How we will forecast our 2023-28 capex and opex

1. Current period opex and customer outcomes

Opex efficiencies

We are delivering opex efficiencies in the current regulatory period by outperforming the AER's allowance

Actual opex vs AER allowance (\$M, Real 2023)



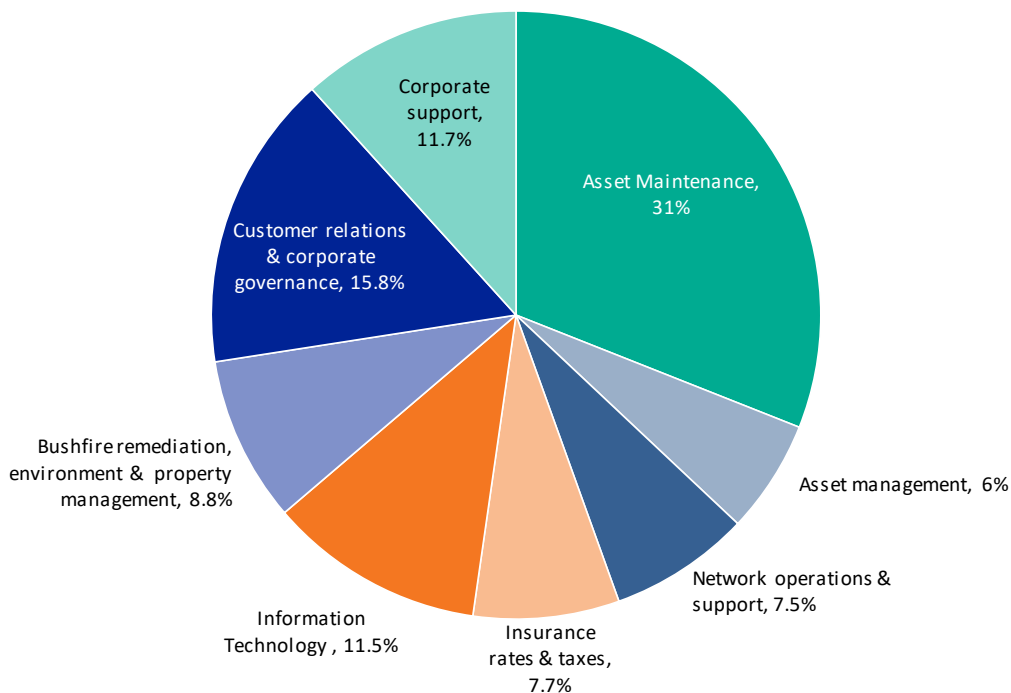
Customer efficiency saving \$300M

Efficiencies driven by:

- More effective labour utilisation
- Operating model changes
- Continually adapting our labour force to meet our ongoing needs
- Replacing manual and outdated processes and systems
- Improved work planning and scheduling

Opex by category

2019-20 Opex by category (\$M, Real 2023)

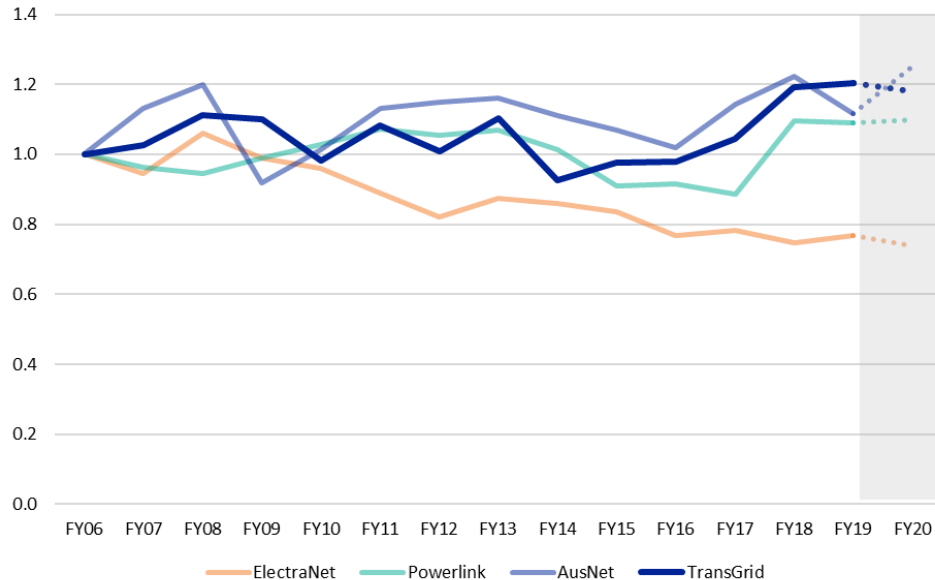


Asset Maintenance	Asset maintenance tasks and activities based on maintenance strategies and plans
Asset Management	Activities that support the strategic development and ongoing management of the network
Network operations	Real-time control-room functions, monitoring of asset performance, condition and fault diagnosis and non-network support
Insurances, rates & taxes	Insurance premiums, property rates (council & water) and taxes incl. land tax
Information technology	O&M for corporate IT systems incl. software license fees and cloud-based services
Bushfire remediation, environment & property management	Remediation costs for 2019-20 NSW Bushfires and operational costs of our property and facilities
Customer relations & corporate governance	Engagement activities with customers & stakeholders and governance functions
Corporate support	Corporate support functions including finance and HR

Opex benchmarking

Significant improvement in our opex efficiency since 2013-14

Opex MPFP, 2005-06 to 2019-20



Multilateral partial factor productivity (MPFP)¹ shows that:

- We are efficient in both in absolute and trend terms
- We are responding to incentives in the regulatory framework
- 2019-20 opex has improved relative to 2016-17 opex, which the AER deemed efficient
- 2019-20 opex is efficient

1. MPFP examines the productivity (i.e. level of output for inputs) of a TNSP's use of opex

Note (1) TasNetworks has been removed because its performance is not representative of a stand-alone TNSP because it is the result of a merger between Aurora (DNSP) and Transend (TNSP) to deliver 'synergies and efficiencies'

(2) 2019-20 data based on estimates from published RIN data

Dealing with the unexpected

2019-20 the worst bushfire season in NSW history

Network Damage:

- 999km of transmission line and 2,681 structures impacted in the fire zones
- 126 conductors spans damaged, 64 of those requiring replacement
- 56 wood poles required immediate replacement and a further 70 damaged

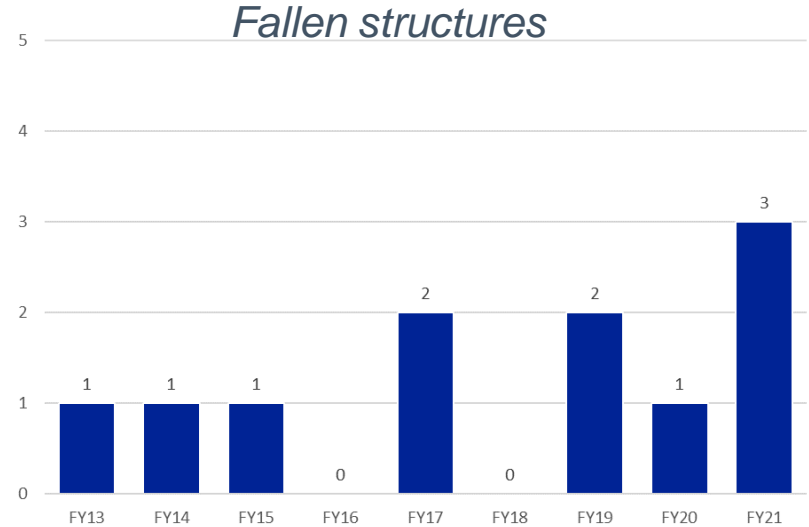


Dealing with the unexpected

Storms and winds – tower collapse



- Mar 2019 to 28 Dec 2020 - 6 extreme wind events
- Rebuilt entire 5.6km section of transmission line due to damage on 1 Dec 2020



Dealing with the unexpected

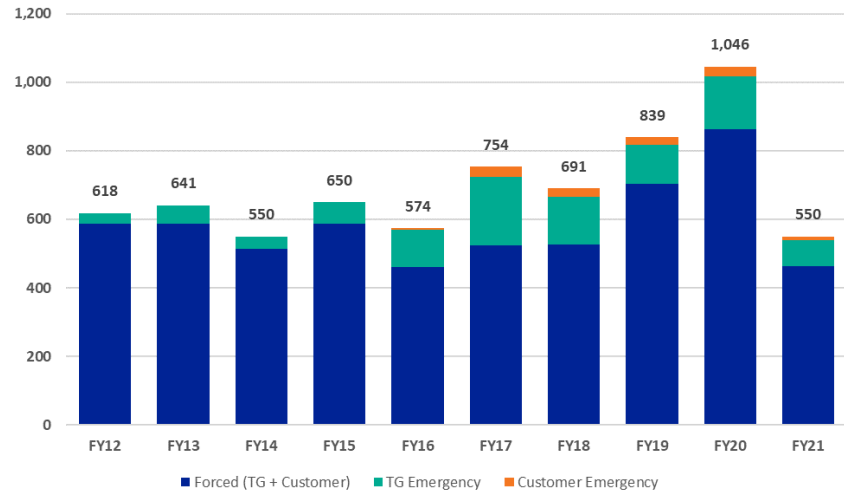
1 in 100 year flood events



Forced and emergency outages are increasing due, in part, to more frequent and extreme weather events

We are responding by replacing assets with more resilient alternatives

Unplanned network outages



Note: 1. Increase in 2019-20 is due to impact of the 2019-20 bushfires

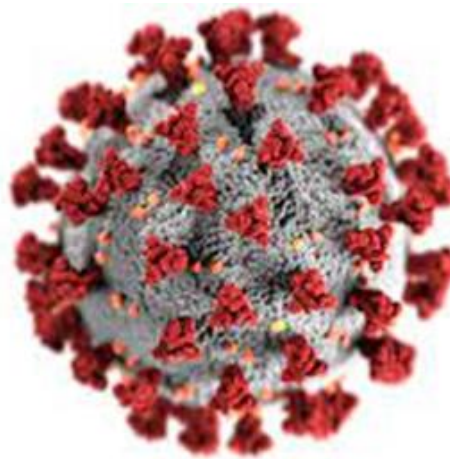
Dealing with the unexpected

COVID-19 pandemic

- The pandemic continues to present challenges for us, our business partners and supply chains, our customers and other stakeholders
- Our highest priority during the pandemic is the health, safety and wellbeing of our communities, customers, employees and delivery partners

➤ Impact of COVID-19 pandemic on our business:

- Increased project delivery costs
- Delayed manufacturing and delivery of equipment
- Labour shortages due to delayed 'working visas'
- Specialist skills shortages due to delayed 'working visas'
- Constrained access to construction sites



Dealing with the unexpected

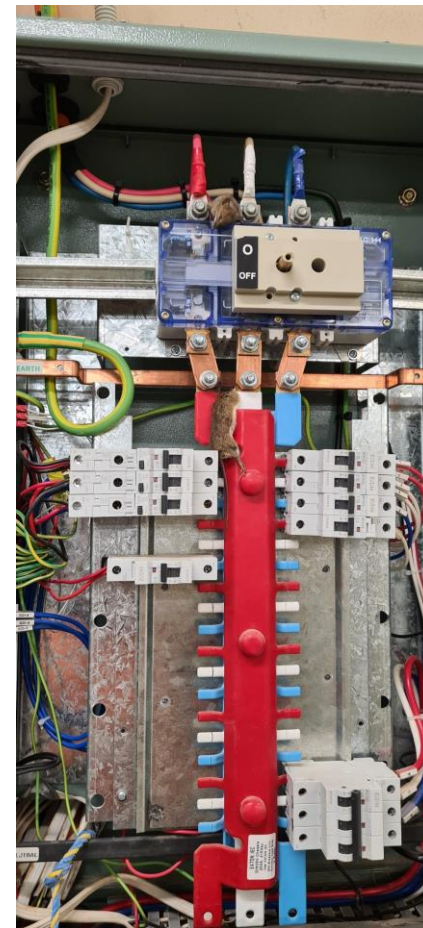
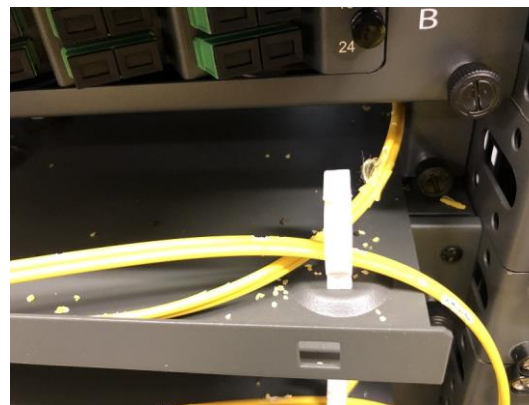
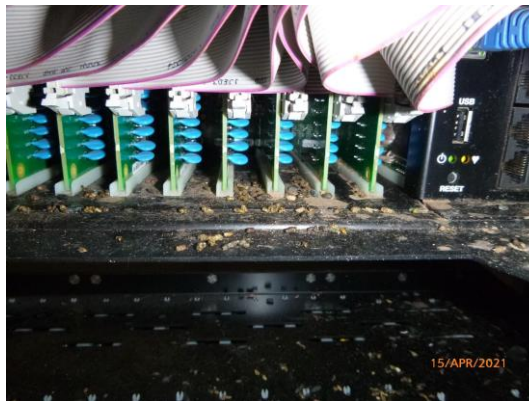
Worst mouse plague in a decade

2021 mouse plague:

- mice have taken refuge in our substations, and
- impacted many of our operational sites

We have responded by:

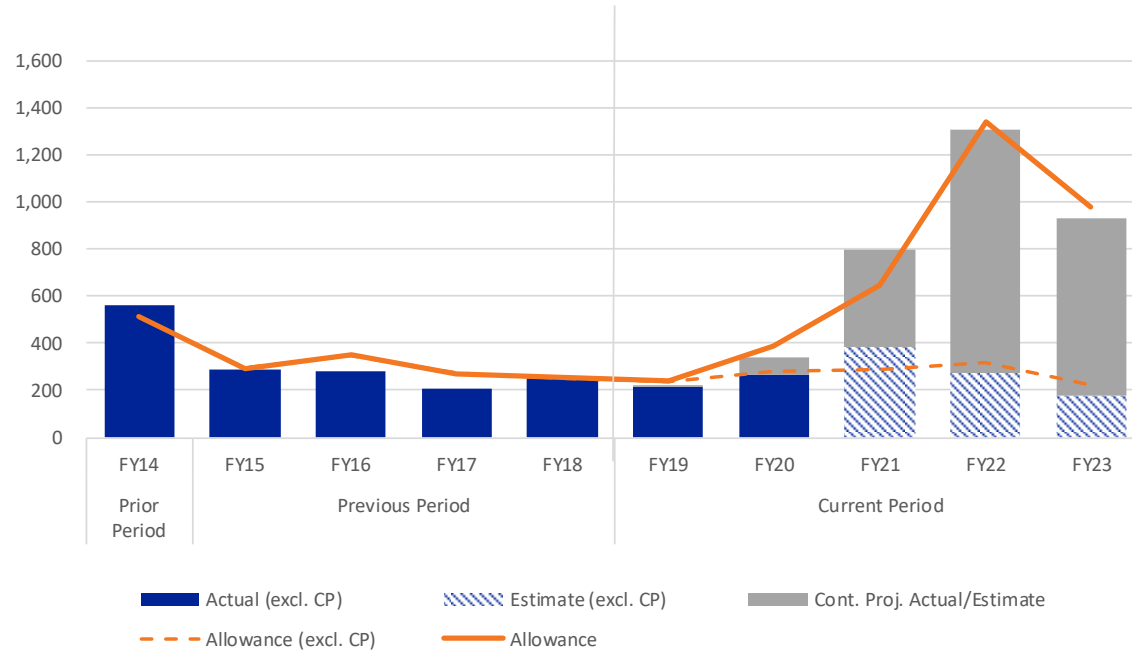
- implementing additional controls to minimise their impact on the operation of equipment
- introducing additional controls for the health and safety of our workers



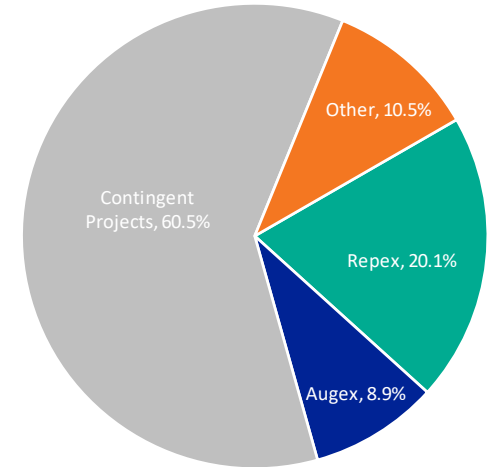
2. Current period capex and customer outcomes

Capex in line with AER allowance

Actual capex vs AER allowance (\$M, Real 2023)



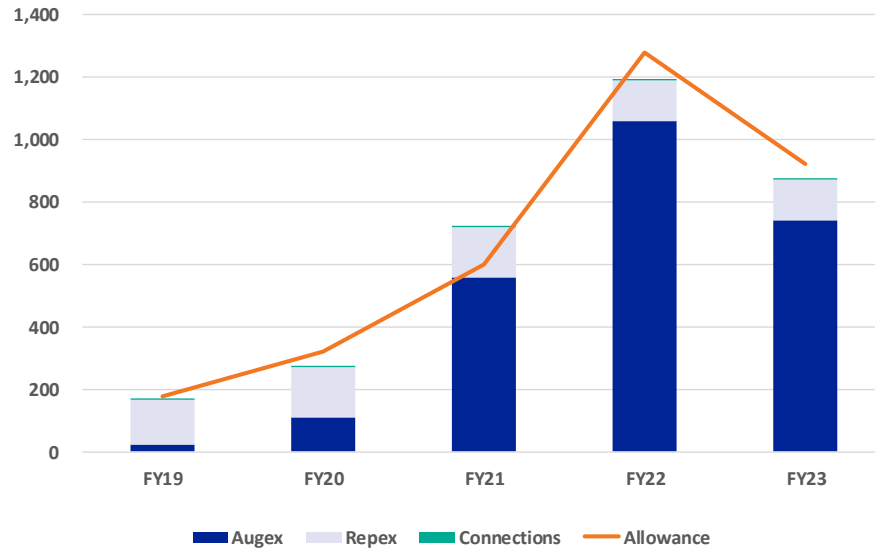
2018-23 capex by category (\$M, Real 2023)



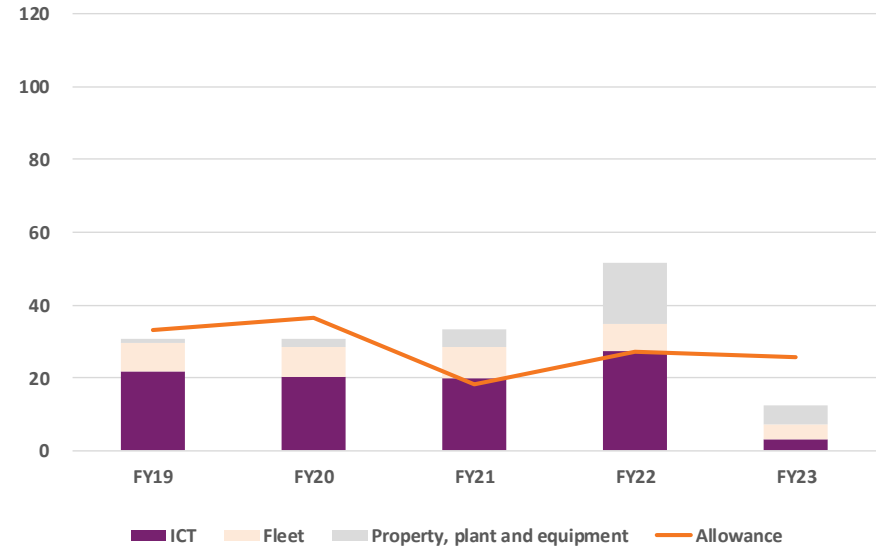
Note: Other capex includes ICT, fleet, property, plant and equipment, overheads and other balancing items

Network and non-network capex

Network capex vs AER allowance (\$M, Real 2023)



Non-Network capex vs AER allowance (\$M, Real 2023)

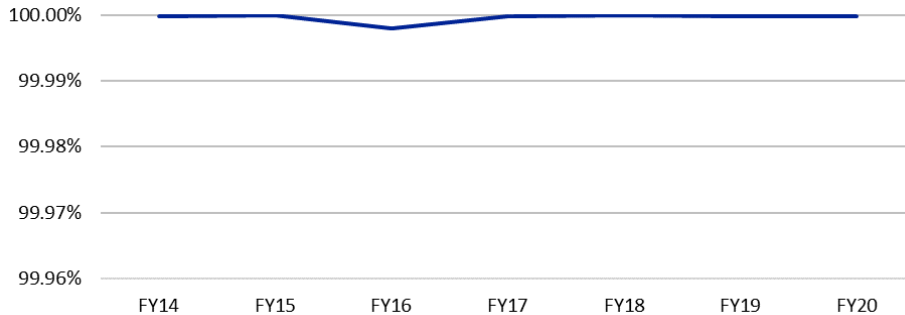


Note: scales are not the same

Maintaining network, safety, reliability & security

We have maintained network reliability at 99.9%

Annual network reliability

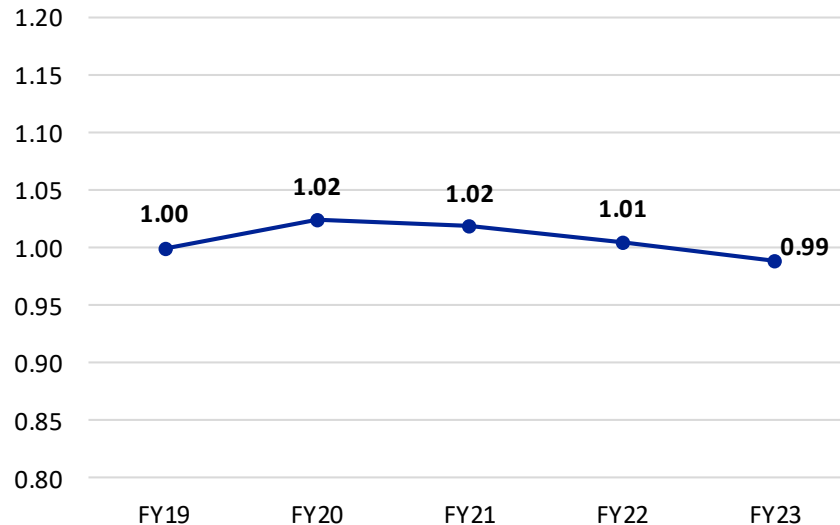


- Our Licence¹ sets out reliability & performance standards
- We have maintained a safe, secure and reliable network by:
 - managing the stability of the power system
 - managing energy at risk events
- We achieved this through key investments:
 - Powering Sydney's Future
 - Building a new 330/132kV substation at Stockdill
 - Various to manage load driven by economic growth and increased renewable generation

Notes: 1. Our Licence for our assets in NSW is issued under Electricity Supply Act 1995 (NSW). We also have a licence to operate in the ACT.

Maintaining network, safety, reliability & security

We are maintaining our network risk

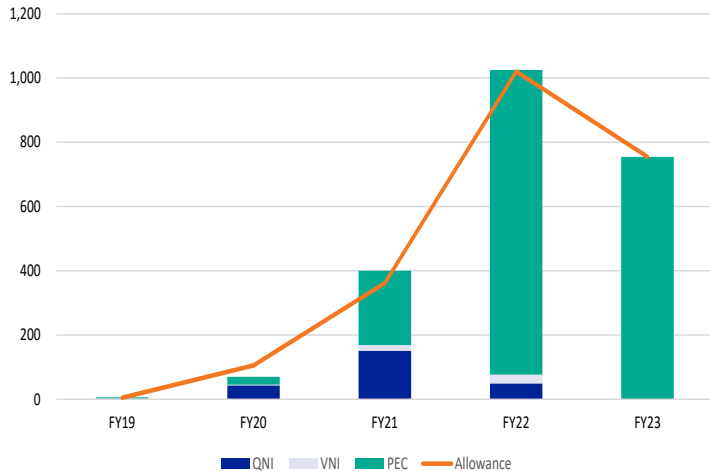


- 'Risk index' - a multi-dimensional measure for safety, environmental, bushfire and reliability
- A higher risk index represents a relative increase from 2018-19 baseline
- A lower risk index represents a relative decrease from 2018-19 baseline
- Risk index takes into account:
 - asset condition
 - probability and consequence of failure having regard for statutory, regulatory and legal obligations
 - inherent asset risk

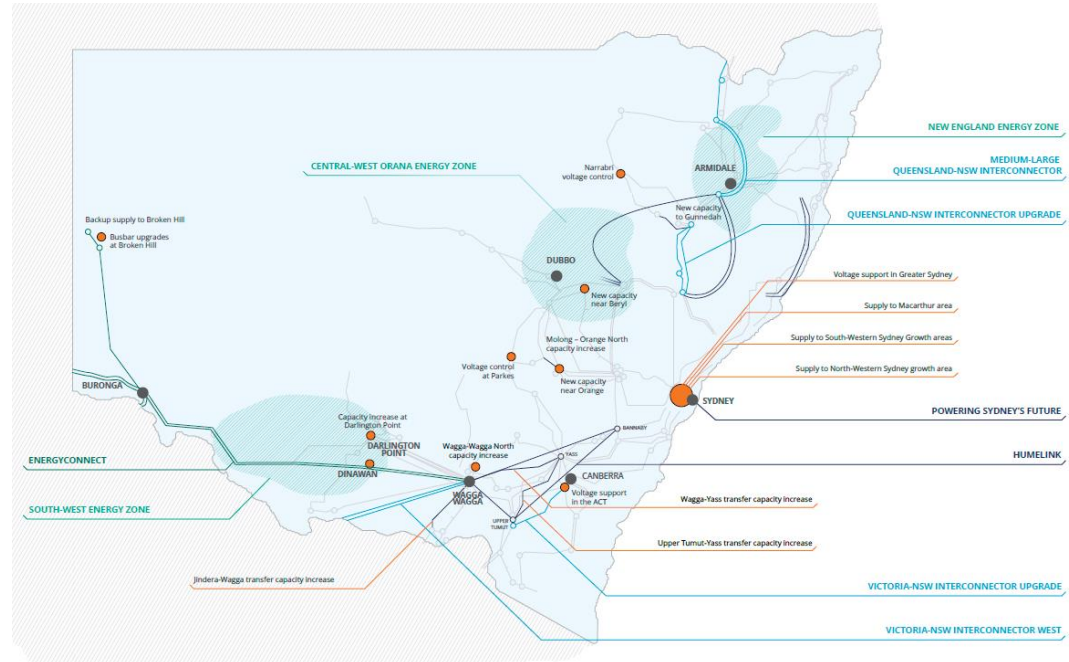
Supporting future de-carbonisation and affordability

AEMO's ISP will improve affordability through greater supply, diversity and competition and decarbonisation by enabling renewables to connect

We are delivering three of AEMO's ISP Projects: PEC, QNI minor upgrade and VNI upgrade



PEC expected to reduce residential bills by \$64 p.a. on average up to 2040¹



Notes: 1. Residential electricity bills for NSW customers taking into account ACT customers. Based on [a report from FTI consulting](#)



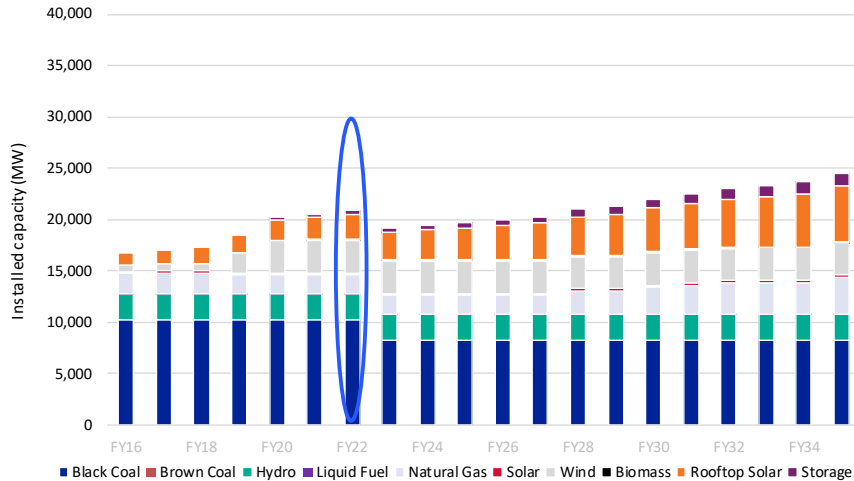
Energy transition happening faster than expected

Driven by government policy changes, decarbonisation commitments, declining costs of renewables & technology advancements

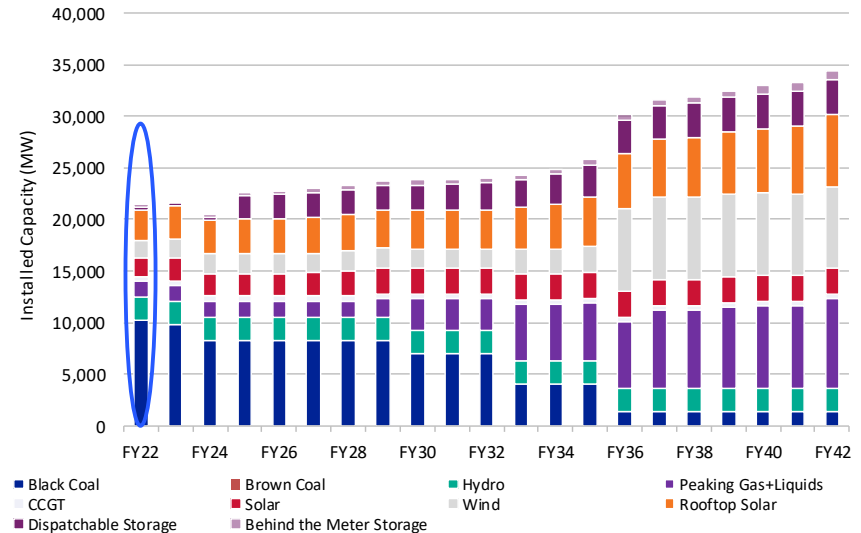
NSW and ACT Governments have a 2050 or sooner goal of net zero emissions

- The mix of renewables is different to what AEMO expected in 2015
- There is almost nine times more large scale solar in FY22, but about half the amount of wind generation

AEMO's 2015 forecast of renewable uptake during FY16 to FY34



AEMO's 2021 forecast of renewable uptake during FY22 to FY42



3. Drivers of expenditure

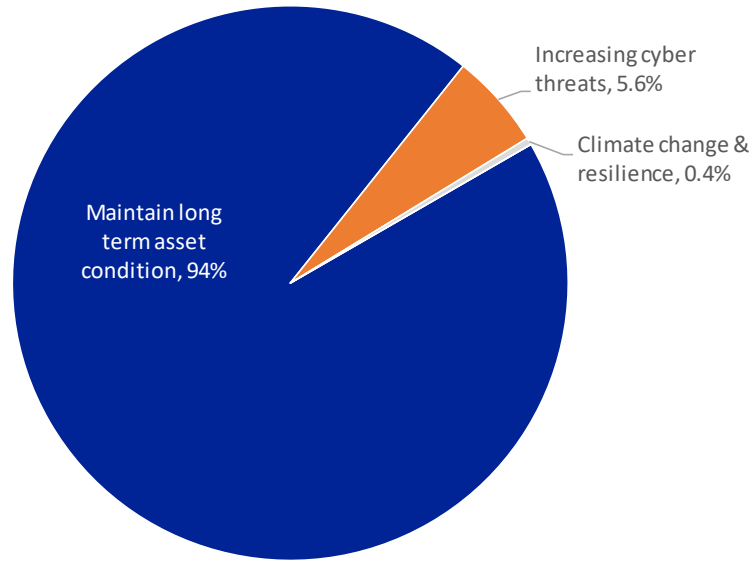
Drivers of expenditure

Continuing and emerging key external drivers form the basis for our forecast expenditure

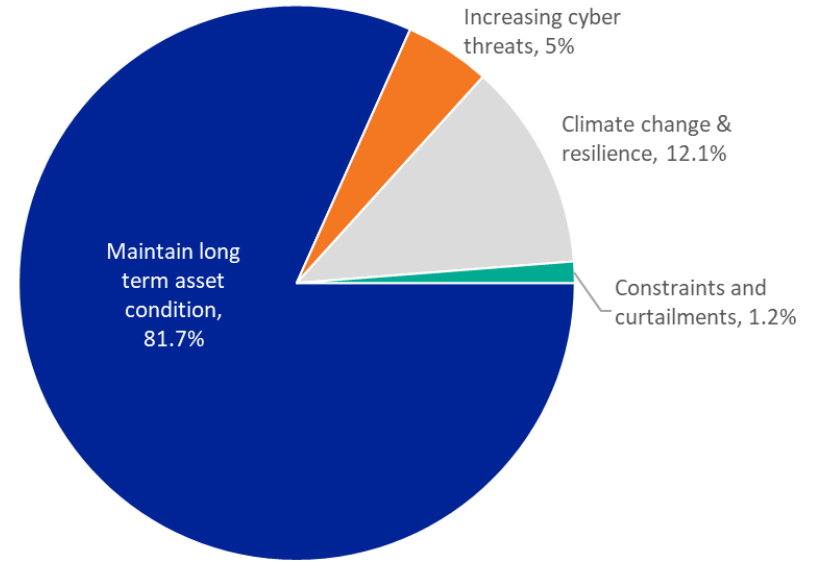
1. AEMOs ISP & NSW Government Roadmap	<ul style="list-style-type: none"> ➤ Support AEMO's Actionable ISP Projects and the NSW Government Energy Infrastructure Roadmap investments
2. Economic conditions (demand growth)	<ul style="list-style-type: none"> ➤ Meet underlying load growth – high growth in Western Sydney (urban expansion / transport projects) ➤ Address spot load connections – data centres, mining and gas projects ➤ Ensure compliance with NER and reliability standards
3. Constraints & curtailments¹	<ul style="list-style-type: none"> ➤ Manage / alleviate constraints from new generator connections which impact power flows (economic benefit) ➤ Existing assets are more highly utilised in some locations where generators have connected
4. Maintain asset condition	<ul style="list-style-type: none"> ➤ Maintain regulatory compliance - safety to ALARP, NER requirements ➤ Manage bushfire, worker/public safety, environmental and reliability risk
5. Climate change - extreme weather	<ul style="list-style-type: none"> ➤ Maintain network risk given increased frequency of extreme weather impacting assets
6. Technology change & consumer choice	<ul style="list-style-type: none"> ➤ Transition to cloud solutions
7. Increasing cyber threats	<ul style="list-style-type: none"> ➤ Comply with Critical Infrastructure Act and AEMO framework for both cyber and physical security

Drivers of expenditure | Repex

Actual/ estimated 2018-23
(\$Million, Real 2023)



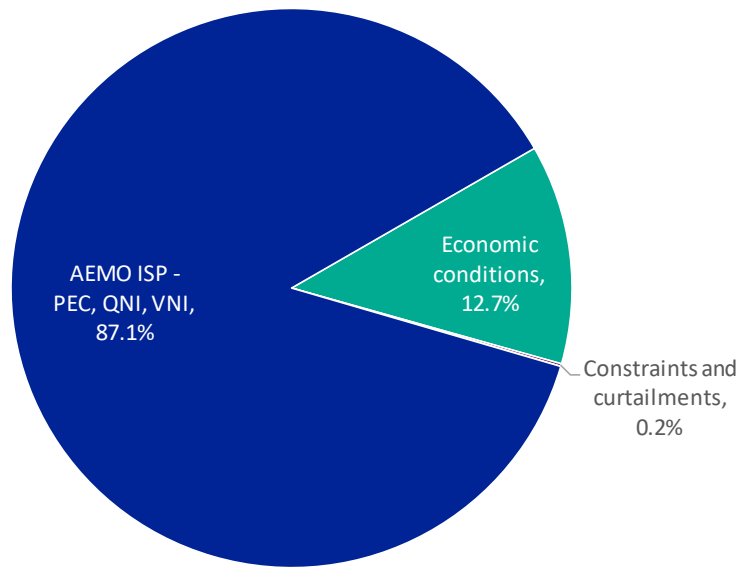
Preliminary 2023-28



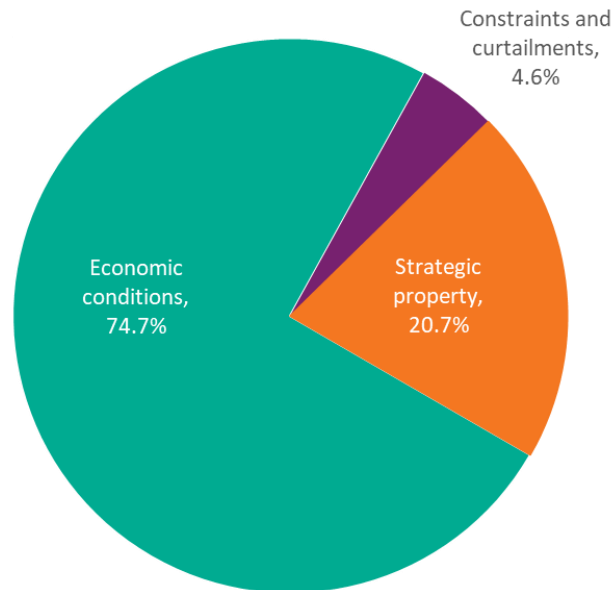
Preliminary subject to change

Drivers of expenditure | Augex

Actual/ estimated 2018-23
(\$Million, Real 2023)



Preliminary 2023-28

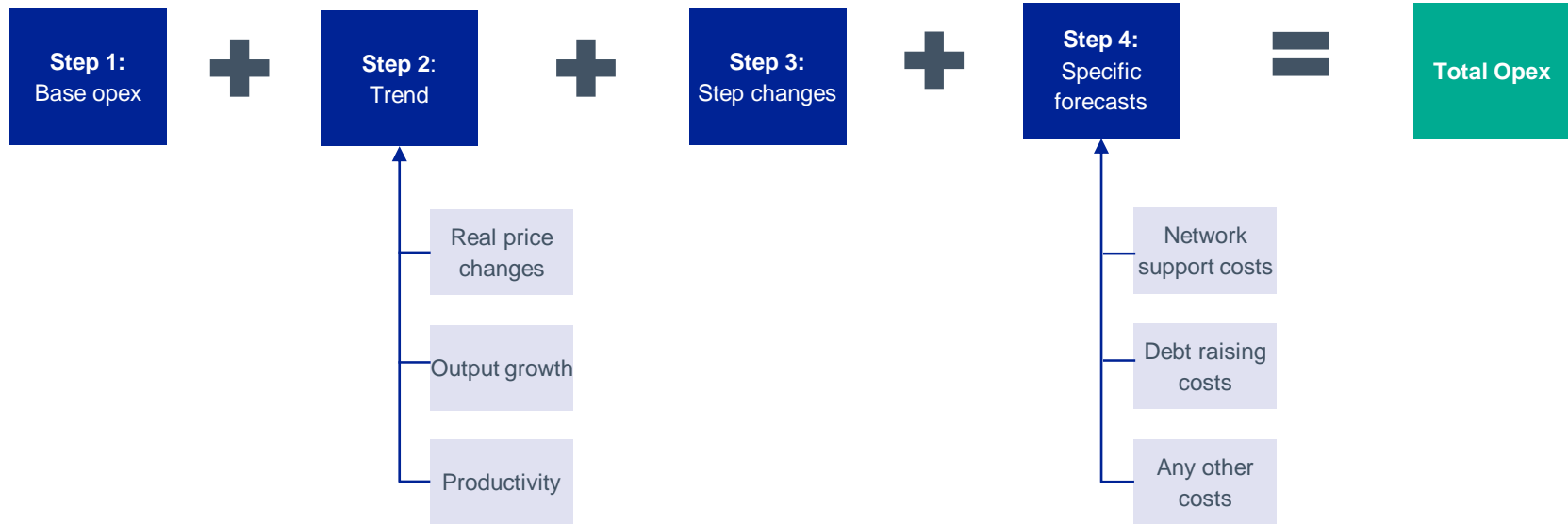


Preliminary subject to change

4. 2023-28 Forecasting methodology

Opex Forecasting method

Base-step-trend approach, consistent with AER preferred approach



Capex Forecasting method

Bottom up build, consistent with AER preferred approach

Inputs:

- > Asset condition
- > Compliance obligations
- > Demand forecasts
- > Market benefits



Notes: 1. RIT-T will commence based on expected project timing. Not all projects will commence a RIT-T prior to Step 5.