Stakeholder Consultation Document

2019 – 2024 Proposal

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CEO Foreword

Thank you to our customers who have engaged with us in so many different ways, from individual emails and posts on social media, to participating in surveys and workshops. Your insights, observations and feedback are vital to how we run Ausgrid.

Since becoming a new business on 1 December 2016, Ausgrid has begun to change the way we engage with and respond to customers, making operational changes that put customers at the centre of everything we do. Everyone at Ausgrid is extremely aware of the impact we have on people's lives and businesses. We are working to ensure that the way we make investment decisions and the way we deliver services meet our customers' needs.

Comprehensive engagement with our customers and stakeholders to date has revealed that, despite their very different energy needs and situations, there are three clear common priorities: energy has to be affordable, reliable and sustainable.

Energy affordability is particularly important for our customers. It has been made clear to us that high energy prices are negatively impacting households and businesses alike. In response to this feedback, we have been working hard over the last two years to significantly reduce our costs. So far, we have lowered operating costs by approximately 20% – or about $100 million per year, which has allowed us to deliver lasting price reductions to customers. In developing our Regulatory Proposal, we are keenly focused on offering households real relief from rising energy prices. Specific measures have also been proposed to protect vulnerable customers.

Our customers are also interested in adopting more sustainable sources of energy and Ausgrid is looking to provide services to support them. In this Regulatory Proposal we are seeking to continue the transformation of our network from a passive distribution network to a smart grid that will more easily allow us to incorporate distributed energy resources and allow us to operate and optimise the network in real-time, helping us deliver the appropriate reliability for our evolving system.

To allow an even greater level of community and stakeholder engagement on key aspects of our proposal, the Australian Energy Regulator (AER) has agreed to our request to extend the submission date to the end of April 2018. This means we can now begin an extended consultation program, which will be framed by this document. This consultation document provides details of each key area of our proposal and asks a series of questions. Additionally, face to face deep dive sessions on capital expenditure and prices will also be held to elicit further feedback.

Our aim is to collaborate with our stakeholders and give them a deep understanding of our Regulatory Proposal. We want to hear from them about our proposed level of investment and price structure and see if it makes sense to them and, ideally, agree with our key stakeholders on the investments we will make and the services that we will provide over the next regulatory period.

We recognise we still have a lot of hard work in front of us. As we move through the year, Ausgrid will continue to consult with stakeholders and customers, sustain our lower operating costs and ensure customers are getting value for money. At the same time we will not compromise on safety, reliability and customer service.

Our vision is to "be a leading energy solutions provider, recognised both locally and globally". Our purpose is "connecting communities, empowering lives". At Ausgrid, we know that we can only achieve our vision and purpose by working closely with our customers and stakeholders.

On behalf of Ausgrid, thank you for taking the time to review this Stakeholder Consultation Document and I look forward to receiving your feedback.

We greatly value your perspective and commit to taking your views into account as we finalise our Regulatory Proposal.

Richard Gross
CEO Ausgrid

01 Background

About Ausgrid

Ausgrid is the largest distributor of electricity on Australia's east coast, connecting 1.7 million customers, ranging from small residential households consuming about 5 megawatt hours (MWh) per year, through to large industrial customers consuming more than 40 gigawatt hours (GWh) per year.

Our core business is to provide distribution network services to customers. We do this by building and operating assets and delivering non-network solutions on behalf of our customers to ensure safe and reliable access to electricity at an efficient and reasonable price.

Our network is made up of large and small substations connected through high and low voltage powerlines, underground cables and power poles spread across more than 22,275 square kilometres. This service area includes some of Australia's most densely populated areas, as well as the fastest growing areas of NSW from Waterfall in Sydney's South to Auburn in Western Sydney to the Hunter region and Central Coast.

Day-to-day, we are responsible for operating, maintaining, repairing and building our network. Long-term, our job is to make sure this network is ready for a future where renewables play a major role in the power mix, and households and businesses can generate their own electricity and sell it back to the grid.

Providing essential services

The origins of Ausgrid go back more than 100 years, when we were the first company to electrify Sydney. Since then, the Sydney energy network has expanded to provide the essential power that makes our lives work.

As customers, we usually only notice electricity supply during the rare times that it stops working. These are the moments when we realise that electricity substantially contributes to the quality of our lives.

About our customers

Ausgrid has a large and diverse customer base. When planning our network we take into consideration the needs of all of our customers. Residential customers make up 89% of the number of customers in our area, while 11% are business users. Businesses account for 66% of energy consumption, compared with 34% used by residential customers.

Our vision is to become a leading energy solutions provider, recognised both locally and globally.

Ausgrid's network map

1.7 MILLION CUSTOMERS

22,275 SQUARE KMS

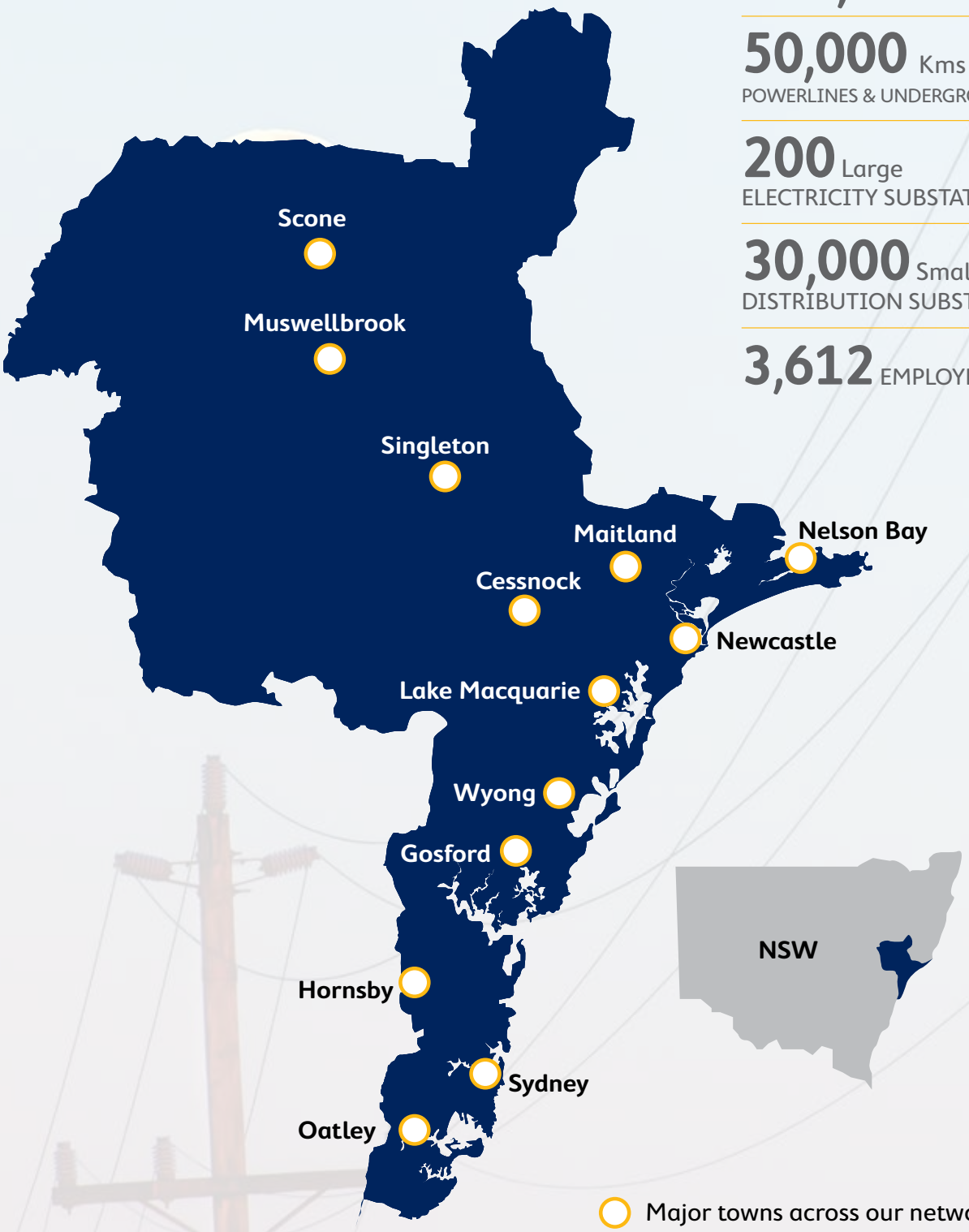
500,000 POWER POLES

50,000 Kms
POWERLINES & UNDERGROUND CABLES

200 Large
ELECTRICITY SUBSTATIONS

30,000 Small
DISTRIBUTION SUBSTATIONS

3,612 EMPLOYEES



About our Regulatory Proposal

Ausgrid is in the process of developing its 2019-24 Regulatory Proposal. The proposal sets out how much we need to invest so we deliver affordable, safe, reliable and sustainable electricity supply to our 1.7 million customers – now and in the future.

Deciding when and how to invest money on the network is a balancing of cost and performance. We need to invest enough on modernising the grid, preventing outages and having the right sized workforce to respond quickly to ensure the reliability of the network and to restore power in emergencies. We also have to play our part in making electricity as affordable and sustainable as possible.

To help us make the right choices, we have been talking to our customers – from major industrial users to households – about their priorities. Taking into account what customers and stakeholders have told us and our own business planning, we have developed this Stakeholder Consultation Document to seek further feedback before we submit our 2019-24 Regulatory Proposal to the AER on 30 April 2018.

How to provide feedback on this document

This Stakeholder Consultation Document outlines the key elements of our proposal so our stakeholders and customers can provide feedback into our 2019-24 Regulatory Proposal. We look forward to receiving comments and suggestions from interested parties including those who have not engaged with us previously.

At the end of each section, you'll find feedback boxes with specific questions on key elements where we would value your opinion.

We are also interested in your views on the Stakeholder Consultation Document as a whole.

You can provide feedback by:

- Emailing us at yoursay@ausgrid.com.au

Submissions close on 27 February 2018.

02 Consultation

The overarching aim of Ausgrid's Stakeholder and Customer Consultation Program is to help us align our business planning, policies and practices with the expectations of our customers.

In the past, Ausgrid has not engaged with customers as effectively as we should. Although we have made considerable progress in the last two years, we are aware there is more work to be done. With the help of our stakeholders, we will continue to work to put customers at the centre of our business.

Ausgrid is working to embed a customer-focused approach across our entire business from customer connections to responding promptly to customer outages to deep engagement on our 2019-24 Regulatory Proposal. Having customer-focused operations across our entire business will ensure daily decisions always include real consideration of the customer's perspective. It will also keep our stakeholders both informed and heard so they can continue to influence our strategic priorities.

Our new approach is captured in our Reset Engagement and Empowerment Framework (see next page), which was developed with our stakeholders and outlines a set of principles that guide the way Ausgrid works with them.

Consultation on our proposal to date

As a starting point to help us achieve our aim of business alignment with customer expectations, we developed a customer research and insights program to better understand our customers and their needs. To date, we have engaged with more than 2,500 customers through our research program, and we continue to have regular consultation with key energy consumer stakeholder organisations as outlined in the table below.

Stakeholder and customer groups input into our proposal

Group	Description	Input into our initial proposal
Reset Working Group (RWG)	Customer advocates Highly informed on regulatory and energy issues	Tested details of Regulatory Proposal, capital expenditure (capex) program, operating expenditure (opex) forecasts and Tariff Structure Statement
Customer Consultative Committee (CCC)	Customer advocates Informed on energy policy and regulatory issues	Tested key components of Regulatory Proposal and Tariff Structure Statement at high level
Retail energy businesses	Part of the energy ecosystem Highly informed on regulatory and energy issues	Discussed how we plan to structure our prices and how our plans might impact them and customers
Local Council representatives	Customers Informed on local regulations	Vegetation management, street lighting and planning
Deliberative Forums	General population Participants equipped with some information	Explored customer expectations, long-term needs and attitudes to pricing and managing network peaks
Focus Groups		Explored customer expectations and preferences
Survey	General population Equipped with minimal information	Tested key issues identified in qualitative research

Customer and stakeholder engagement

A key initiative of our customer research and insights program was the Customer at the Centre project, which was specifically designed to support the development of our 2019-24 Regulatory Proposal. Customer at the Centre was a multi-phase project, incorporating customer focus groups, deliberative forums and a quantitative survey of 2,360 customers. Participants in the project reflected the diversity of Ausgrid's customers, including culturally and linguistically diverse individuals, older and younger people, the vulnerable and businesses.

We asked customers what they want from the network, their knowledge and attitude to electricity, what they expect of Ausgrid and how we could become a more customer-focused business. We also asked for feedback on key concepts for our 2019-24 Regulatory Proposal, including potential pricing structures and investment plans. On advice from the CCC we included additional topics such as customer views on climate change, whether we should subsidise vulnerable customers and preferred channels for information and communication.

Customer Consultative Committee

Customer feedback on previous proposals indicated customers wanted more quality engagement with us. In response, we fundamentally redesigned the way we engage with stakeholders and customers. We reformed our Customer Council and created a new Customer Consultative Committee to provide oversight and advice on Ausgrid's plans, policies, service and engagement with customers. We created a CCC sub-group called the Reset Working Group (RWG) to specifically consult on more detailed technical issues related to our Regulatory Proposal.

The CCC is helping us become a customer-focused business that is sensitive to the needs and views of its stakeholders. The CCC has assisted with the development of our pricing strategy and given input into issues such as:

- Rebalancing fixed and variable charges
- Incentives for energy efficiency
- Complexity of pricing design.

Ausgrid Reset Engagement and Empowerment Framework

Rules and regulation compliant	Meets all legal and regulatory requirements and in line with professional/industry codes
Ethical and responsible	Safety never compromised, environmentally and socially responsible, responsible employer, always ethical
Customer focused	Primary focus on long-term interests of customers, with best possible customer service we can deliver
Optimal solution	Delivering reliability and risk management with optimal revenue, investment levels and affordability. Incorporating market/policy trends, technology and innovation
Fair and reasonable	Proposals for reliability, investment levels, revenue and pricing seen as fair and reasonable by customers and stakeholders
Accountable and transparent	Key decisions supported by robust evidence, with an open and transparent process, and stakeholders' views clearly taken into account
Respectful and collaborative	Relevant stakeholders consulted and involved at each key stage in respectful two-way conversation, necessary information provided simply
Stakeholder-supported	Broad support from most stakeholders

Local government

We established consultation programs with local government representatives on street lighting and vegetation management. Our consultation on street lighting included two meetings in 2017 with 41 local government councils and several sessions with Southern Regional Organisation of Councils (SSROC). On tree trimming, Ausgrid engaged with 33 Councils across Sydney, the Hunter and Central Coast. Our focus was on how we can better align our tree trimming practices with community expectations. In addition to these discussions, Ausgrid conducted risk assessment studies to inform changes in our practices.

Retailers

Retailers are responsible for billing customers, bundling up our network charge along with other costs. In June and again in November 2017, we met with AGL, EnergyAustralia, Origin Energy and Alinta Energy to discuss how we plan to structure our prices and how our plans might impact them. In early 2018, we will continue to engage with retailers to obtain feedback from them on our approach. We will include this feedback in our 2019-24 Regulatory Proposal and pricing strategy.

Other stakeholders

Ausgrid also used online forums to interact with a broader set of stakeholders to test out our approach to encourage customers to use technology like solar panels and batteries. Ausgrid's Demand Management team further explored customers' attitudes to allowing their air-conditioners and batteries to be controlled by the business during times of network congestion in exchange for rebates.

What our customers and stakeholders told us

Engaging with our customers and stakeholders has helped us see ourselves in a very different way – not just from a technical or economic perspective. Our customers and stakeholders have challenged us to deal with difficult issues. With their assistance, we now have a better understanding of what's important to our customers and how we can serve them better.

Key issues of particular concern to customers and stakeholders include:

- **Affordability** – Customers are dissatisfied with rising prices, with many experiencing 'bill shock'. Customers want energy prices to stabilise or decrease. This was their top priority for Ausgrid
- **Reliability** – Customers highly value stable reliability and secure electricity supply, even though outages are rare. Reliable supply is a fundamental expectation and is a particular concern for businesses. Stakeholders are looking for more clarity on our load shedding practices
- **Sustainability** (Renewables and New Energy Technology) – Both customers and stakeholders support solar and renewables with most believing Ausgrid should be actively involved in the shift to renewable energy sources
- **Safety** – While safety is seen as essential, it is not something that most customers think about every day. Safety should be a continuous point of emphasis
- **Fairness** – Greater support for low consumption and vulnerable customers with initiatives such as transitional distribution network prices. Stakeholders are looking for a price structure that is fair and equitable, the ability to respond to price signals and a return on investment in technology or energy efficiency
- **Customer Service** – Stakeholders have asked for a more meaningful measure for customer service under the Service Target Performance Incentive Scheme (STPIS)
- **Street Lighting** – Councils are looking to reduce energy bills and carbon emissions through the transition to energy efficient light emitting diode (LED) lighting. They told us how they want these new technologies to be priced. Ausgrid provided a list of options to Councils for them to select the charging structure that best suited their needs
- **Vegetation** – Communities and Councils are looking for a better balance between network safety and reliability needs and local community aesthetic expectations for trees in their neighbourhoods. Councils support reducing clearances to improve canopy cover in non-bush fire areas
- **Education** – Several participants consider we should focus more on educating the public on Ausgrid's responsibilities and provide information on how to save money on electricity.

How we are improving the customer experience

Investing in a new digital customer strategy including new systems and a website rebuild to make it easier for customers to communicate with us via their preferred channel. Digital maps show network outages and allow faults to be reported.

Reducing red tape for customers who want to connect their solar systems to the network by fast-tracking certain applications and removing the need to conduct a detailed technical assessment for others.

Streamlining our complaints handling processes to make it easier for us to record and respond to complaints, and make it easier for customers to lodge issues with Ausgrid and track resolution.

Improving Safety - Underlying all our customer interactions is our commitment to keeping our customers safe, including by installing and operating our equipment safely and responding to emergencies promptly.

Changing the way we engage with customers

In response to recent research and previous customer feedback, we have worked with the CCC to improve how we understand and communicate with customers, including introducing:

- **A new customer service measure** – With the CCC, we worked together to develop a new customer parameter for the STPIS as a more meaningful measure of customer service. We will gather data over 2019-24 to enable us to develop targets and apply this metric as part of the STPIS from 2024
- **Research topics** – We consulted with the CCC on what topics we should discuss with our customers as part of our Customer at the Centre project. As a result, we included additional topics such as customer views on climate change, whether we should subsidise vulnerable customers and preferred channels for information and communication
- **Life Support Customers (LSC) research** – On the CCC's suggestion, we completed this research to understand LSC communication expectations and preferences during interruptions to power supply
- **A strategy for Culturally and Linguistically Diverse (CALD) communities** – Prompted by the CCC, we specifically targeted our research to better understand the needs and preferences of CALD communities. We also have an ongoing program to develop a strategy to better engage with our culturally and linguistically diverse customers
- **Simple information** – On the advice of the CCC, we are revamping our Energy Literacy material to make information easier to access and understand, as well as to identify any gaps. We will also work with our stakeholders to identify appropriate channels to provide information to different customers, such as CALD communities
- **Improved information on Load Shedding** – Following load shedding on 10 February 2017, the CCC raised questions about how Ausgrid approaches load shedding. We are now reviewing our website to ensure customers have information on why and how load shedding occurs.

Response to local government

As a result of our engagement with Councils, the way we price advanced LED lighting solutions now reflects the charging structure that Councils told us they preferred. Ausgrid will also hold an additional session with local government representatives to further consult on our public lighting approach to inform our Regulatory Proposal. On vegetation management, we have implemented a new standard for trimming trees around powerlines, which allows for reduced clearances (less trimming) in non-bushfire designated areas, minimising the aesthetic impact without sacrificing safety.

Extended consultation program

Having received the AER's approval to extend the submission date for our 2019-24 Regulatory Proposal to the end of April 2018, we are able to extend our consultation program to allow an even greater level of community and stakeholder engagement on key aspects of our proposal. The program includes the release of this Stakeholder Consultation Document, which will enable energy customers and stakeholders to understand the approach we are taking to our proposal and give feedback, along with a series of face-to-face meetings with deep dive sessions on capex and our price strategy.

Ultimately, the aim is to agree with our key stakeholders on the investments we will make and services we will provide over the next regulatory period. We will also work closely with the AER during the period of the extension.

Consultation January 2018 – April 2018

Public Consultation on Stakeholder Consultation Document

We will seek feedback on this document from the CCC, customers and stakeholders including:

- NSW Council of Social Services (NCOSS)
- Public Interest Advocacy Centre (PIAC)
- Energy Consumers Australia (ECA)
- AER Consumer Challenge Panel
- AER representatives

- Ethnic Communities Council of NSW (ECCNSW)
- Total Environment Centre (TEC)
- Councils on the Ageing NSW (COTA)
- Energy Water Ombudsman NSW (EWON)
- Energy Users Association Australia (EUAA)
- Retailer representatives
- Urban Development Institute of Australia (UDIA).
- Institute of Sustainable Futures (ISF)

Additionally, any customer or member of the general public can provide feedback via the email: yoursay@ausgrid.com.au until 27 February 2018.

Customer Consultative Committee (CCC)

We will hold two meetings of the CCC. The first will seek feedback on the Stakeholder Consultation Document and provide a more detailed review of our opex forecast. The second will review the extended consultation report (see below).

Deep dive sessions

The objective of the deep dive program is to share our capex projects and pricing strategy with our stakeholders and get their feedback so we can shape our capex program and price structures.

These sessions will allow stakeholders to raise issues with and ask questions of our technical staff. We will invite key stakeholders to these sessions including the AER representatives, ECA, Customer Challenge Panel, PIAC, NCOSS and TEC.

We propose five deep dive sessions in total, four on capex and a session on the development of our Tariff Structure Statement.

The capital expenditure sessions will cover:

- An introduction session – Review capex, augmentation and connection capex proposals
- Replacement capex programs including Advanced Distribution Management System (ADMS)
- Non-network programs including information technology and cyber security and the cost of supporting our capital programs or overheads
- A concluding session.

In addition, we will hold sessions on:

- The future of the energy network
- The proposed Tariff Structure Statement.

Extended consultation report

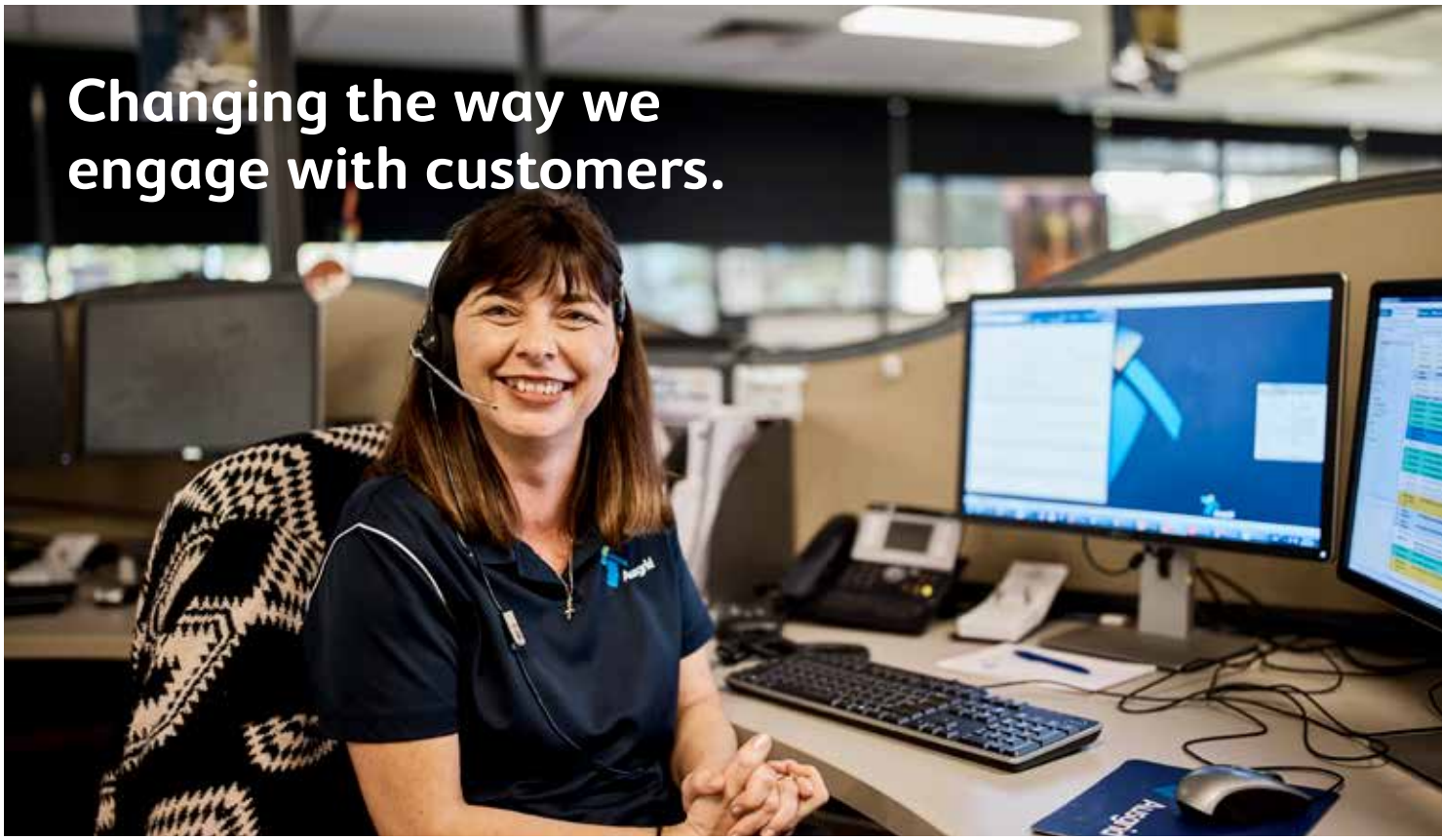
The key outcomes from the first CCC meeting, the deep dive sessions and community feedback will be compiled into an extended consultation report that will be discussed with the CCC. It will highlight what we have heard and will inform our 2019-24 Regulatory Proposal.

Consultation April 2018 – December 2018

From April to December 2018, we will continue to engage with key stakeholders and also seek input from broader stakeholders as we develop our final regulatory response.

AER Draft Determination Consultation

Following the release of the AER Draft Determination, Ausgrid will run a CCC workshop to discuss the Draft Determination and our response to it so it can be stress tested and informed by our stakeholders and customers.



Timeline for extended consultation program

Ongoing consultation

From December 2018 onwards, we will continue to embed ongoing engagement practices in our business as recommended by our stakeholders. We recognise that consulting with stakeholders on an ongoing basis is increasingly important as technology developments provide more choice in the way energy is used. We are fully committed to continuing to embed customer input across our business and use their feedback to make improvements to our customer service.

YOUR FEEDBACK:
Tell us what you think of our consultation approach

- Do you think our approach to engagement will allow concerns from all stakeholders to be raised?
- Are the processes we have adopted appropriate for obtaining feedback from all our stakeholders?
- What else could Ausgrid do to seek input from customers and stakeholders?

03 Our role in a changing energy market

The environment in which Ausgrid operates is fundamentally changing. Customers want new services that enable them to connect their rooftop solar PV and battery storage system and charge their electric vehicle, while others will or simply wish to continue to access affordable and reliable power. These services must be provided at a price that represents value for all our customers.

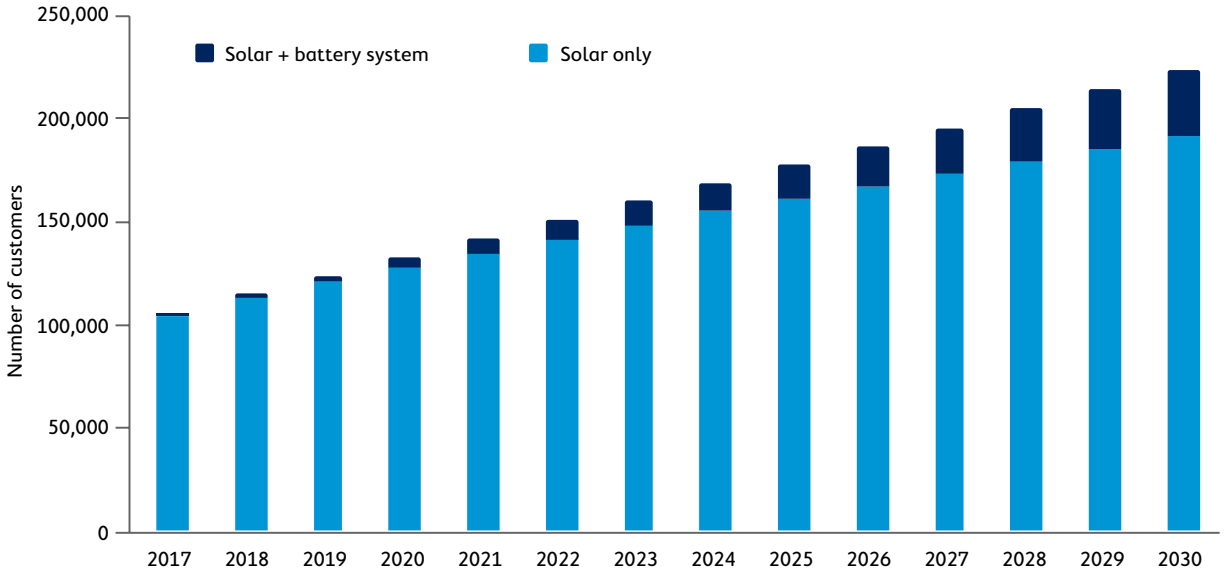
As distributed energy resources are adopted, the electricity grid will increasingly operate with two-way energy flows. Households and businesses will generate their own electricity and sell extra power back into the energy market or to their neighbours via the grid.

When we asked them about this future, our customers told us they want to be able to produce and consume electricity, when and how they choose. Residential customers are particularly interested in solar power, solar hot water, home monitoring of usage and costs, home battery storage, home energy management systems and electric vehicles. About 120,000 Ausgrid customers have already installed solar power systems and 1,500 have installed battery storage systems.

As the cost of solar panels and batteries continue to come down, these technologies will become more accessible to a greater number of customers. If managed appropriately the benefits of these technologies can be substantial to customers and the broader community.

Number of customers with small scale solar and battery systems

By 2030, we expect to see a doubling of customers on the Ausgrid network with solar and solar+battery systems. As a result, we plan to conduct trials to see if these technologies can help defer capex and explore new ways to deliver services more affordably.



Source: Ausgrid forecasts

We have already been working to make it easier for customers to install and take advantage of new technologies. In recent years we have:

- Surveyed residential and business customers about solar, batteries and energy efficiency to better understand their motivations and preferences for installing new technology and willingness to partner with Ausgrid to reduce demand
- Lowered the cost of connecting residential customers to solar and batteries and reducing red tape by making the process faster and simpler
- Implemented the innovative CoolSaver program where we partnered with 150 residential customers to reduce peak demand from air conditioners using new power saving technology
- Delivered a large-scale peak rebate program for business customers to refine demand management solutions from this important customer segment
- Investigated the ability of a grid battery to reduce network demand and optimise solar operation for customer benefits
- Tested the impact on our grid of electric vehicles and their charging infrastructure
- Explored the ability of residential batteries and fuel cells to reduce customer bills and network demand.

How our proposal will prepare for energy market transformation

We intend to continue the process of transforming our distribution network into an interconnected 'smart grid'. Customers already have more control and choice over the way they produce, use and store energy. Now they want to get more value from investing in clean energy technology like solar panels and batteries. Ausgrid can support this by investing in grid technology that in the future may help customers sell their locally generated power to community retailers or directly to other customers. The key challenge lies in doing this in a way that does not disadvantage those customers who do not, or cannot, adopt these technologies in the same way.

The smart grid we envision will support an energy mix that includes a high proportion of renewables, both large and small scale. It will encourage customers to help us intelligently manage electricity demand across the grid and reduce their bills by maximising the value and use of their distributed energy resources.

We are proposing to:

- **Improve demand management**. Our plans include partnering with customers to reduce the need to build more network infrastructure by using batteries, smart meters, smart appliances and innovative rebate offers. We also intend to conduct innovative projects to refine demand management solutions, including identifying the optimal mix of solar, batteries, energy efficiency and embedded generation to help us defer the replacement of network assets
- **Support customers to generate their own power.** We recognise the future isn't a one size fits all grid system. We are making it easier for customers who wish to invest in solar power by:
  - Lowering the cost of connection
  - Making connection efficient and simple
  - Trialling micro grids that help customers to generate, store and manage power so we understand what type of technology is needed to keep micro grids stable, reliable and with power quality meeting expected standards.

We are also planning to invest in an Advanced Demand Management System (ADMS) to replace and enhance the existing electricity network monitoring and control system. This is an integrated software and hardware platform that enables the modern grid. This system would allow us to operate the grid safely, reliably and effectively as more and more customers adopt distributed energy resources. Our initial investment would set up the core of this platform and as we continue to invest in future regulatory periods, this would allow us to:

- See what's going on in the grid in real time – to improve our knowledge of where outages occur. This means we can remotely isolate faults before we arrive and minimise disruption to customers
- Add more renewables into the grid, giving customers the option of choosing green energy or generating their own power from solar panels
- Partner with customers to enable them to operate batteries and use smart control of appliances to lower their bills
- Enable customers to participate in peer-to-peer trading
- Manage the grid better through changes such as customers choosing to operate electric vehicles.

Customer consultation strategy workshop – The future of energy networks

To better understand how our customers are engaging with new technologies and explore their future needs, Ausgrid proposes hosting with customer representatives and relevant experts a facilitated customer consultation strategy workshop on the future of energy networks. Topics to discuss will include demand management practices, micro grids, solar and battery adoption, peer-to-peer trading and getting ready for electric vehicles. The workshop will also consider the importance of appropriate price structures and price signals in this new ecosystem.

Protecting customers who can't, or don't want to use new technology

We know that not everyone can or wants to adopt new technology. We will remain focused on our core service of providing safe, reliable and affordable electricity for all our customers.

YOUR FEEDBACK:
Tell us how you think we should respond to energy market changes

- What do our customers need and expect from us in a changing world?
- What action can we take over the next five years to put us on the right path to delivering services that our customers want at a price they are willing to pay?
- How do we ensure the needs and expectations of vulnerable customers are taken into account?
- What steps can we take to protect those customers that can't adopt new technologies from subsidising those who can?

04 Key elements of our regulatory submission

Our 2019-24 Regulatory Proposal will:

- Reduce prices in the short term and ensure the choices we make today don't unnecessarily increase prices in the future
- Keep costs down as much as possible while maintaining network reliability and security, and managing the transition to more renewable and distributed energy sources
- Move towards fair pricing structures appropriate for the future grid, but do it in a way that manages the impact on vulnerable customers.

Customer risks and benefits analysis of Ausgrid's 2019-24 Regulatory Proposal

Benefits for customers…	…and how we will achieve them
Improve affordability	Lower total network costs
Assist vulnerable customers	Safeguard pricing for vulnerable low use customers
Improved customer experience through easier access to the information they need	Focus on customer service and engagement and our digital customer strategy
Provide network price stability	Sustainable network investment over the long-term to provide the best value for customers
Maintain reliability	Focus on investments that ensure we maintain our high levels of reliability
New uses for the network: distributed energy resources (DER), selling energy, trading, demand management	Focus on future use of the network and invest to meet the changing needs of customers
Risks for customers…	**…and how we will manage them**
Pace of industry change means the assets we build tomorrow may not be right for the future	Use demand management and innovative solutions rather than building new or replacing assets where feasible
Power outages caused by loss of upstream supply	Replace ageing parts of the network and those in poor condition at the right time
Cyber attacks compromise the security	Invest in cyber security measures to protect the network consistent with critical infrastructure requirements
Bill shock occurs	Ensure sustainable levels of investment and introduce pricing options to allow customers to manage their energy use and reduce costs

Capex

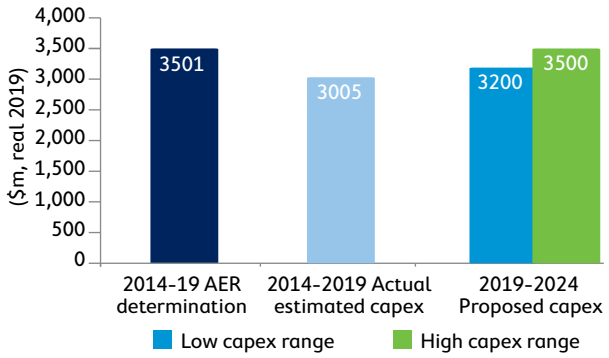
Our capex forecast for 2019-24 is between $3.2 billion to $3.5 billion (in real FY19 terms).

Our capex program has been prepared with a view to meeting the needs of our customers and moving towards a low carbon future.

We have focused our efforts on making sure the capex forecast is at a sustainable level and flows through to stable prices in the longer term. We are striving to achieve this while meeting our regulatory responsibilities around safety, reliability and security of the network.

Our capex forecast for 2019-24 is between $3.2 billion to $3.5 billion. The lower range is based on internal analysis of the condition of our assets, demand growth and future technology needs. The higher range is an age based assessment.

Ausgrid's actual estimated capex and proposed capex compared to the AER determination (in real FY19 terms)



Source: Ausgrid analysis

Taking a new approach to capex

We are planning to change the way we invest in the grid to make sure we get the best outcomes for customers.

Our desire is to keep capex to the minimum levels possible to meet customers' needs. This ensures we keep the costs down, which both delivers on customers immediate needs and safeguards the long-term position of the grid in delivering for customers. Ausgrid and customers both benefit from a lower cost energy ecosystem.

Our proposed capex program would allow us to provide reliable and safe services at the lowest cost to customers. In the 2019-24 period:

- We plan to only invest if there is clear value for customers. Our replacement programs carefully target expenditure on assets that ensure the safety of our staff and customers and mitigate reliability risks
- Rather than simply building more infrastructure, we are looking first at where new technology, innovation and partnering with other companies and our customers will solve the problem at a lower cost. This includes demand management solutions.

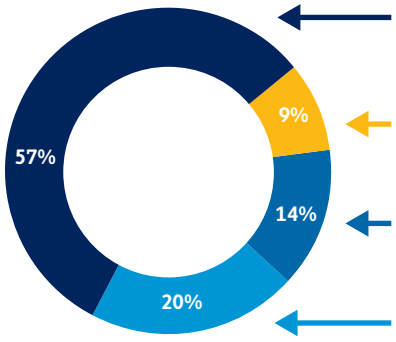
Renewing our ageing network and modernising systems

Most of our proposed capex is to replace assets on the network.

Our analysis indicates that we need to spend between $1.7 billion and $2 billion on replacing distribution assets that are at increasing risk of failing because of age.

Breakdown of Ausgrid's forecast capex by AER categories 2019-20 – 2023-24

Most capex will be on replacing assets.



Replacement ($1,669m to $2,000m)
Based on the analysis of asset condition and performance we must invest to manage system reliability and safety risks for our customers, whilst ensuring our network supports the transition to a lower carbon economy.

Growth ($311m)
Connecting large infrastructure projects, population growth as well as dealing with the strains of localised increasing peak demand, drives the need for this investment.

Non-Network ($489m)
Non-network investments deliver improvements in overall business operations, allowing us to enhance customer experience including through faster response times.

Support costs ($717m)
We will find ways to reduce the proportion of corporate costs that support our investment program.

Replacement Growth Non-network Support costs

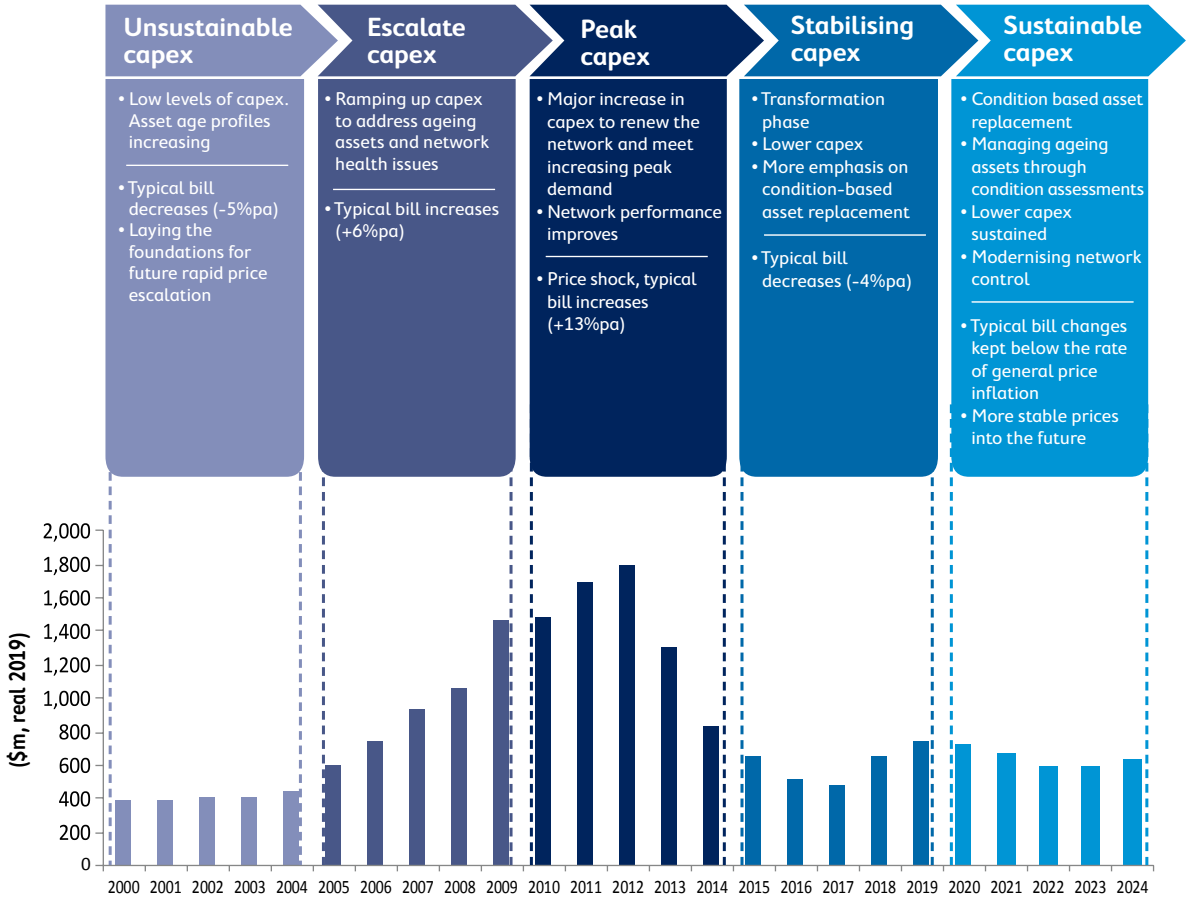
Source: Ausgrid analysis

SUSTAINABLE CAPEX PROGRAMS

Capex has fluctuated significantly over the last 25 years. This has resulted in price volatility for our customers. The drivers of volatility are explained in the diagram below.

Ausgrid's capex 1999-2000 – 2023-24 (in real FY19 terms)

More sustainable level of capex into the future.



Source: Ausgrid analysis

Our capex program seeks to sustainably renew our network to deliver reliable and affordable prices into the future. The key drivers of the capex investment are:

- **Renewing our ageing distribution network** – Our analysis indicates that large volumes of our smaller assets have condition issues related to many of our assets being beyond their technical life. Therefore, we have to replace and renew these assets to ensure public and worker safety and reliability
- **Preparing for the future grid** – Our grid operating systems require modernising, including staged investment in the new ADMS, to replace ageing and old technology systems. Investment in the ADMS would also enable us to meet the future requirements of our customers and the changing nature of the grid. The ADMS offers more functionality for network management, integrating our customer call centre, network management and cyber security systems.

Not investing enough, early enough, puts at risk the reliability of our service and the condition of assets on the network. Asset condition issues put at risk the safety of the community and our workers. The proposed capex program balances meeting our obligations to ensure a safe, secure and reliable service with our commitment to make sure network prices are affordable.

Our estimate of replacement capex for 2019-24 is between $1.7 billion and $2 billion, which is 4% to 23% higher than actual replacement capex in the 2014-19 period.

The lower range of our estimates is based on internal analysis of the condition and the risk of assets failing. The higher range uses age based analysis, that works out the level of replacement expenditure to ensure that assets are replaced before they exceed their standard service life. The level of replacement reflected in our proposed capex program is for the most part lower than the aged based assessments, but we consider it a more appropriate level based on our internal condition based analysis. Our internal analysis has the advantage of granular condition data. However, age based models can better predict the level of replacement expenditure required to ensure sustainable capex into the future.

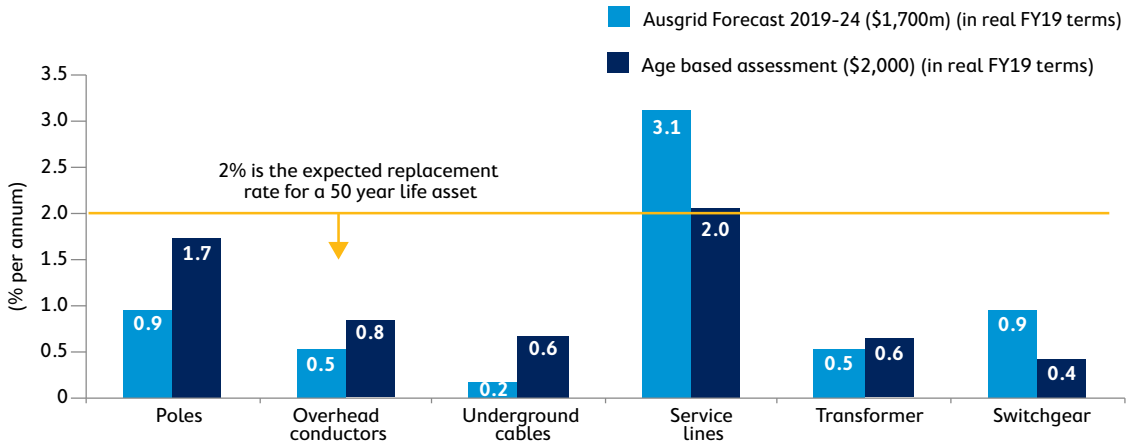
As shown in the figure "Comparison of forecast asset replacement rates by asset category", compared to the age based analysis outcomes, our condition based engineering assessment results in lower replacement rates for four asset categories and higher replacement rates for two asset categories. The age based assessment results in a higher capex program overall.

Almost a quarter (24%) of the number of our assets are over their technical life, as shown in the figure "Replacement value by age of asset of Ausgrid's network", suggesting a need to steadily increase our replacement capex in the upcoming period. This will help achieve more stable levels in the future.

We consider that a 4% increase in replacement capex will be sufficient to maintain the safety, security and reliability of the network, over the regulatory period. We note this will lead to lower prices, while recognising it may create a greater need for replacement capex in future periods.

Comparison of forecast asset replacement rates by asset categories 2019-20 – 2023-24

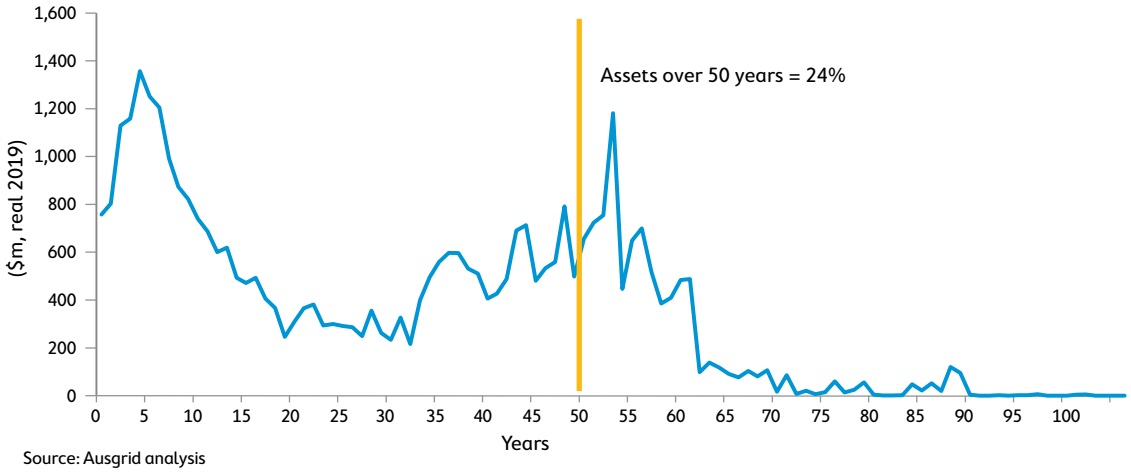
Our condition-based total replacement capex is mostly lower than age related assessments.



Source: Ausgrid analysis

Replacement value by age of asset of Ausgrid's network (in real FY19 terms)

A quarter of our assets are over their technical life (50 years old).



Source: Ausgrid analysis

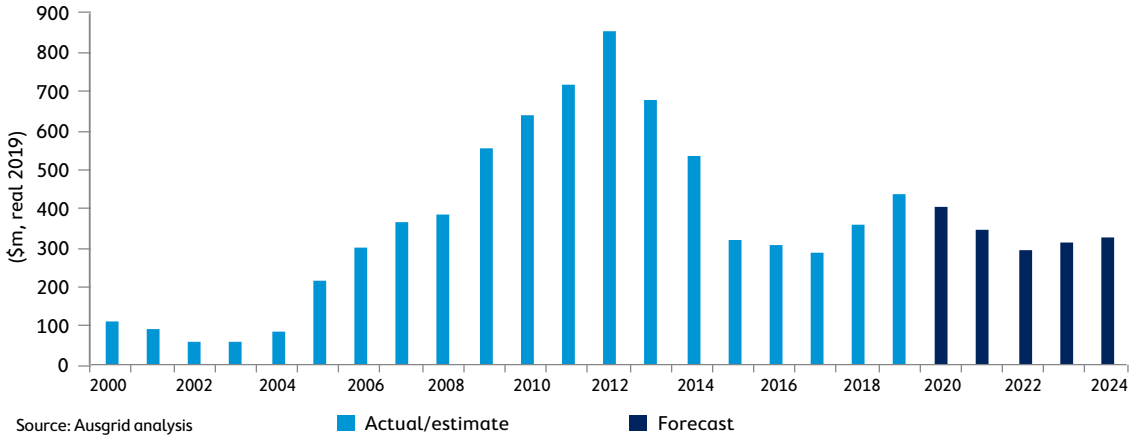
Our forecast capex compared to past trends is shown in the figure "Replacement capex forecast". It shows a stabilising level of capital expenditure.

We believe this is the right level of capex going forward.

This forecast is based on our view that the condition based assessment is the right approach.

Replacement capex forecast (in real FY19 terms)

The replacement capex forecast is driven by the condition of the assets. The forecast shows that replacement capex is stabilising. The peak replacement capex in the FY2010-14 period reflected the need to address underspend in previous periods.



Source: Ausgrid analysis

Providing for new connections and developments

Growth capex includes augmentation and customer connection related projects, which are needed to meet reliability requirements.

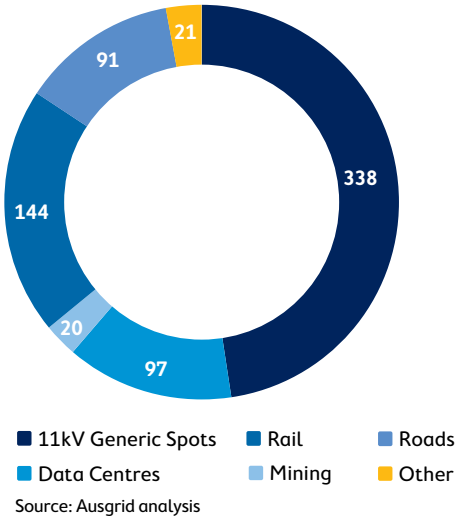
Our growth capex of $311 million is an increase of about $97 million on the previous period. Much of the increase relates to a modification to our connection policy to facilitate more equitable and efficient network development and augmentation works required to facilitate large customer connections (e.g. infrastructure projects, data centres). Currently, large customers are discouraged from connecting in areas where infrastructure upgrades are needed because they are required to pay the full cost of an upgrade. This approach can create disincentives, which may lead to sub-optimal network investment. We believe this change will deliver a more cost effective grid for everyone in the long-term. (See section "Fairer connection policy" on the next page for more information).

We forecast growth capex at only 9% of total capex in the 2019-24 period, giving Ausgrid the lowest growth capex per customer spend in the National Electricity Market (NEM).

Growth capex is driven by increases in peak demand and customer connections. As shown in figure "Forecast peak demand from major new connections by industry segment 2019-20 – 2023-24", rail and road projects and data centres are the major contributors to peak demand.

Forecast peak demand from major new connections by industry segment 2019-20 – 2023-24 (MW)

Data centres and transport infrastructure are major contributors to growth capex.



Source: Ausgrid analysis

GROWTH FROM MAJOR INFRASTRUCTURE PROJECTS IN SYDNEY

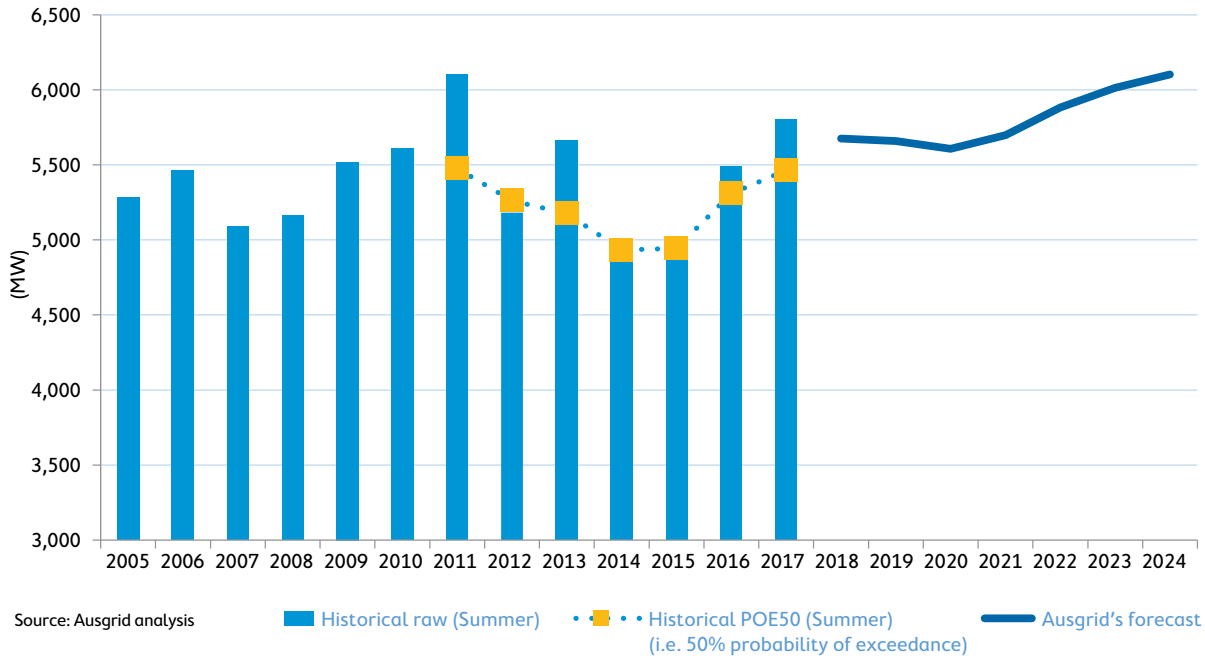
We expect that the increase in spot loads relating to new major infrastructure connections, which are clustered around the Sydney metropolitan transport corridors, will continue. This will likely result in higher localised spot loads and total peak demand in summer over the 2019-24 period.

Our investment will target locations with existing sub-transmission network infrastructure. Through this approach new connecting customers will benefit from efficient network development and existing customers will benefit from improved utilisation of existing assets.

Peak demand is forecast to grow in the next period, as shown in the figure "Ausgrid's system total summer maximum demand forecasts". However, there will be areas which experience no peak demand growth and those that experience significant growth. We must strengthen the system in those areas to ensure risks of reliability issues on hot summers days are mitigated appropriately. The probability of exceeding peak demand in periods of hot weather can often be significantly higher than 50%.

Ausgrid's system total summer demand forecasts 2004-05 – 2023-24

Peak demand expected to drop then increase.



Source: Ausgrid analysis

FAIRER CONNNECTION POLICY

In 2019-24, our connection policy will no longer ask new customers to pay a capital contribution if their connection is for a predominantly shared asset likely to be used by other customers in the future.

This approach provides for the cost of network development to be funded by those who benefit from that infrastructure. This leads to fairer outcomes for all customers and more efficient network development since customers will not be undertaking inefficient augmentations.

This change in policy will resolve a current issue where small to medium scale customers in the same area can be required to pay substantially different connection costs.

Furthermore, constructing a shared network in high growth areas with multiple simultaneous developments has the potential to significantly reduce the overall costs to the community by integrating construction works and providing greater opportunity for demand management and other non-network alternatives.

PIONEER SCHEMES

Under a pioneer reimbursement scheme, a customer who has funded the cost of new connection assets is able to be reimbursed for part of those costs if other customers subsequently connect to the newly established assets. We are considering making changes to how the current pioneer scheme applies to multiple occupancy sites. At the moment, if a property developer funds a network extension to service a multiple occupancy site the occupants of the new dwelling, rather than the developer, will be entitled to any future pioneer scheme payments. Ausgrid is seeking views as to whether this is a fair allocation of benefits and whether it provides the right incentives in terms of developing the network to efficiently provide for future growth.

MODERNISING OUR BUSINESS (NON-NETWORK CAPEX)

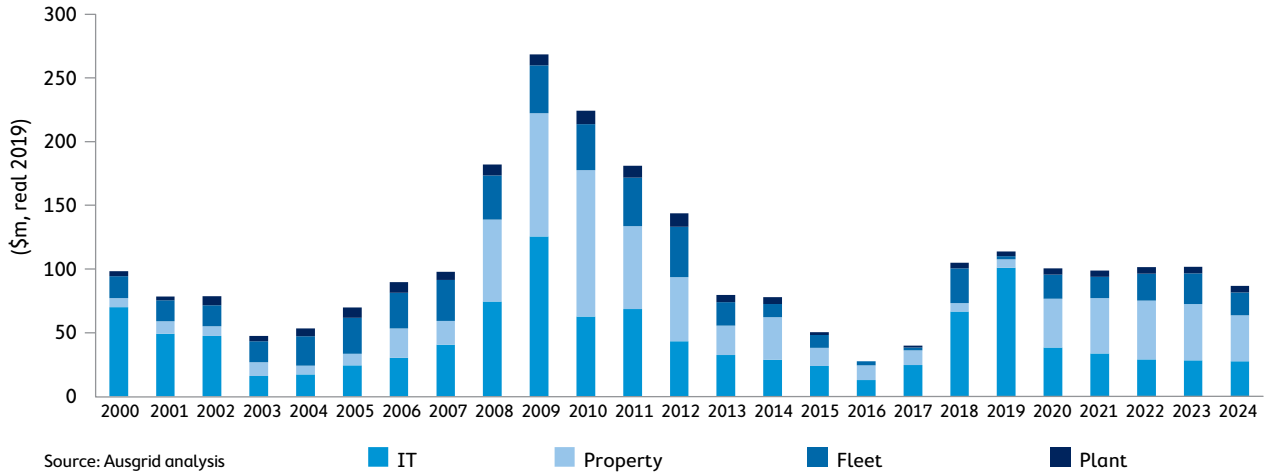
Based on our analysis we propose to increase our investments in IT, property and fleet in the 2019-24 period relative to the previous period. The long-term trend in non-network capex is shown in figure "Non-network capex for the 2019-24 period".

The focus of our strategy is to modernise the ways we do business. This will unlock efficiencies and improve our services to customers. This includes:

- Corporate property accounts for about half of the proposed non-network capex. The majority of our forecast $208 million investment will be on replacing and upgrading five of our 19 primary depots as well as upgrading offices. In most cases, these properties are over 50 years old and are at risk of not meeting basic workplace standards. In some cases, replacement of corporate property will result in surplus land which will be sold and used to lower the regulatory asset base
- The majority of our IT investment is on updating the systems that support our business-critical functions, and on continuing our transition to cloud based services. We are also investing in modernising and automating our services to customers. We forecast $9 million capex on our digital strategy program that would streamline and improve our customer service. This program would also improve the safety and efficiency of our workforce. In addition, we forecast that we need to invest $20 million on cyber security programs to align with the Government's Critical Infrastructure Resilience project
- Fleet accounts for about 20% of the proposed non-network capex. We have reduced our total fleet by 50% over the last five years. We are planning to invest just enough to maintain a safe and efficient fleet.

Non-network capex for 2019-24 period (in real FY19 terms)

Growth in non-network capex to stabilise.



Source: Ausgrid analysis

YOUR FEEDBACK:
Tell us what you think of our capex proposal

- What is your view on deferring replacement of assets if we can manage risk levels (safety and reliability) in the short term, even if that leads to higher capital expenditure levels (and potentially higher prices) in the long-term? Is there a reasonable trade-off?
- What has been your experience with Ausgrid's current connection policy?
- Other than the connection policy, what other factors do we need to consider in preparing our growth forecast capex?
- Should changes be made to pioneer scheme payments?
- What further information should our proposal contain about forecast capex?

Opex

We plan to spend $0.5 billion (in real FY19 terms) less than we expected to spend in the 2014-19 period.

Our forecast opex for 2019-24 is $2.4 billion (in real FY19 terms). Opex funds the day-to-day operations needed to keep power flowing to our 1.7 million customers. We use these funds to:

- Inspect and maintain our network to ensure it is safe
- Respond to emergencies and restore power as soon as possible
- Keep business systems and IT running smoothly.

Significantly reduced costs in the last few years

In 2015, the AER challenged us to reduce our costs. Since then, we have significantly changed our business to cut our operating cost base by more than $100 million. The changes we have made have allowed us to:

- Lower costs while not compromising safety or reliability
- Pass on cost savings to customers.

OUR PERFORMANCE FROM 2014 TO 2019

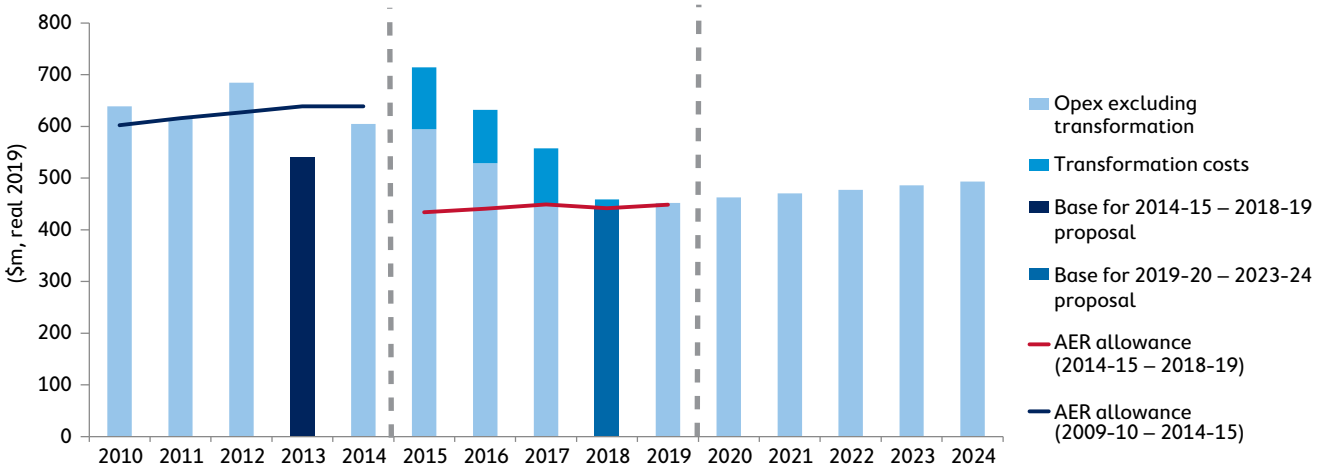
Our actual costs have been higher than the allowance the AER determined for Ausgrid in 2015 (see figure below). However, we have worked hard to reduce costs by:

- Embedding a new business model and management structure to streamline decision making and improve accountability and effectiveness; and
- Increasing field productivity to reduce overall costs and resources required to deliver our capital and maintenance programs.

Together, these actions have created a sustainable future operating cost base for Ausgrid.

Actual and expected opex 2009-10 to 2023-24 (in real FY19 terms)

We have invested $330m in right-sizing our operations. Compared to our last proposal, we have reduced our operating cost base by over $100m or 19%. Every dollar spent on our transformation program will deliver five dollars of opex savings to customers.



Source: Ausgrid analysis

Right-sizing our workforce

Because employee costs represent the largest part of our operating expenditure, a major focus of our transformation program has been to right-size our workforce. Customers want a workforce that is adequate to deliver our services both safely and efficiently. Ausgrid has identified areas where we can be more efficient, without compromising reliability and safety, and has implemented a program to ensure we have the right skills and people to deliver. Ausgrid has faced considerable regulatory constraints in its ability to quickly implement this program, including from the Electricity Network Assets Act 2015 (ENA legislation), which was integral to the long-term lease of Ausgrid, and existing Enterprise Bargaining Agreements (EBA). However, Ausgrid has worked collaboratively with its workforce to implement efficiency changes by agreement, including offering voluntary redundancies and a range of non-financial support to employees whose roles are no longer required.

Initially, this increased costs as we made redundancy payments but over time this has reduced ongoing costs and the benefits will be passed through to customers within the 2019-24 regulatory period.

Forecasting our future opex needs

We have forecast how much opex we need for 2019-24 using a 'base-step-trend' approach. This approach selects a base year where we have efficiently managed costs and then forecasts going forward. We chose this method as it:

- Is simple and transparent
- Has been used effectively by the AER and other businesses; and
- Is based on the significant and sustainable costs decreases achieved through our transformation program.

To date, stakeholders have not expressed concerns with this forecasting approach.

BASE-STEP-TREND APPROACH

Base – As our efficient base year, we used expected 2017-18 opex with transformation costs removed, which provides a base year of $440 million (the red line). This base year expenditure is in line with the AER's 2015 determination and represents a $107 million saving compared to our base year in 2012-13.

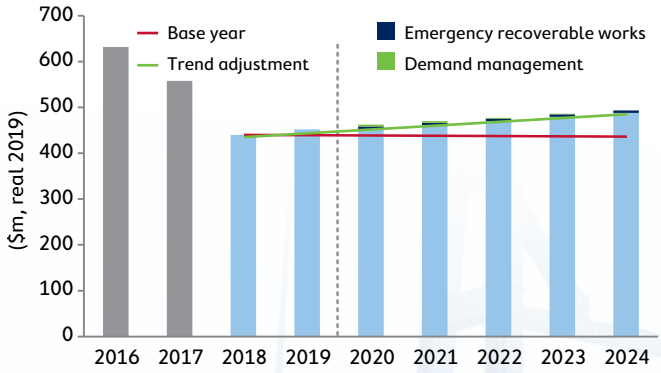
Step – We added two 'step changes' to adjust the forecast to include:

- Funding to repair the network when it is damaged by third parties (e.g. a car hitting a pole) who cannot be identified (navy blue shaded area). These costs were not originally included in the base year and reflect a change in the scope of our standard control services from 1 July 2019. Historically these costs have been around $5 million per year
- Funding for demand management projects (green shaded area). In response to customer feedback, we are proposing expenditure to further develop our demand management capabilities in the face of uncertainty over future technologies and energy demand and consumption patterns. We are proposing demand management costs of around $2 million per year. This funding is based on choosing demand management solutions where the benefits (from avoiding or deferring capex) outweigh the costs of the project.

Trend – We adjusted the forecast to reflect growth in the size of our network and forecast price increases for wages, materials and suppliers (the green line). In general, we have adopted methods previously used by the AER to make these adjustments.

Opex forecast using base step trend approach (in real FY19 terms)

The changes in opex from the base year over the 2019-24 regulatory period reflect forecast changes in real costs, activity levels, service classification and opex/capex trade-offs.



Source: Ausgrid analysis

Our opex forecast breaks into five categories:

Grid Maintenance and operation:

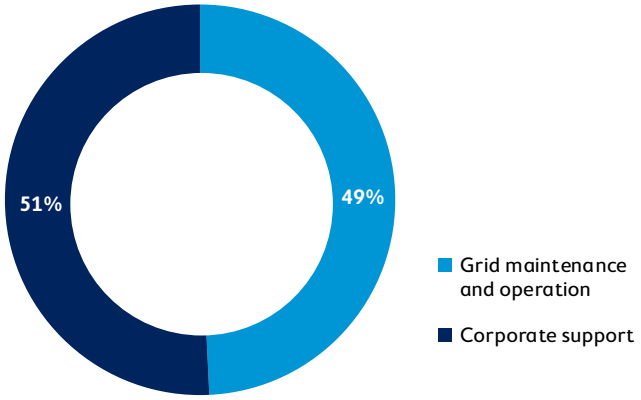
- **Maintenance** – inspecting and maintaining our network to ensure customers, the public and our employees are safe
- **Network support** – running the network control centre, planning, talking to customers and responding to emergencies.

Corporate support:

- **ICT** – running the many IT and telecommunication technologies and systems required to manage our large network
- **Corporate support** – covering management, human resources, finance, our fleet of vehicles, insurance etc
- **Property** – including land tax and building maintenance.

Forecast opex by program (in real FY19 terms)

Our forecast opex is more or less equally divided between "grid maintenance and operation", and "corporate support".



Source: Ausgrid analysis

YOUR FEEDBACK:
Tell us what you think of our opex proposal

- What feedback do you have on the indicative opex forecast outlined in this section?
- Do you think we have applied an appropriate approach to forecasting the opex we need over the 2019-24 period? Why/Why not?
- Do you support our proposal to expand our demand management activities over the 2019-24 period? And why?
- What further information should our proposal contain about forecast opex?

Rate of return

A reasonable return on capital ensures we can secure long-term investment in the network.

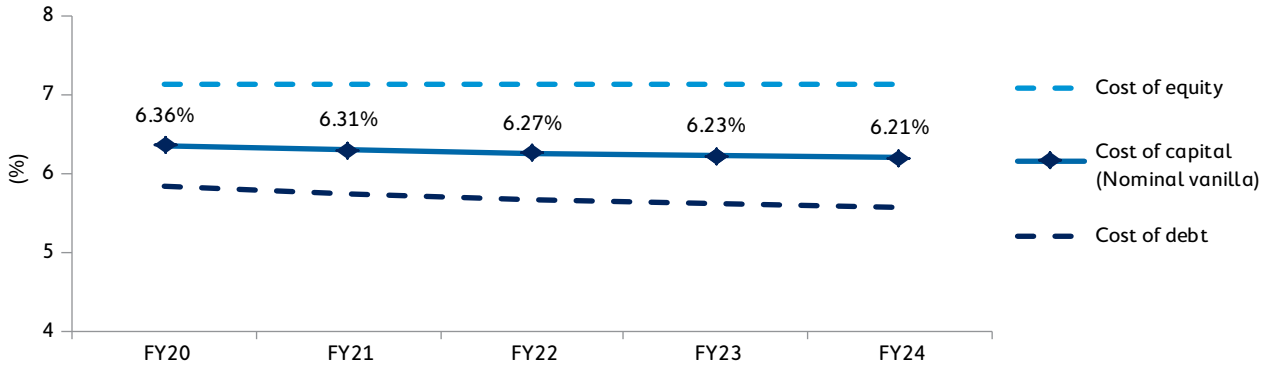
Ausgrid raises funds from both debt markets and long-term equity investors. Debt finance is very similar to a loan, where Ausgrid borrows money to invest in network assets and pays interest on the amount we borrow. Once we borrow money, we are contractually bound to pay the interest rates agreed to. Equity finance is more costly than debt finance because equity investors are not guaranteed a set rate of return. Instead, they take on the risk that they could make lower (or even negative) returns depending on how efficiently the business performs.

Equity investment is valuable because it provides flexibility to ride out short term fluctuations in our costs.

The AER determines the allowed cost of debt and equity sources of finance that Ausgrid requires through our regulated revenues. In the past, the allowed cost of capital has been a particularly contentious issue between the AER and regulated businesses. To give consumers more certainty and stability, Ausgrid is proposing to adopt the AER's rate of return guideline for the 2019-24 regulatory period.

Ausgrid's proposed cost of capital

We are proposing to adopt the AER's rate of return guideline for 2019-24.



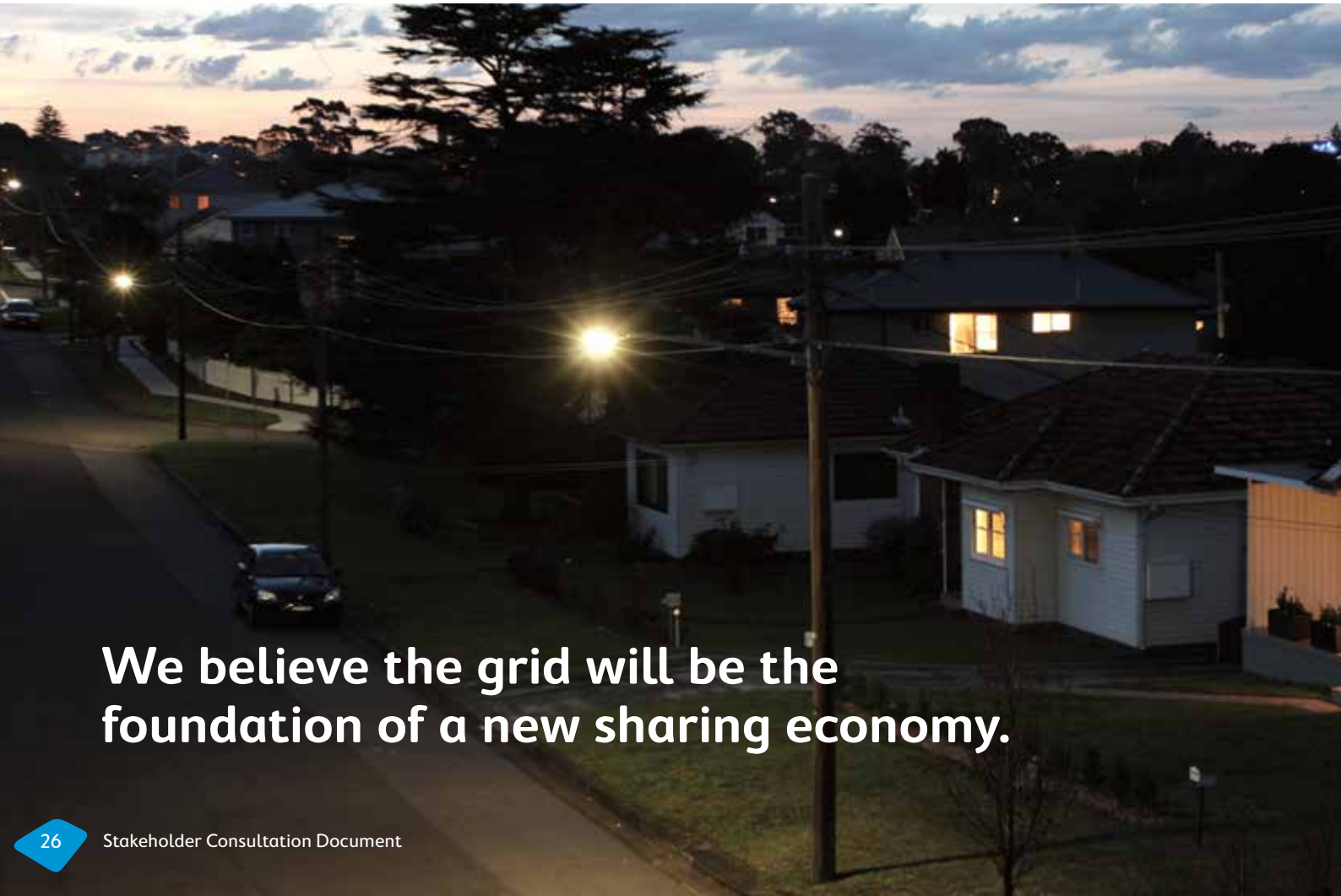
Source: Ausgrid analysis

Ausgrid's proposed cost of capital for 2019-20

To give customers more certainty and stability, Ausgrid proposes adopting the AER's rate of return guideline for the 2019-24 regulatory period.

7.15%	Cost of equity using AER's guideline approach
2.60%	Risk Free Rate (Recent trading data)
0.7	Equity Beta (lower than average systematic risk)
6.50%	Market risk premium (AER historic average)
5.84%	Cost of debt using AER transition to 10yr trailing average

→ 40% Equity Finance
→ 60% Debt Finance
→ **6.36%** Cost of capital



We believe the grid will be the foundation of a new sharing economy.

The figures above are preliminary forecasts, which will change depending on how interest rates move between now and when the AER makes its final 2019-24 regulatory determination for Ausgrid.

Cost of equity

Our proposed cost of equity is 7.15%. This is based on the AER's 0.7 estimate for equity beta (the measure of electricity networks' systematic risk relative to the equity market as a whole); the AER's historic based estimate for the market risk premium of 6.5%; and the AER's approach for estimating the risk-free rate (2.60% based on recent trading data). This current estimate of the allowed cost of equity is well below the long-term average required cost of equity. This is mainly due to the AER's guideline approach, which uses a long-term average market risk premium and a short-term prevailing risk-free rate.

A more stable return on equity would be achieved over the long-term if we use either a:

- Long-term risk free rate estimate; or
- Prevailing market risk premium estimate.

However, all of the AER's cost of equity decisions since 2013 have used a short-term prevailing risk-free rate combined with a long-term average market risk premium. We are proposing a method consistent with the AER's preferred approach, noting that this issue, amongst others, will be considered within the broader industry rate of return consultation taking place throughout 2018. We look forward to working collaboratively with the AER to help ensure the method for setting the allowed cost of equity for future determinations produces outcomes in the long-term interests of consumers.

Cost of debt

Both Ausgrid and the AER agree that the 10-year trailing average cost of debt is consistent with the benchmark efficient cost of debt for electricity network businesses on a prospective basis. Our proposal uses the AER's guideline method, which transitions from prevailing interest rates in 2013-14 to a full trailing average by 2023-24.

YOUR FEEDBACK:
Tell us what you think about how we propose calculating the cost of capital

- Do you have any comments on our proposed approach to setting the cost of capital?
- Are there any reasons why we should depart from the AER's rate of return guideline for the return on debt or return on equity?

Prices

In a changing world, our price structures must change to remain relevant.

The substantial investment in energy technology and renewables means our electricity network will become a platform for customers wanting to sell their surplus energy at certain times and to rely on our network to meet their energy requirements at other times. We consider the grid will be the foundation of a new sharing economy for some and will continue to provide the services it does today for others.

Right now, the way we recover costs from customers is based on the out dated concept of a one-way flow of electricity. We want our pricing to be fair and to support technologies which help the transition to a lower carbon economy at lowest cost. However, if we continue with our current energy-based pricing approach, this will create an energy ecosystem that is more expensive than it has to be. With the right price signals, distributed energy resources (DER) can deliver better outcomes for the customers who invest in them, as well as the energy ecosystem. In the longer term, moving to smart capacity or demand based pricing arrangements will support and encourage those distributed energy resources which deliver for all customers.

Demand and capacity based pricing will also encourage the development of the demand response market, which is expected to drive significant cost reductions through the new energy ecosystem.

To support the cost effective transition to a lower carbon economy, we propose to change our pricing arrangements to be relevant to the grid of the future while keeping prices fair, affordable and sustainable without compromising reliability. Our proposed pricing strategy will reward our customers for better managing their energy use in a way that reduces the long-term costs of the energy ecosystem, rather than cost shifting among customers.

Customer perspectives

Our draft pricing strategy reflects the views of our customers, obtained through qualitative and quantitative research. The results of this research have informed our final pricing strategy as discussed below.

Our revised understanding of customer and stakeholder priorities has heavily influenced our proposed pricing strategy. The CCC had particular input into issues such as rebalancing fixed connection and variable charges, incentives for energy efficiency, and reducing the complexity of pricing design. In addition, our proposed strategy takes into account the following specific insights from customer and retailer research.

Insights from customer and retailer research

	Specific research finding	What we are proposing in response
Customers	It is generally acceptable to increase fixed connection charges – a key element of our pricing reform proposal – as long as the variable charge is reduced to ensure that overall network bill outcomes are acceptable. Increasing fixed connection charges will prepare for a future where the way customers use the network evolves.	We propose to match fixed connection charges increases with a corresponding reduction in inefficient energy charges to ensure acceptable network bill outcomes are achieved during the transition to more efficient pricing.
	Customer support for pricing reform increased if we put in place adequate safeguards for low energy users, particularly vulnerable customers.	We propose to introduce a comprehensive transitional pricing arrangement in the next regulatory control period to apply to low energy users and vulnerable residential customers using less than 2 MWh pa.
	Some customers believed our pricing strategy should also support the broader transformation towards a de-carbonised economy.	We understand just how important pricing arrangements are to ensuring the transition to a lower carbon economy occurs as cost effectively as possible, especially in an environment of affordability concerns. Our entire strategy is about slowly transitioning to pricing arrangements which support a decarbonised economy with decentralised generation. We are looking to slowly restructure our pricing arrangements to prepare for an environment of two way energy flows and, when technology allows, to implement new pricing in the form of demand and capacity charging. This will support demand response and distributed generation.
	Customers generally do not support regional pricing or more cost reflective prices for customers with smart metering even though these proposals may yield economic benefits over the longer term.	We are not proposing to introduce these economic reforms in the next regulatory control period. This will enable us to undertake additional research over the next few years to better understand the customer acceptance issues. We want to deliver more sophisticated network pricing solutions, so we can work with customers and stakeholders and put forward better-designed options for discussion.
Stakeholders	Retailers were generally comfortable with shifting customers onto time of use (TOU) network prices once they had access to the necessary metering technology. However, retailers were concerned that this approach could confuse customers if their prices changed when receiving a new meter and again on 1 July with general price changes. Retailers were also concerned this approach may make it difficult to proactively roll out smart meters.	Our goal of supporting the transition to a lower carbon economy, and doing so conscious of affordability pressures, relies on the transition from dumb to smart meters. Providing customers with smart meters will enable the wide-spread introduction of price structures more suited to the energy ecosystem of the future. Therefore we want to support the efforts of retailers to roll out smart meters, so we will be considering a proposal by retailers to delay any tariff change resulting from the installation of a new meter for existing customers until 1 July each year.
	Retailers were concerned with the complexity of the proposed transitional pricing arrangements, including the safeguard prices. The greater the number of pricing arrangements, the more difficult it is for retailers to manage within their billing systems.	We understand that overly complex tariffs are difficult for retailers to manage. We will work with retailers and the AER to identify simpler ways to provide an appropriate transition for our most affected and vulnerable customers, such as through a rebate.

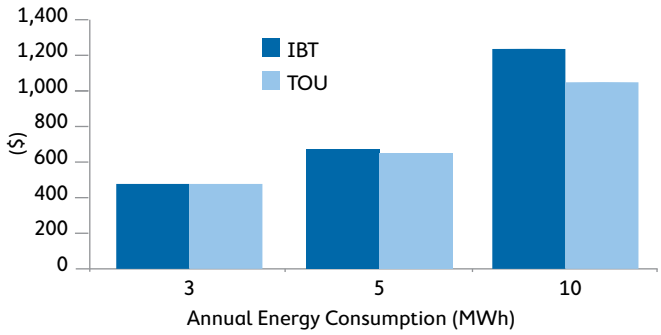
Our proposal is to apply seasonal Time of Use (TOU) pricing for all new customers and existing customers that need to replace their basic accumulation meter. This form of pricing better reflects the higher costs of running our networks on hot summer days and cold winter evenings.

Most customers will save under TOU prices particularly if they can reduce their peak usage (see graph below).

We also propose replacing our current flat prices with an Inclining Block Tariff (IBT). Under the IBT, the prices increase as customers consume more electricity based on blocks of consumption.

Potential network bill savings under a TOU pricing compared to IBT in FY24

The IBT results in larger energy users saving more under TOU, given that they typically have better than average load profiles, which will encourage a higher TOU take-up.



Source: Ausgrid analysis

PHASING OUT SHOULDER AND OFF-PEAK ENERGY PRICES

Residential customers on TOU pricing currently face three different charges depending on the time of day at which they are using electricity - peak, shoulder and off-peak. However, our stakeholders are concerned that three pricing tiers are unnecessarily complex.

To address this concern, we propose improving the design of our seasonal TOU pricing by gradually reducing the shoulder/ off-peak charges to zero. This change will appropriately reward our customers for using the network outside peak times, when there is little cost to do so.

INTRODUCING DEMAND CHARGES FOR HIGH USE RESIDENTIAL AND SMALL BUSINESS CUSTOMERS

We also propose assigning our high electricity use customers (between 15 and 40 MWh each year) to seasonal TOU demand pricing that gives them a stronger incentive to reduce their network usage during peak times. This form of pricing includes a demand charge applied to the maximum amount of electricity a customer uses during the peak period. To minimise the customer impacts, we propose to transition the demand charge to cost-reflective levels over time.

This proposed strategy should be considered in the context of our long-term vision that demand pricing should be applied to all residential and small business customers. To achieve this vision, we will need to address customer acceptance concerns surrounding demand pricing through education and better design. It should also be noted that the widespread introduction of demand pricing is dependent on the roll out of smart meters.

INCREASING THE NUMBER OF LARGE BUSINESS CUSTOMERS ON LOCATIONAL NETWORK PRICES

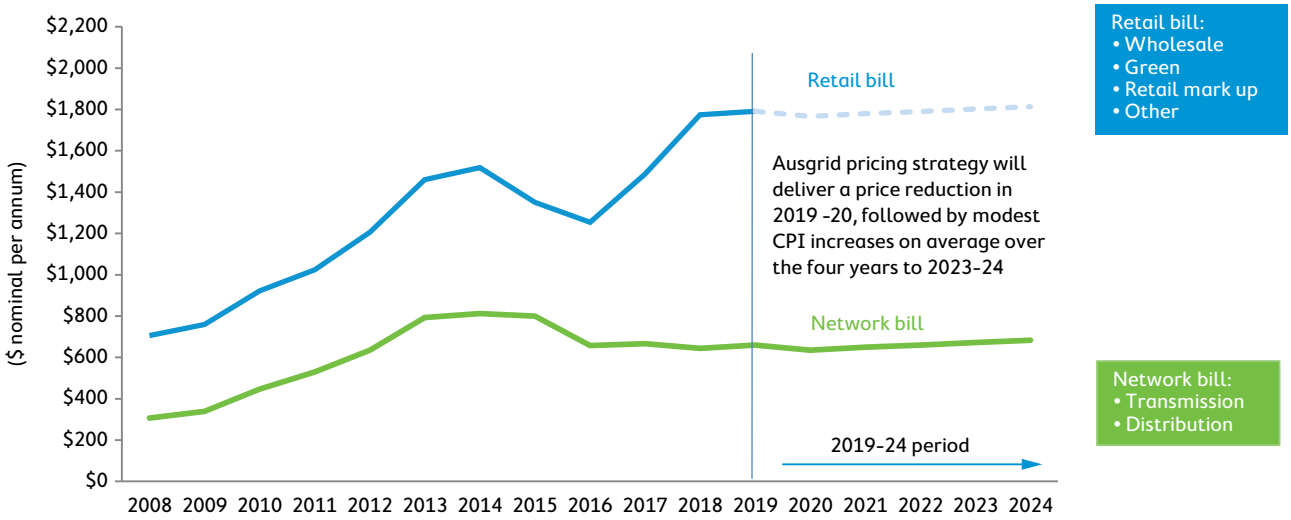
We propose giving more large business customers incentives to consider their impact on our network costs when making decisions to connect to our electricity network or alter their existing connection characteristics. To achieve this outcome we propose to relax the eligibility criteria from 40 GWh pa to 20 GWh pa to be assigned to a pricing arrangement that preserves the locational component of the Transgrid transmission price signal.

To minimise the customer impact, we propose only applying this new criteria to new large customers or existing customers that change their connection characteristics. Most existing large customers will not be impacted by this proposal, unless they choose to voluntarily apply to be re-assigned to a new locational network price structures.

INCREASING CONNECTION CHARGES

We propose increasing the fixed connection charge component of our network prices, relative to the variable component. This will better reflect the costs associated with providing network services and ensure that customers that choose to both import from and export to our grid will pay their fair share of the cost of providing network services. Our customer research revealed a high degree of acceptance of higher connection charges, as long as there are adequate safeguards in place for low energy users and vulnerable customers who would be impacted most by these charges. Our modelling indicates we can increase the proportion of connection charges without significantly impacting the overall bill for residential and small business customers.

Annual network and retail bill outcomes for a typical Ausgrid residential customer using 5 MWh pa



Source: Ausgrid analysis

The above calculation is based on actual published retail price of EnergyAustralia up to 2018 and network prices of Ausgrid and represents the total bill for an average non TOU residential customer. This type of customer is considered to be representative as (a) 1.2 million of Ausgrid's customers are on non-TOU tariff and (b) an average customer would consume about 5 MWh per annum. We have assumed the difference between the final retail bill and the network bill will stay constant in nominal terms from 2018 onwards although this is unlikely to hold true in reality.

Transitional pricing arrangements for small energy users and vulnerable customers

To ensure that existing smaller customers who consume less than 2 MWh pa do not receive significant higher charges during the transition towards cost reflective prices, we are proposing to introduce additional transitional pricing arrangements for certain vulnerable low energy users. The transition period for the fixed connection charge for this tariff will be even longer – about 10 years.

YOUR FEEDBACK:
Tell us what you think about our proposed prices

- Our research to date suggests customers can accept an increase in the fixed connection charge component, as long as it is offset by a lower variable component of the tariff. Do you agree?
- Do you have any other insights and/or evidence that either support/question our findings?
- Do you think demand charges should be extended to lower use customers? Why and to what level of usage?
- Do you support our approach to protect low use energy customers and vulnerable customers from bill shocks under our strategy?

Revenue and impact on bills

We are committed to keeping customer network costs flat or declining in real terms over the 2019-24 period.

This is possible because of the significant reforms we have implemented to reduce our underlying cost base by 19% since 2013.

Overall, Ausgrid's pricing strategy will deliver a price reduction in 2019-20 followed by CPI increases on average over the four years to 2023-24.

The revenues we forecast we will need over 2019-24 are calculated using the AER's 'building block' model. This model converts the underlying capex, opex and rate of return components of our proposal into an estimate of the revenues we need to earn to cover the efficient costs of managing the electricity grid.

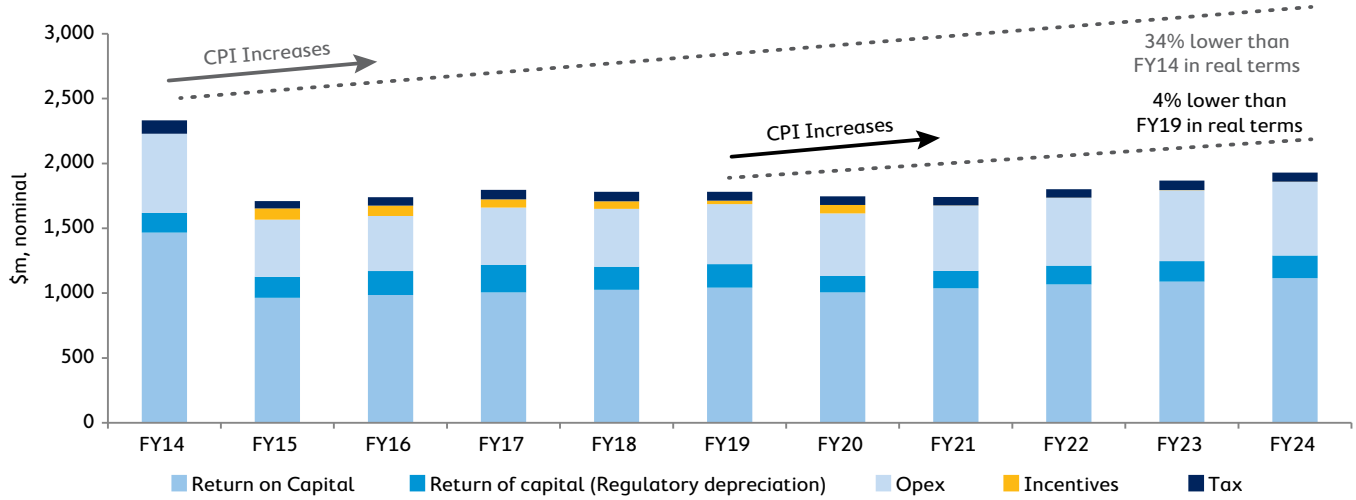
The key components of this building block model are:

- Return on capital – our efficient cost of finance
- Return of capital – recovering the initial cost of capital investments (analogous to repaying the principal on a loan)
- Opex – the costs of operating and maintaining the network including corporate support
- Tax – The cost of meeting tax liabilities
- Incentives – payments/penalties under the AER's service standards, capex and opex efficiency schemes.

The figure on page 33 provides a graphical representation of how the building blocks model operates to determine allowed revenues and prices.

Ausgrid's building block revenues by component ($m, nominal)

The following chart indicates $1b reduction in building block revenues of in real terms since 2013-14.
Building Block revenues are projected to be 34% lower in FY24 than if we had let costs increase along with inflation since 2013-14.



Source: Ausgrid analysis

There was a significant reduction to the operating costs we were allowed to recover from 2014-15. This provided us with a significant challenge to reduce our underlying expenditure. Since that time, we have gradually reduced our underlying cost base to deliver lasting savings to our customers.

In addition, debt funding costs have declined since 2013-14. The reductions to underlying opex (and debt costs) mean that revenue has declined by 34% in real terms since 2013-14. This is highlighted in the graph above "Ausgrid's building block revenue by component".

Alternative Control Services

We offer customers a range of additional services on a 'user pay' basis.

These services are known as Alternative Control Services (ACS) and are regulated by the AER by setting the maximum price we can charge.

Our ACS proposal includes our proposed prices for metering, public lighting and non-routine (ancillary) services. Customers who use these services will pay a standalone fee separate from our general network charges for Standard Control Services (SCS). This is consistent with the existing approach of the current regulatory period.

Metering services

Our metering proposal has been developed in the context of the Power of Choice metering reforms which are facilitating a market-led rollout of advanced meters managed by retailers. Prior to the Power of Choice reforms Ausgrid was required to ensure that all customers had a working meter. To meet this regulatory obligation, we funded the capital cost of all our residential and small business customers' meters at the time of installation. We then recovered that initial outlay of capital via metering charges.

With the market-led rollout of advanced meters now underway this capital cost recovery process could potentially be disrupted by customers switching to an advanced metering service.

This risk was recognised in our 2014-19 determination. To address it, the AER developed – in consultation with stakeholders – a charging structure whereby customers who leave our metering service continue paying for the capital cost of their Ausgrid meter. These ongoing payments are to last until our metering asset base (MAB) is fully depreciated.

Our 2019-24 proposal applies this charging structure, which we agree with the AER is the most appropriate way to recover metering capital costs incurred in providing regulated metering services.

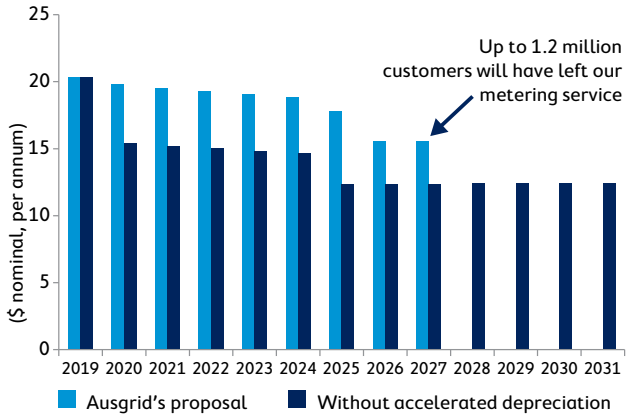
We, however, want to minimise its impact on customers.

In terms of these impacts, the charging structure could potentially lead to customers continuing to pay off the capital cost of an Ausgrid meter many years after they have switched to an advanced metering service managed by their retailer. To address this, we are proposing to accelerate the rate at which we recover our metering capital costs.

The price impact of our proposal is set out in the figure "Ongoing annual metering charges for inclining block pricing customers". It shows that under a non-accelerated rate of capital cost recovery customers would be required to continue paying an ongoing metering charge, even if they do not have an Ausgrid meter installed, until 2030-31 (when our Metering Asset Base (MAB) is fully depreciated). By contrast, our proposal to accelerate the rate of our current rate of capital cost recovery would shorten this to FY2026-27.

Ongoing annual metering charges for inclining block pricing customers

Customers who leave our metering service will stop paying all Ausgrid metering fees four years earlier under our proposal to accelerate depreciation of our MAB.



Source: Ausgrid analysis

In total, we expect that for up to 1.2 million customers the period between when they leave our regulated metering service and when they stop paying all ongoing Ausgrid metering fees will be shortened by four years.

Public lighting

Public lighting is undergoing a major transformation. In developing our proposal, we listened to local Councils' views on technological developments and their eagerness to take up innovations in advanced public lighting solutions.

Consistent with their views, we have started replacing older, less energy efficient luminaires with Light Emitting Diodes (LED). The LED rollout is set to expand in the 2019-24 period and will cover nearly 125,000 street lights by the end of the next regulatory period. Of these, about 60,000 will be replaced in 2017-18 and 2018-19.

We will also begin implementing Public Lighting smart controls. This technology has the capability to increase maintenance efficiency as well as provide Councils with a backbone for smart cities. There are broad benefits associated with our mass rollout of LED lights. Their greater energy efficiency will deliver a more sustainable public lighting service with a lower carbon footprint. Customers who take up LEDs will also benefit from cost savings. This is in the form of lower energy bills and, due to an increase in reliability compared to older technologies, and a reduction in public lighting maintenance charges.

Ancillary network services

The AER defines Ancillary Network Services as non-routine services provided to individual customers on request, such as providing design-related information for connections to our network, special meter reads and site establishment fees.

Hourly labour rate for ancillary network services

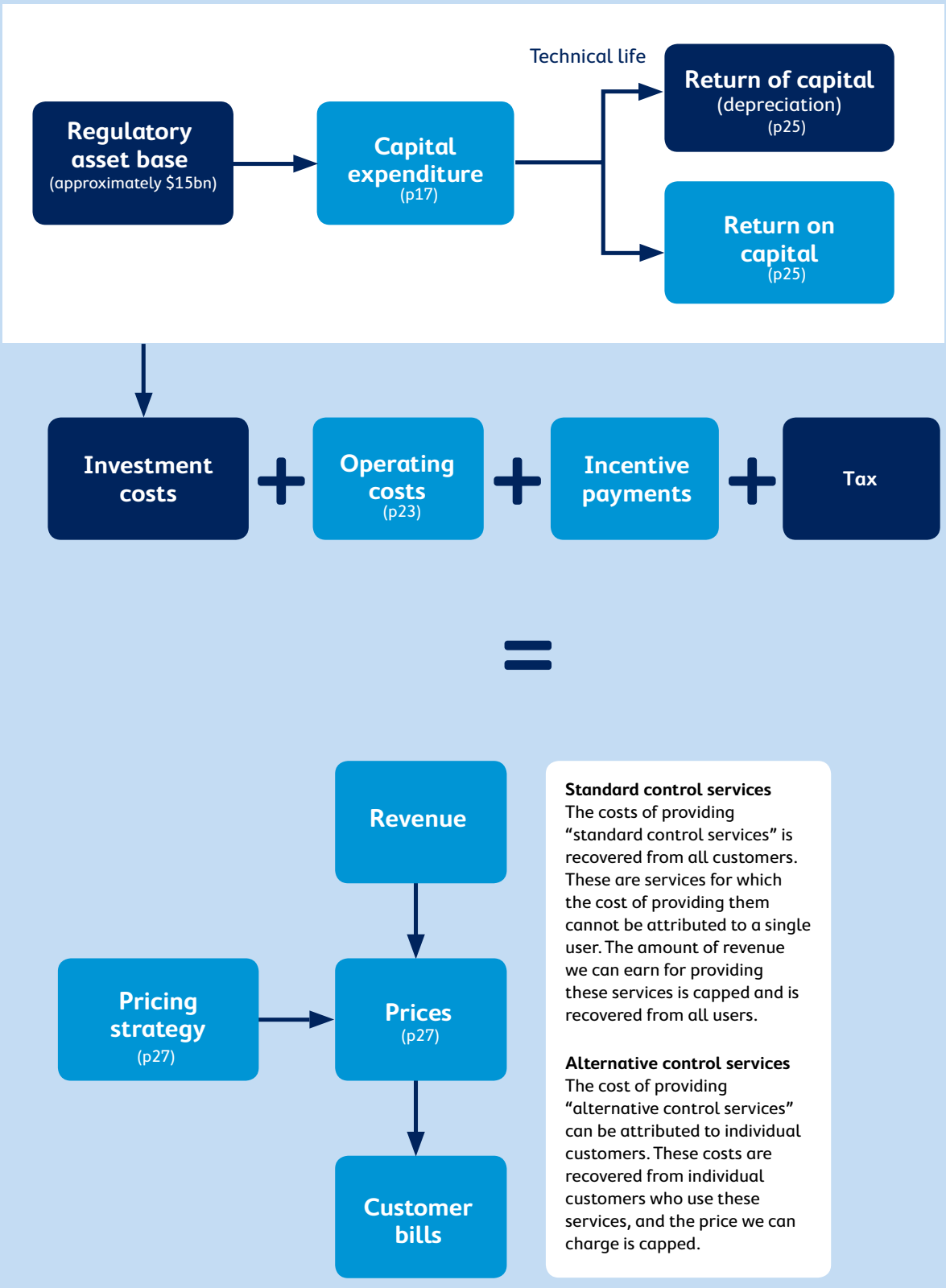
	Hourly labour rate ($, real FY19)
Administrative	148.72
Technical specialist	196.90
Engineer/Senior engineering officer	189.41
Field worker	150.67
Senior engineer	263.18

Labour is the key input into our ancillary network service proposal. For the forthcoming regulatory period, we propose applying the benchmark efficient labour rates the AER last approved for Ausgrid (adjusted for inflation and labour escalation).

YOUR FEEDBACK:
Tell us what you think of our proposed alternative control services

- Do you agree that our approach to recovering the cost of our legacy metering assets is in the long-term interests of customers?
- Ausgrid is reviewing its charges for the maintenance of street lighting assets. Currently some assets with lower maintenance requirements are subsidising others. Ausgrid proposes removing the cross subsidy, which will increase the charges for older lamp types but decrease charges for newer types such as LED's. Do you support this approach?

Key components of our proposal and how they fit together



Standard control services
The costs of providing "standard control services" is recovered from all customers. These are services for which the cost of providing them cannot be attributed to a single user. The amount of revenue we can earn for providing these services is capped and is recovered from all users.

Alternative control services
The cost of providing "alternative control services" can be attributed to individual customers. These costs are recovered from individual customers who use these services, and the price we can charge is capped.

05 Next steps

Please send us your feedback

You can provide feedback to us by:

- Emailing us at yoursay@ausgrid.com.au

Note: Formal submissions close on **27 February 2018.**

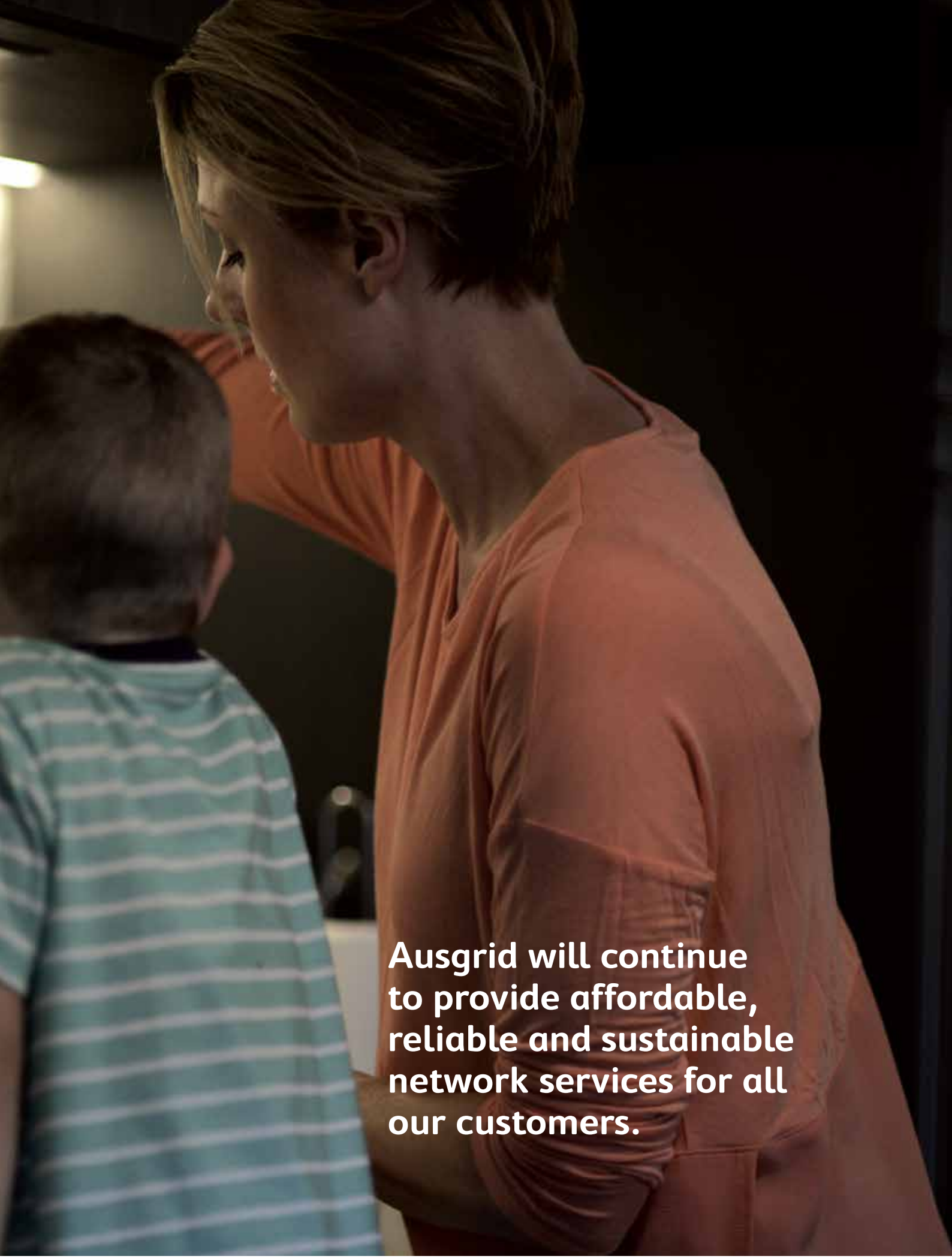
How your feedback will be considered

Feedback provided in response to this Stakeholder Consultation Document will be used to help inform our final Regulatory Proposal.

All feedback will be presented to, and considered by, our Executive Leadership Team as they finalise our investment decisions. We will also explain how your feedback was taken into account in our final proposal.

06 Glossary

ACS	Alternative Control Services
ADMS	Advanced Distribution Management System
AER	Australian Energy Regulator
CALD	Culturally and Linguistically Diverse
capex	Capital Expenditure
COTA	Council on the Aging NSW
CCC	Customer Consultative Committee
DER	Distributed Energy Resource
ENA Legislation	Electricity Network Assets Act 2015
EBA	Enterprise Bargaining Agreement
GWh	Gigawatt hours
IBT	Inclining Block Tariff
LED	Light Emitting Diode
LSC	Life Support Customer
MAB	Metering Asset Base
MWh	Megawatt hours
NEM	National Electricity Market
NCOSS	NSW Council of Social Services
opex	Operating Expenditure
RWG	Reset Working Group
STPIS	Service Target Performance Incentive Scheme
SSROC	Southern Sydney Regional Organisation of Councils
SCS	Standard Control Services
TOU	Time of Use
UDIA	Urban Development Institute of Australia
WACC	Weighted Average Cost of Capital


Ausgrid will continue to provide affordable, reliable and sustainable network services for all our customers.


Ausgrid