ActewAGL Distribution
2014-19 Regulatory Proposal

AER public forum

Wednesday 30 July 2014

ActewAGL for you

Stephen Devlin

General Manager, Asset Management

- Key messages
- Our operating environment

Today's presentation

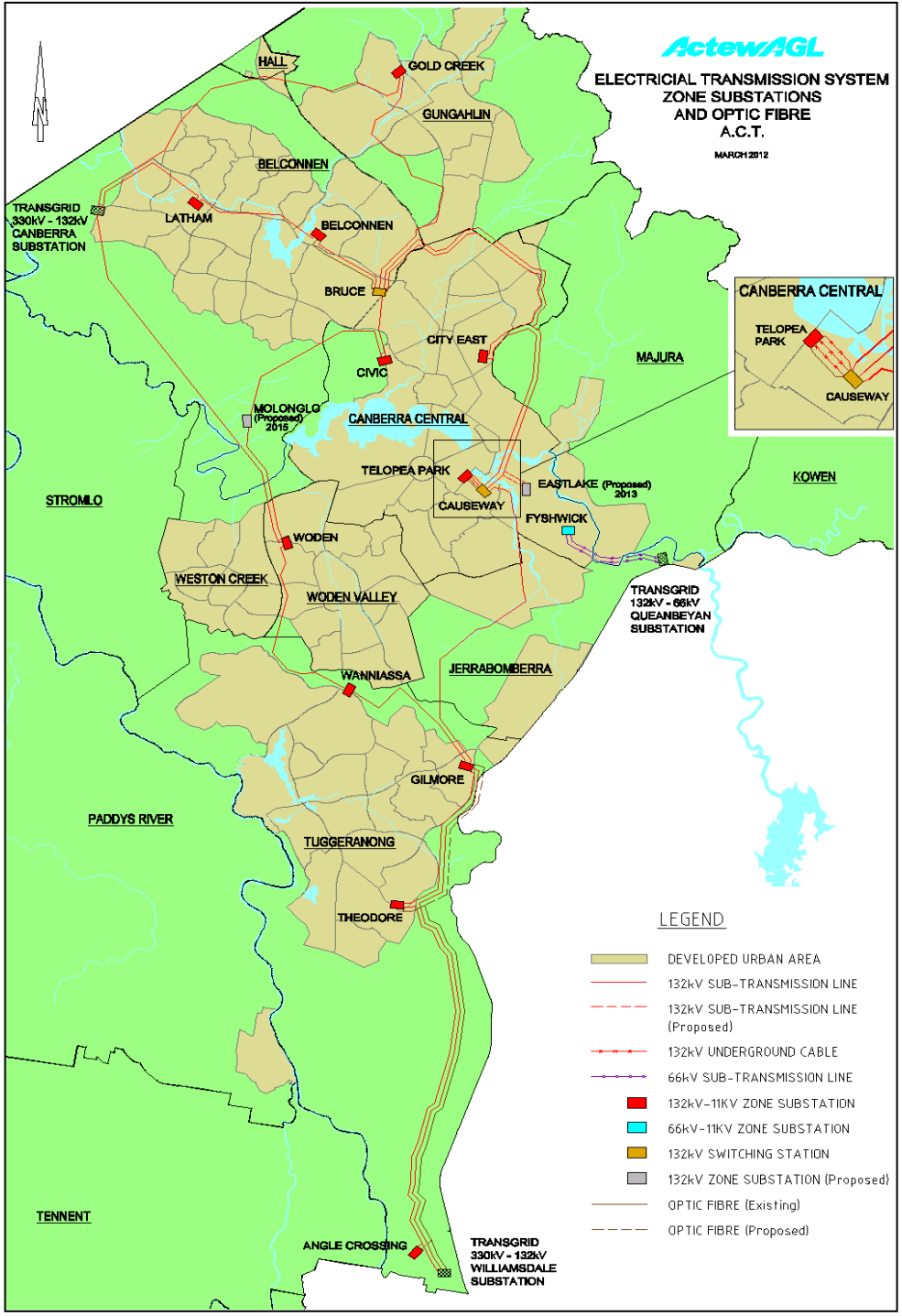
- Introduction to ActewAGL
  - Who we are
  - Our network
  - Our performance – low price and high reliability
  - Our priorities
- Our 2014-19 Regulatory Proposal
  - Capital expenditure program
  - Demand management
  - Operating expenditure
  - Customer impacts
- Engaging our consumers

Our key messages

1. Our electricity prices are the lowest in Australia
2. Our network costs continue to be the lowest in Australia
3. Our network reliability is amongst the best in Australia
4. Our customers are satisfied with our performance
5. Our 2014-19 Regulatory Proposal represents prudent investment to maintain this situation and tackles emerging challenges facing all electricity distribution businesses

Introduction to ActewAGL

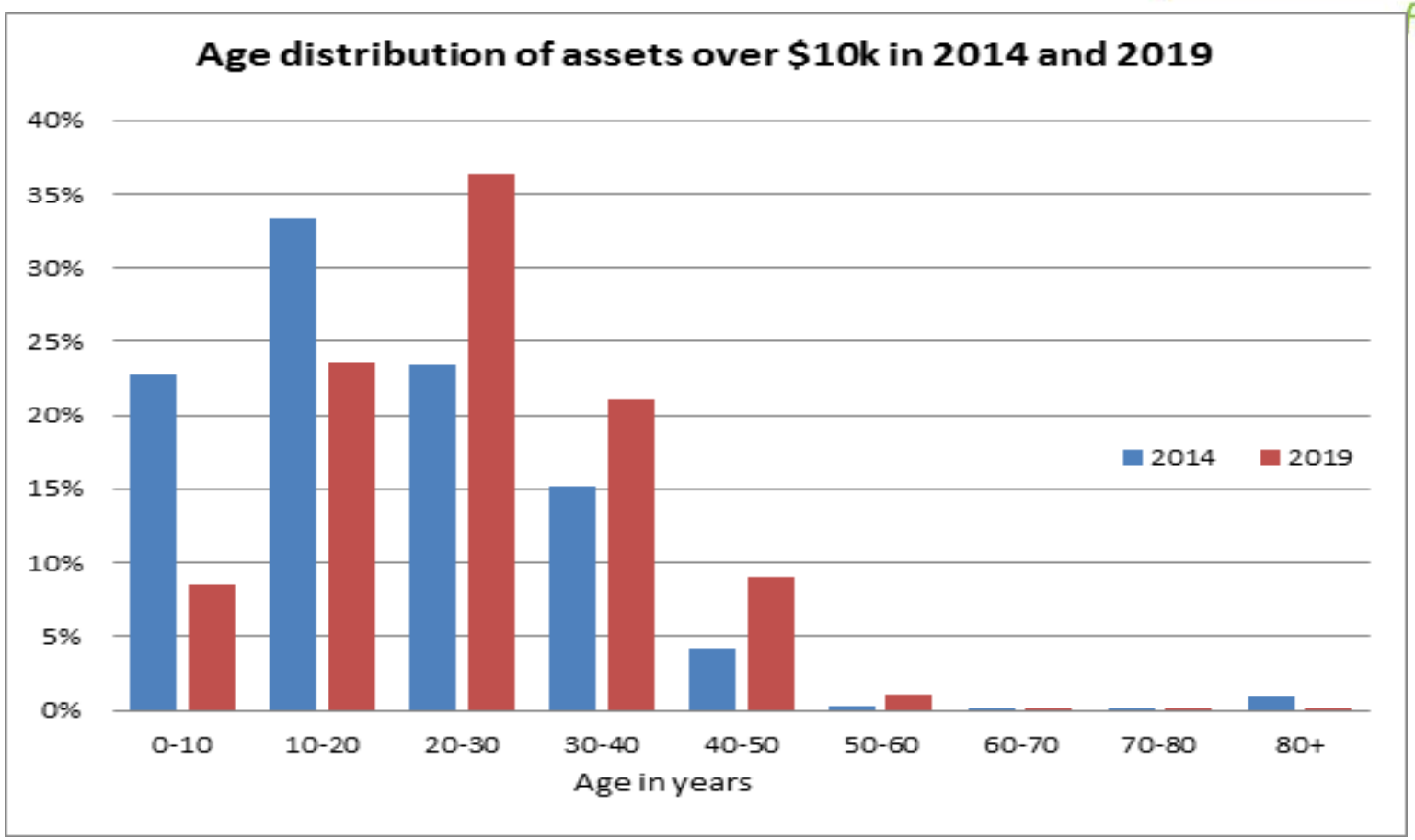
- ActewAGL joint venture the first multi-utility in Australia operating as a public-private partnership
- Two partnerships:
  - **ActewAGL Distribution**
  - ActewAGL Retail
- ActewAGL Distribution partnership equally owned by Jemena and ACTEW Corporation
- The regulatory proposal presented today is for ActewAGL Distribution's **electricity distribution network**


ActewAGL
ELECTRICIAL TRANSMISSION SYSTEM
ZONE SUBSTATIONS
AND OPTIC FIBRE
A.C.T.
MARCH 2012
HALL
GOLD CREEK
GUNGAHLIN
BELCONNEN
TRANSGRID
330kV - 132kV
CANBERRA
SUBSTATION
LATHAM
BELCONNEN
BRUCE
CITY EAST
CIVIC
MAJURA
CANBERRA CENTRAL
TELOPEA
PARK
CAUSEWAY
MOLONGLO
(Proposed)
2015
CANBERRA CENTRAL
TELOPEA PARK
CAUSEWAY
EASTLAKE (Proposed)
2013
FYSHWICK
KOWEN
STROMLO
WODEN
WESTON CREEK
WODEN VALLEY
TRANSGRID
132kV - 66kV
QUEANBEYAN
SUBSTATION
WANNIASSA
JERRABOMBERRA
GILMORE
PADDYS RIVER
TUGGERANONG
THEODORE
TENNENT
ANGLE CROSSING
TRANSGRID
330kV - 132kV
WILLIAMSDALE
SUBSTATION
LEGEND
DEVELOPED URBAN AREA
132kV SUB-TRANSMISSION LINE
132kV SUB-TRANSMISSION LINE (Proposed)
132kV UNDERGROUND CABLE
66kV SUB-TRANSMISSION LINE
132kV-11KV ZONE SUBSTATION
66kV-11KV ZONE SUBSTATION
132kV SWITCHING STATION
132kV ZONE SUBSTATION (Proposed)
OPTIC FIBRE (Existing)
OPTIC FIBRE (Proposed)

ActewAGL Network Statistics

- 2,358 km^2 covered
- Around 180,000 households and businesses connected
- Overhead lines spanning 3100km
- Underground cables spanning 4400km
- 53,000 power poles
- 14 zone substations
- Over 4,400 distribution substations
- Operating voltages of 132/66/22/11kilovolts and 415/240 volts
- Total weighted average system age of 26.3 years

Asset age profile



- Most of our significant assets are poles, cables and substations.
- We have a few very high value items in our zone substations, but their number is so small as to not materially effect the outcome of the overall age distribution.

National capital implications

- Two planning authorities – ACT Planning and Land Authority and National Capital Authority
  - Designated commercial and residential areas - limited mixed development
  - Restrictions on location of substations
  - “Bush capital” – relatively high concentration of urban vegetation
- Strategic facilities require high level of supply security – e.g. Parliament House, Defence

Backyard reticulation

- A distinctive feature of the ACT – has major implications for network performance and costs
- More planned outages are required for access to poles and lines in backyards
- Maintenance, inspection and vegetation management are all more difficult and costly when poles are in backyards.

Vegetation management

Rural aerial inspection
Inspection on Reid feeder for vegetation encroachment and asset defects

Vegetation management

Urban backyard aerial inspection

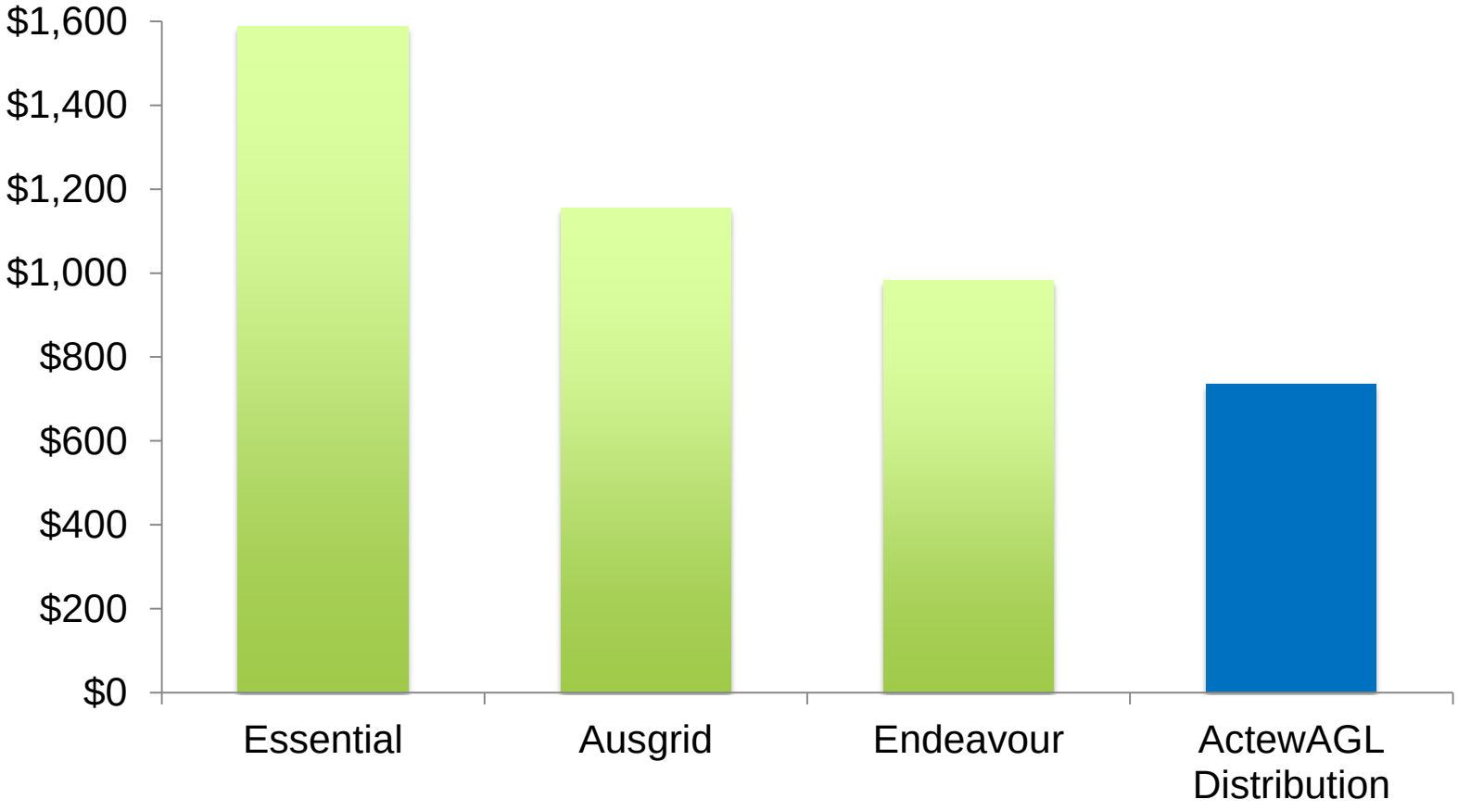
Crossarm defect detected through aerial inspection

Urban aerial inspection

Vegetation growing into power lines

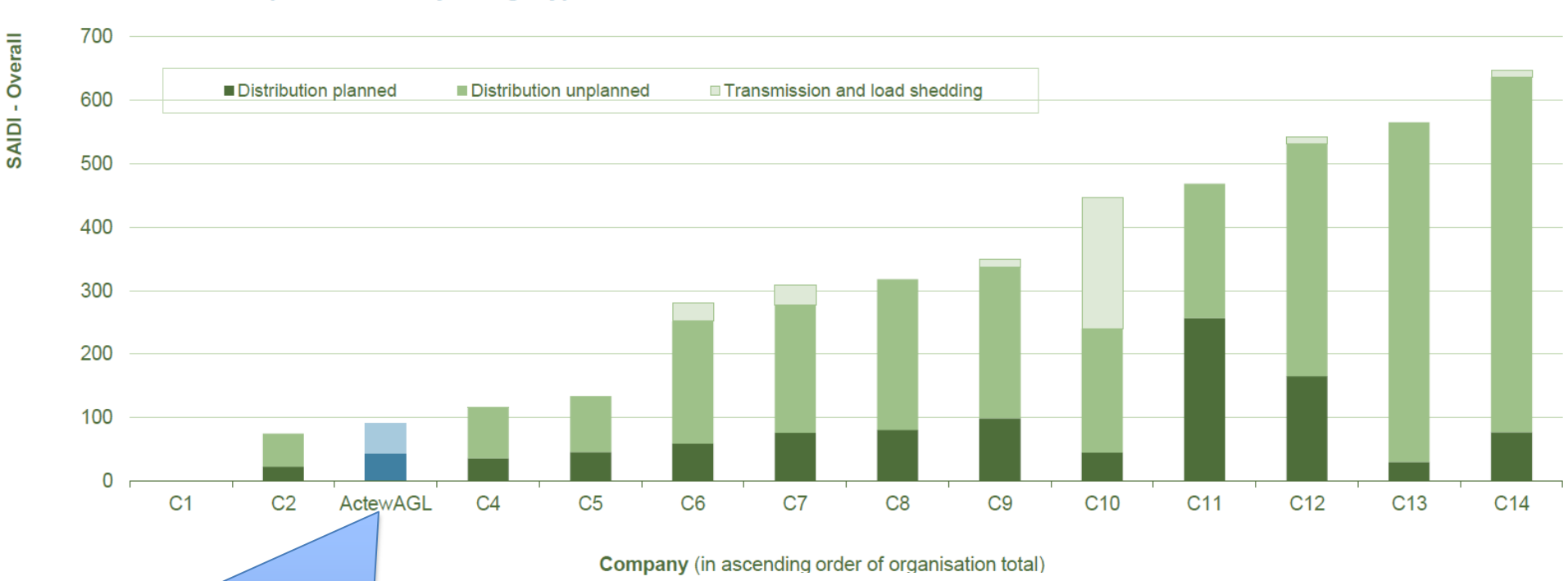
ActewAGL Distribution cheaper than NSW

Comparison of residential network charges for customer consuming 7,000 kWh pa in 2014/15 (incl. GST)



High network reliability

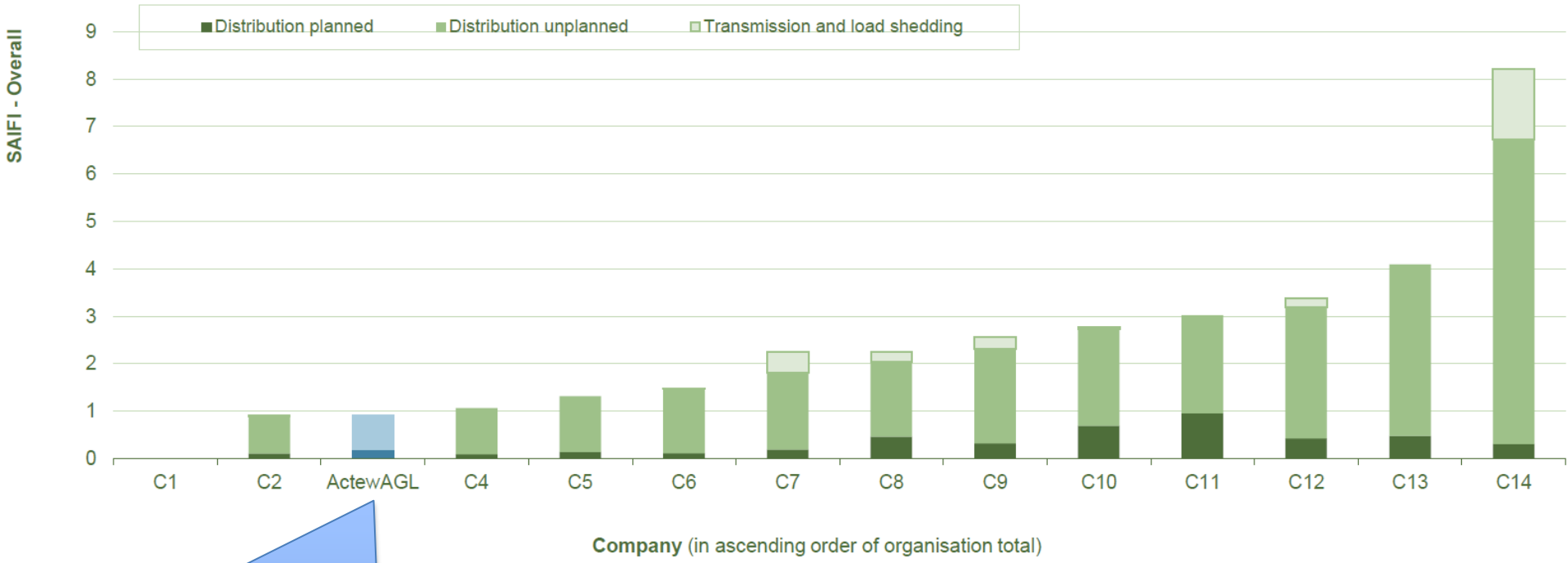
System Average Interruption **Duration** Index (SAIDI) performance 2012/13



ActewAGL Distribution's service has consistently been amongst the most reliable in Australia and is the most reliable in terms of unplanned interruptions

High network reliability

System Average Interruption **Frequency** Index (SAIFI) performance 2012/13



ActewAGL Distribution's service has consistently been amongst the most reliable in Australia and is the most reliable in terms of unplanned interruptions

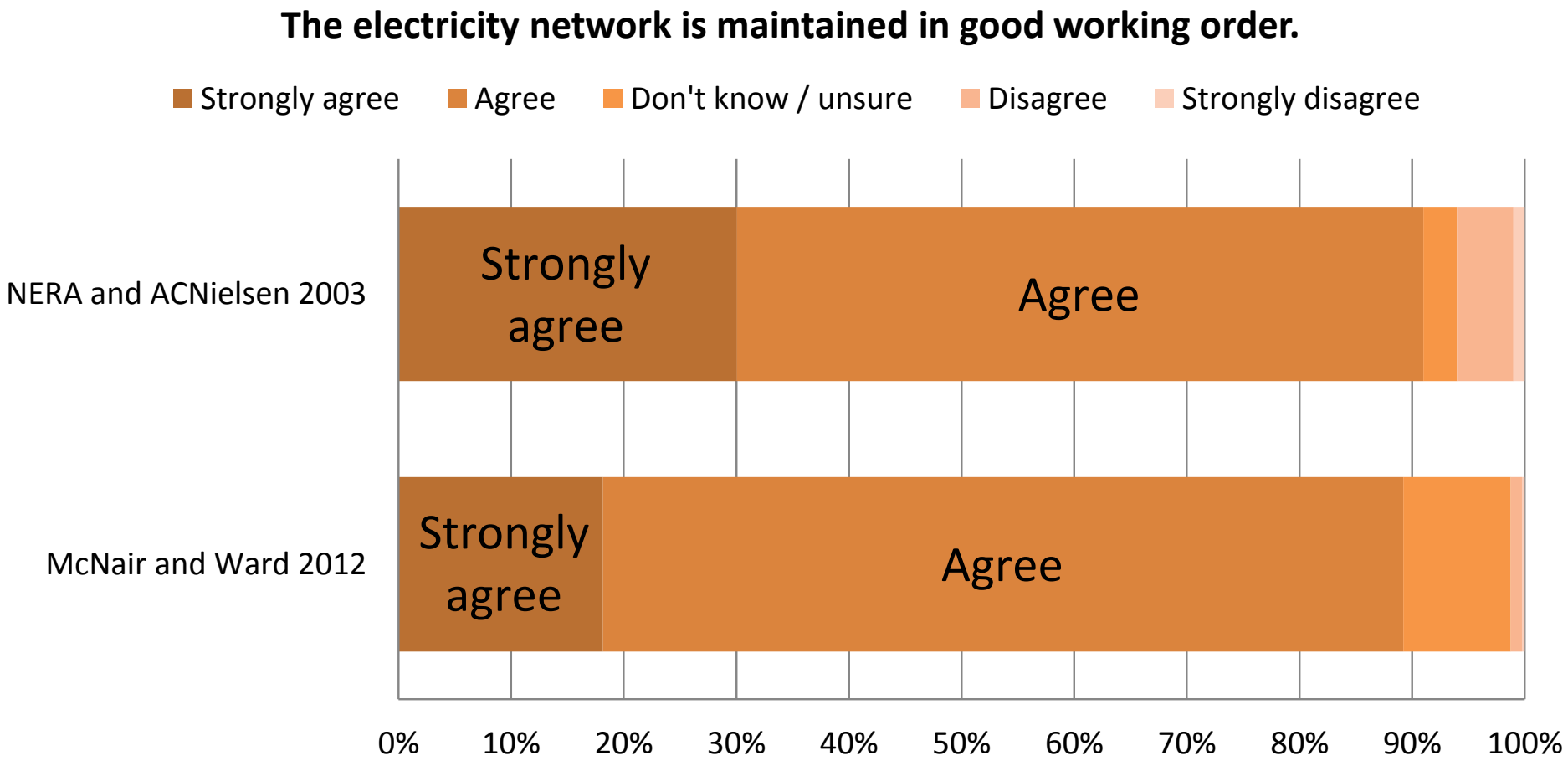
David Graham

Director, Regulatory Affairs and Pricing

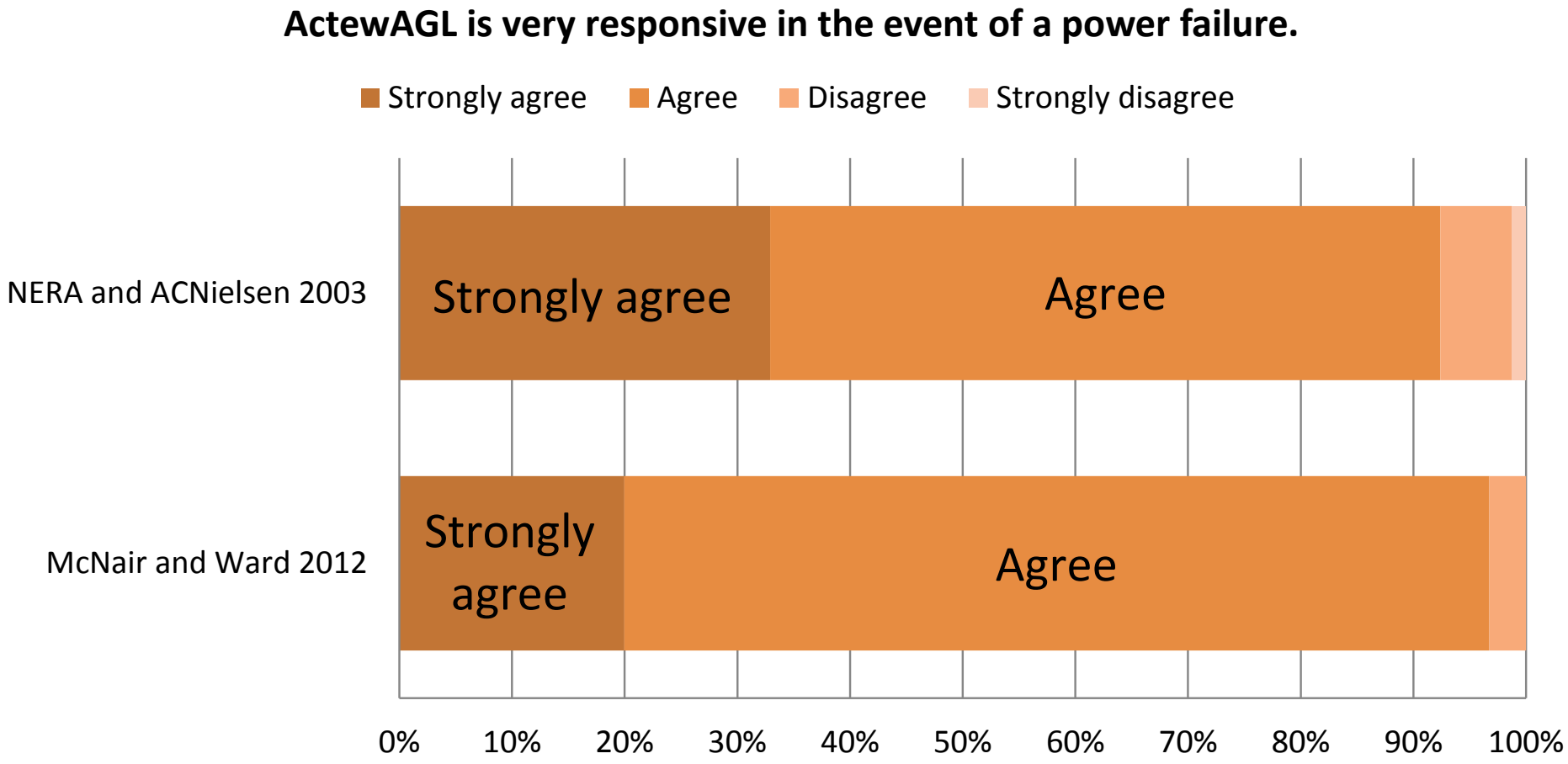
- Customer satisfaction
- Pricing

High level of satisfaction

High level of satisfaction



High level of satisfaction



Willingness to pay studies

NERA and ACNielsen in 2003

- Reliability and supply quality
- Residential and non-residential customers

Australian National University and University of Sydney in 2009

- Undergrounding
- Residential customers

Australian National University in 2011-12

- Reliability
- Residential customers

Choice modelling approach

	PACKAGE A	PACKAGE B
Number of times electricity is completely unavailable to your home:	4 times per year	1 time per year
Length of time that electricity is completely unavailable to your home each time that it goes out:	30 minutes	4 hours
Time of day that electricity is completely unavailable to your home each time that it goes out:	Mon-Fri sometime after 6pm	Mon-Fri sometime after midnight
Prior notification that electricity will be unavailable to your home:	1 day	Electricity unavailable due to emergency - no notification possible
Response to phone inquiries in the event of electricity becoming unavailable to your home:	You get straight through to a PERSON - you are not put on hold and there is no machine directing you to press buttons	Your call is answered by an AUTOMATIC VOICE - the voice gives you the option of hearing a recorded message that gives you an up-to-date status report on any electricity supply issues by suburb, or to speak to someone but you may be put on hold before a person answers
Total Electricity bill for the year:	**$810**	**$710**

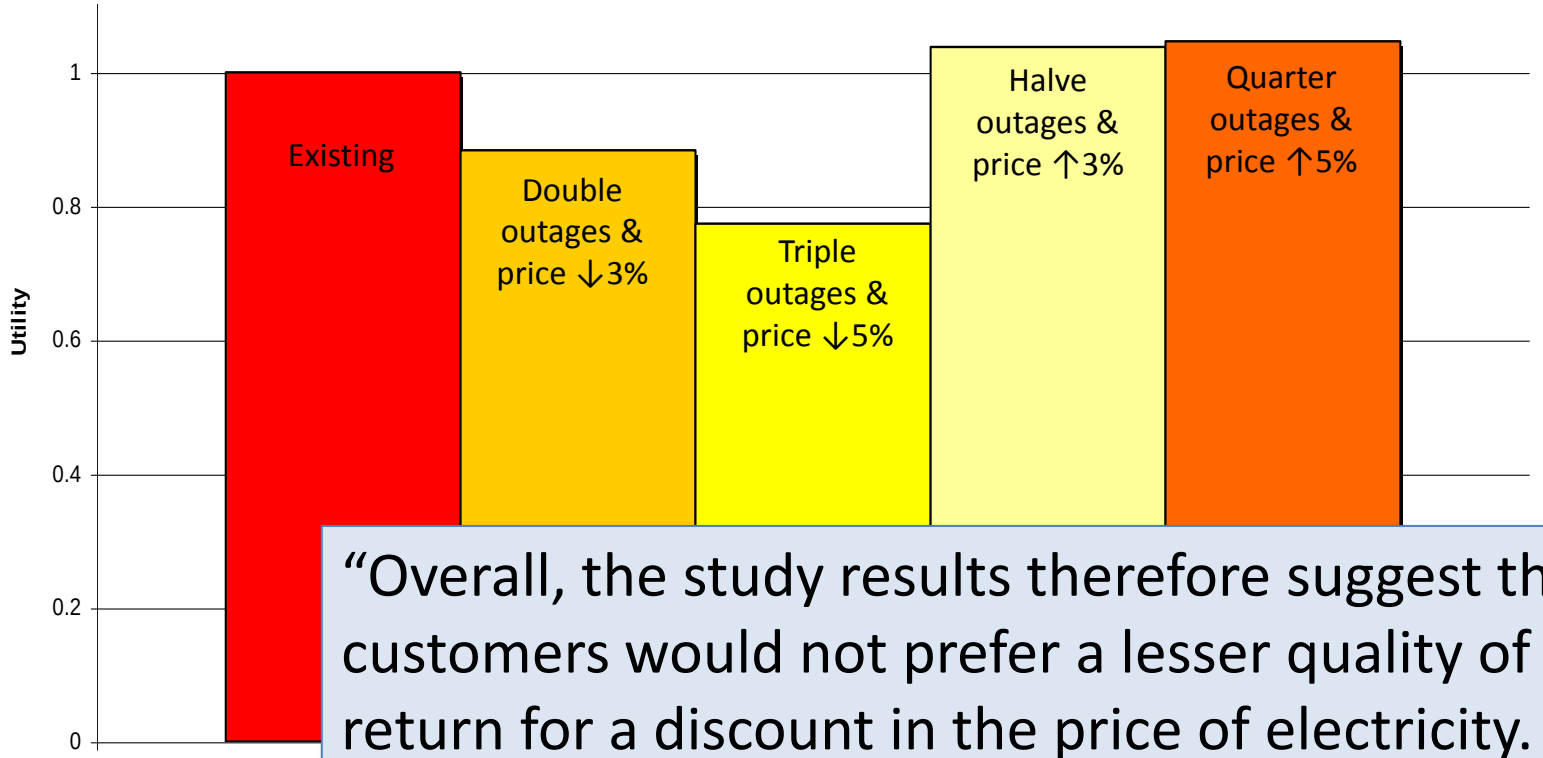
YOUR DECISION: If these were the only 2 options available to you, which option would you choose: Package A or Package B ?

Choice modelling has been adopted by AEMO for most customer segments of its national VCR study

Results overview

- Customers are willing to pay (or accept compensation) for changes in:
  - the number of interruptions
  - the duration of interruptions
  - the amount of advance notice given
  - the time of day interruptions occur
  - the number of voltage fluctuations
  - the time taken to speak to a human operator when making phone enquiries
- Non-residential customers tend to place a higher value on service changes than do residential customers

NERA 2003 conclusion on reliability levels

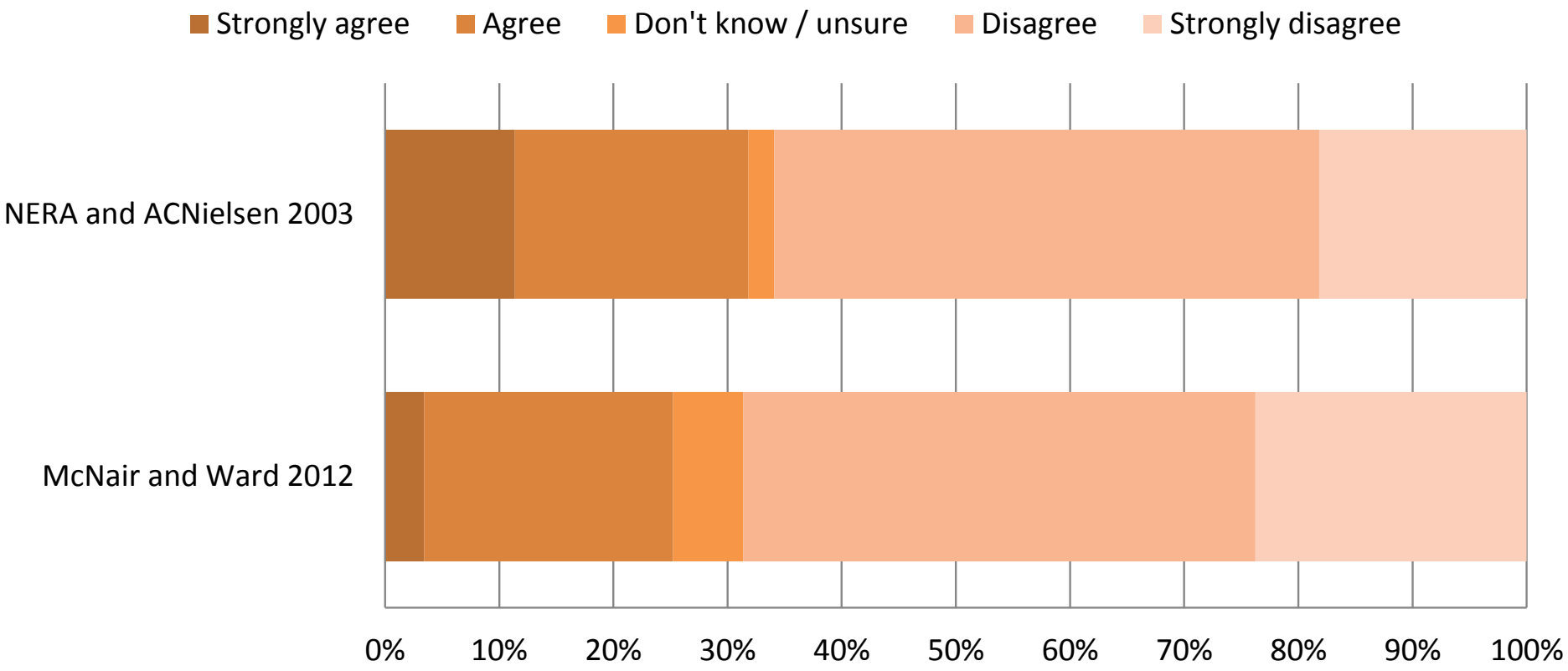


"Overall, the study results therefore suggest that customers would not prefer a lesser quality of service in return for a discount in the price of electricity. Customers… may indeed be willing to pay for higher levels of service."

Residential customers only.
The analysis assumes that the current frequency of interruptions is 1.2 a year, the average duration of an interruption is 1.5 hours.

Trees are a problem

Keeping trees/shrubs clear of electricity infrastructure is a problem for you.



Findings from undergrounding study

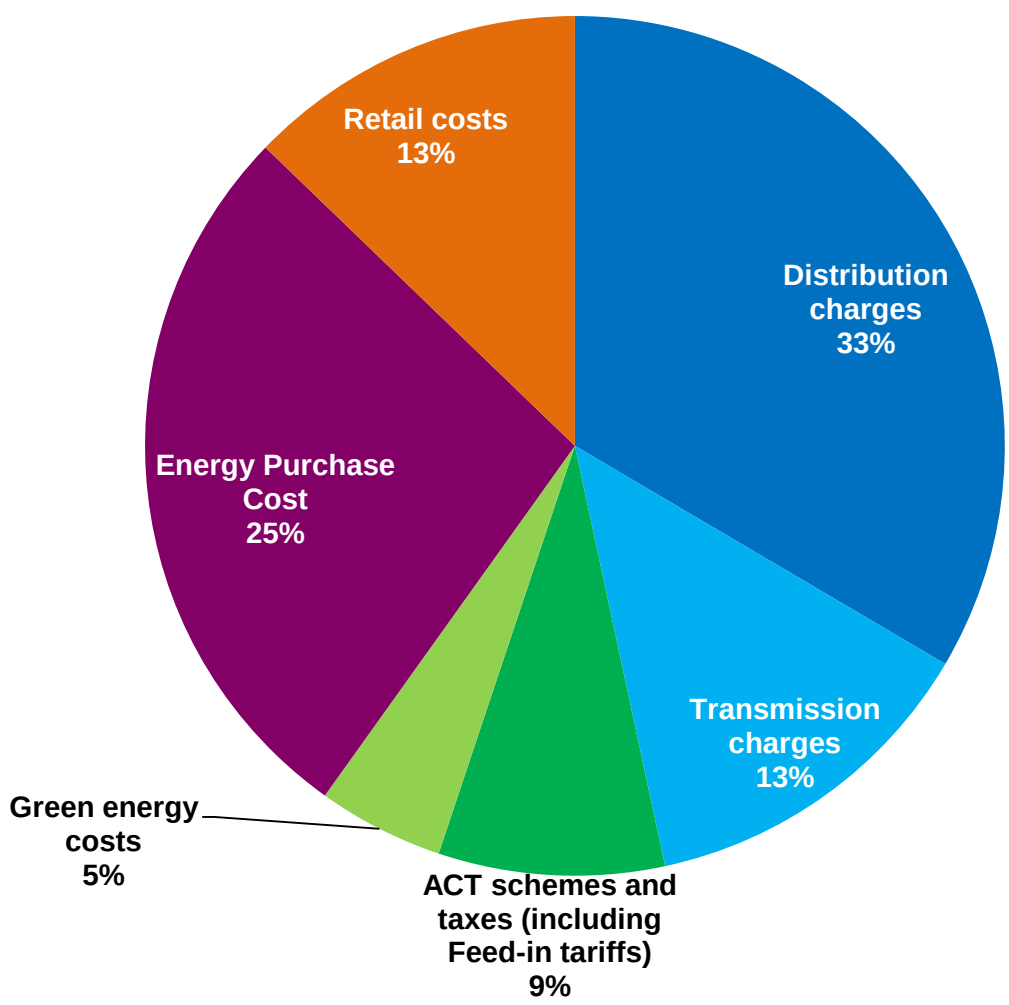
- Bundle of household benefits from undergrounding:
  - Safety
  - Improved appearance and views
  - Supply reliability
  - Reduced tree trimming requirements
  - Fewer restrictions on use of yard space
- Large variation in WTP across households
- There may be economic merit in undergrounding at least some suburbs

Our regulatory proposal

- Revenue requirement for 1 July 2014 to 30 June 2019
- Revenue requirement based on efficient cost ‘building blocks’ including:
  - forecast operating expenditure
  - a return *on* capital investment (proposed rate of return of 8.99%)
  - depreciation (or ‘return *of* capital’)
  - our tax liability
- Revenue requirement covers network charges only

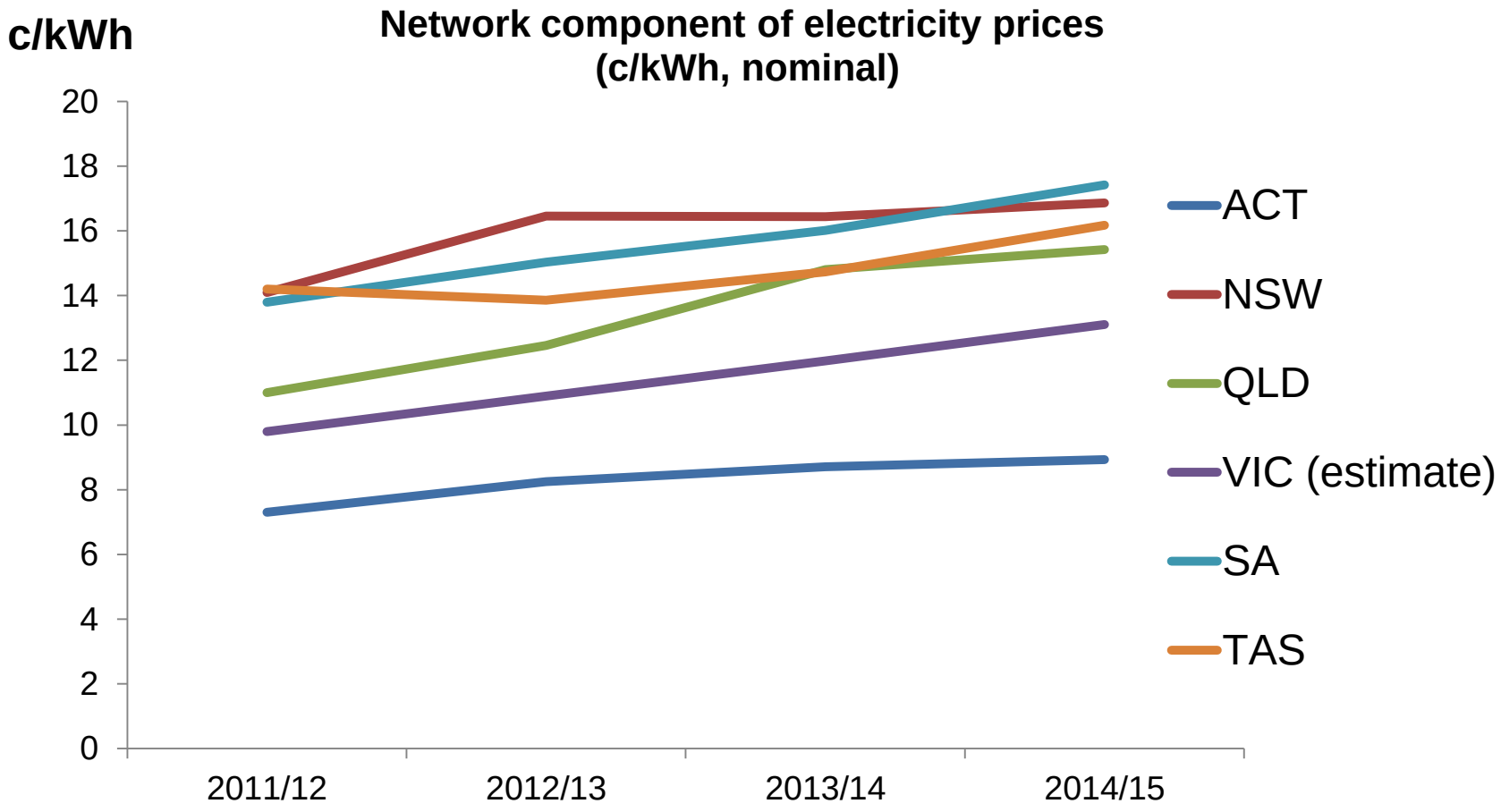
Price impacts

Components of a typical ACT electricity bill 2014/15



Total network charges (including jurisdictional schemes) make up 55% of your electricity bill

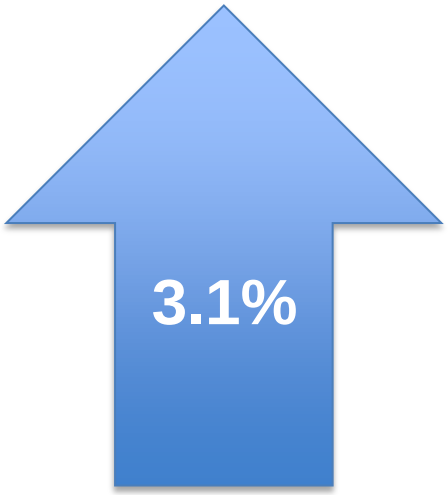
Lowest Network Prices in Australia



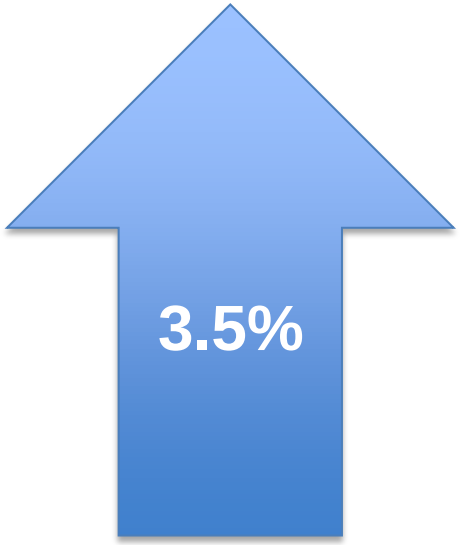
Source: AEMC Electricity price trends final report 22 March 2013
http://www.aemc.gov.au/media/docs/Fact-Pack---AEMC-Price-Trends-Report-53b9d522-662f-467e-bf8a-b74d69d696d7-0.PDF

Price impacts of our proposal

- On average in each of the four years of the 2015-19 period the annual retail bill will…



For residential customers using 5,000 kWh per year



For commercial customers using 20,000 kWh per year

Stephen Devlin

General Manager, Asset Management

- Capex
- Opex
- Consumer focus and engagement

ActewAGL and the ACT community

- We are the smallest DNSP in the National Electricity Market
- We take pride in being an organisation with a community focus
- We’re a major employer in the ACT and play a vital role in the community
- Long history of customer and community engagement

Our priorities

Guided by the National Electricity Objective

Safety performance

Safety remains our number 1 priority.

Customer service & productivity

We strive to deliver outstanding and innovative customer service, improve our understanding through engagement, and respond to our customers' needs.

Asset management philosophy & operating frameworks

We aim to operate a modernised, automated electricity distribution network so that customers get maximum value from our our assets.

Organisational capacity & capability

To meet current and future business needs we need to provide a rewarding and stimulating work environment to ensure we have a diverse, skilled and adaptable workforce.

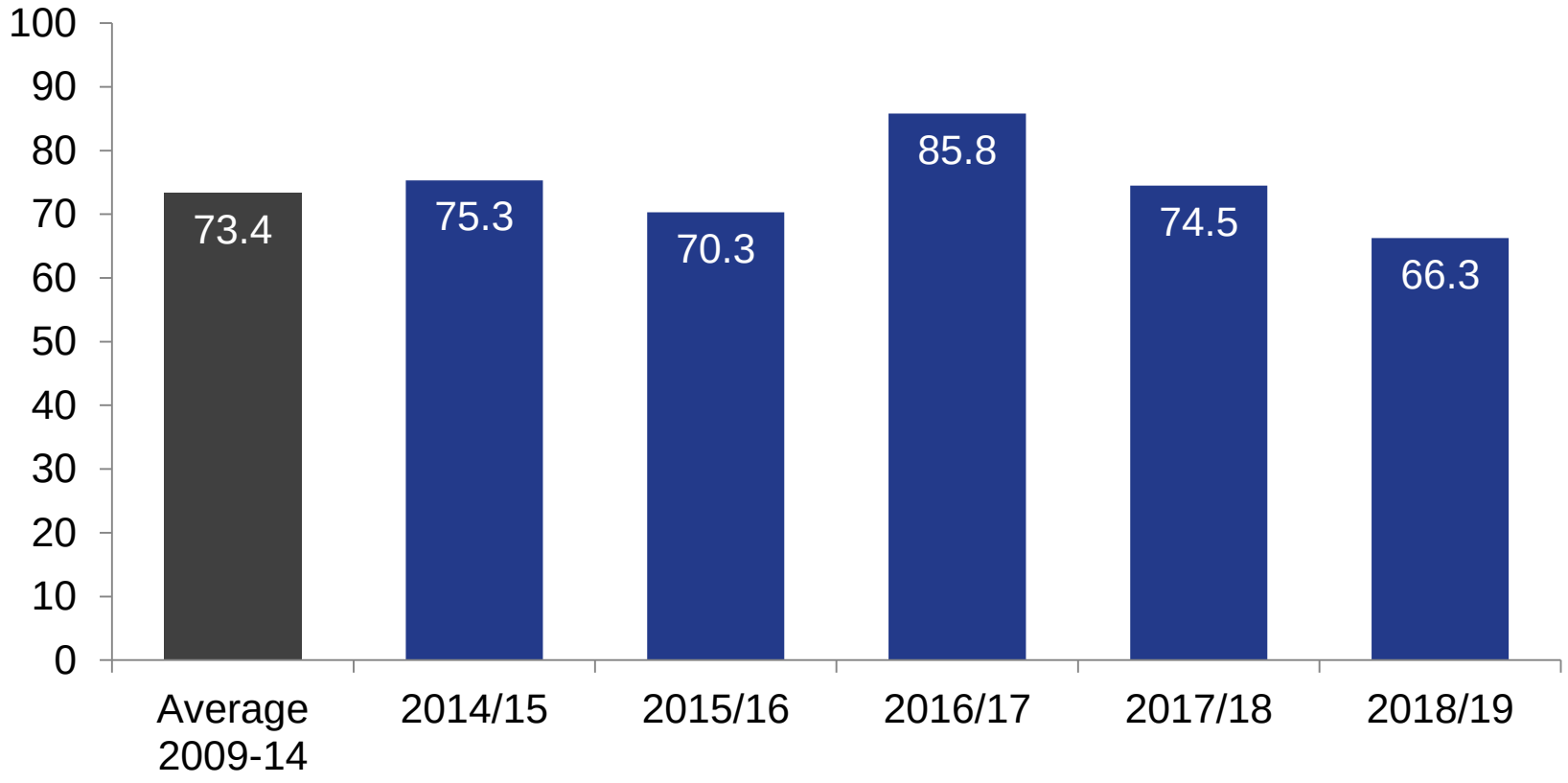
Capex Program – Customer benefits

Our capex program will serve the long term interests of consumers by:

- Ensuring the safety of the public and our staff and contractors
- Supporting urban development by meeting the electricity demand of new suburbs
- Improving the security of electricity supply to the ACT
- Continuing to meet reliability standards
- Reducing whole-of-life costs of essential assets
- Empowering consumers with better information and greater control over consumption and their electricity bills

Proposed capital expenditure 2014-19

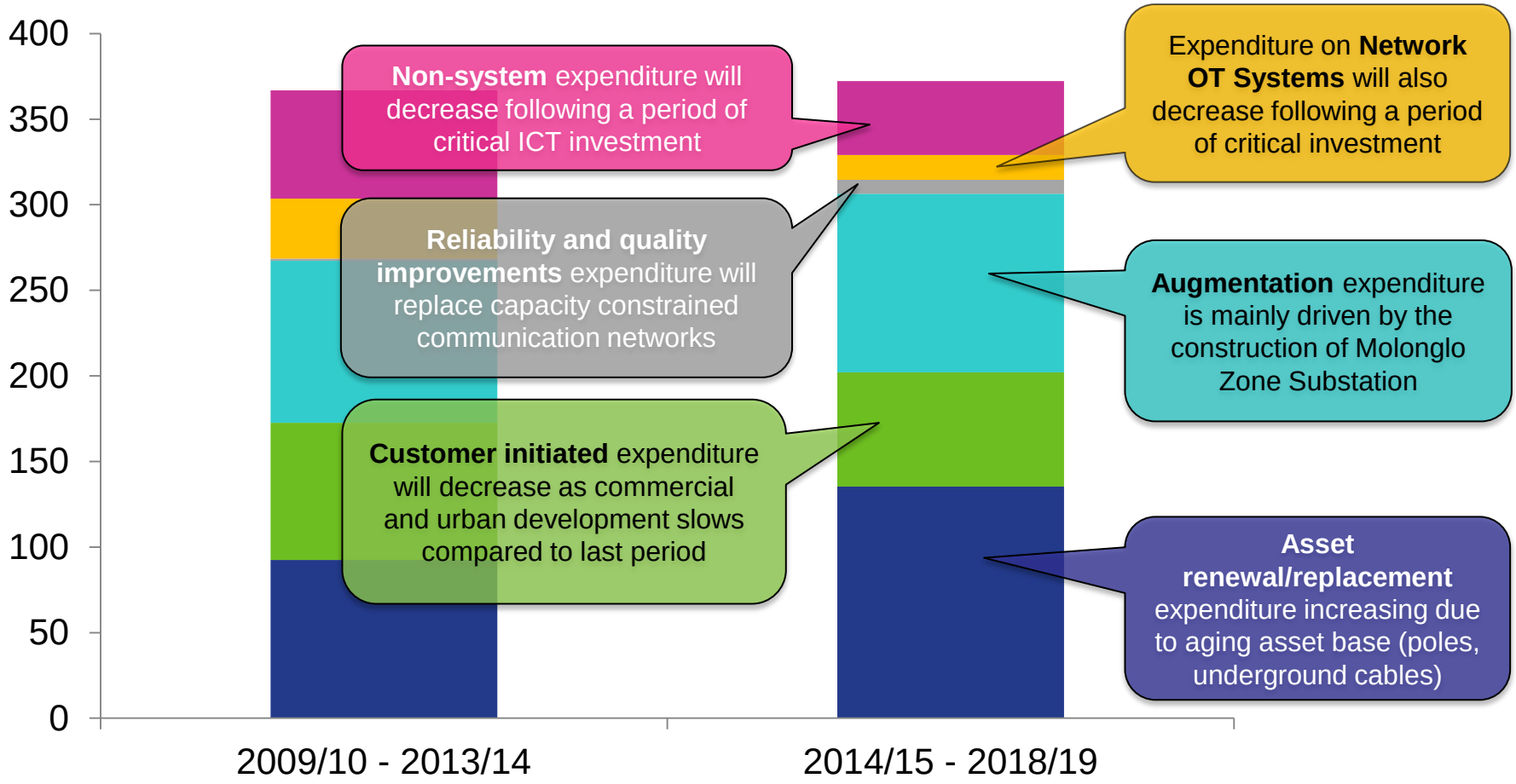
ActewAGL Distribution's forecast capital expenditure 2014–19
($million, real 2013/14 dollars)



Total = $372 million for the 2014-19 regulatory period

Capex 2009-14 vs. 2014-19

Capital expenditure: 2009-14 and 2014–19
($million, real 2013/14 dollars)

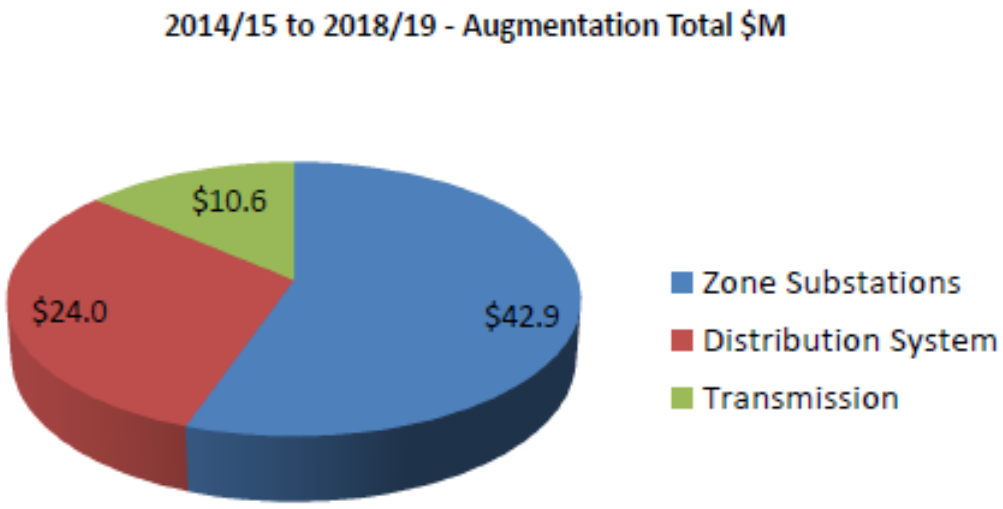


Capital program – focus areas

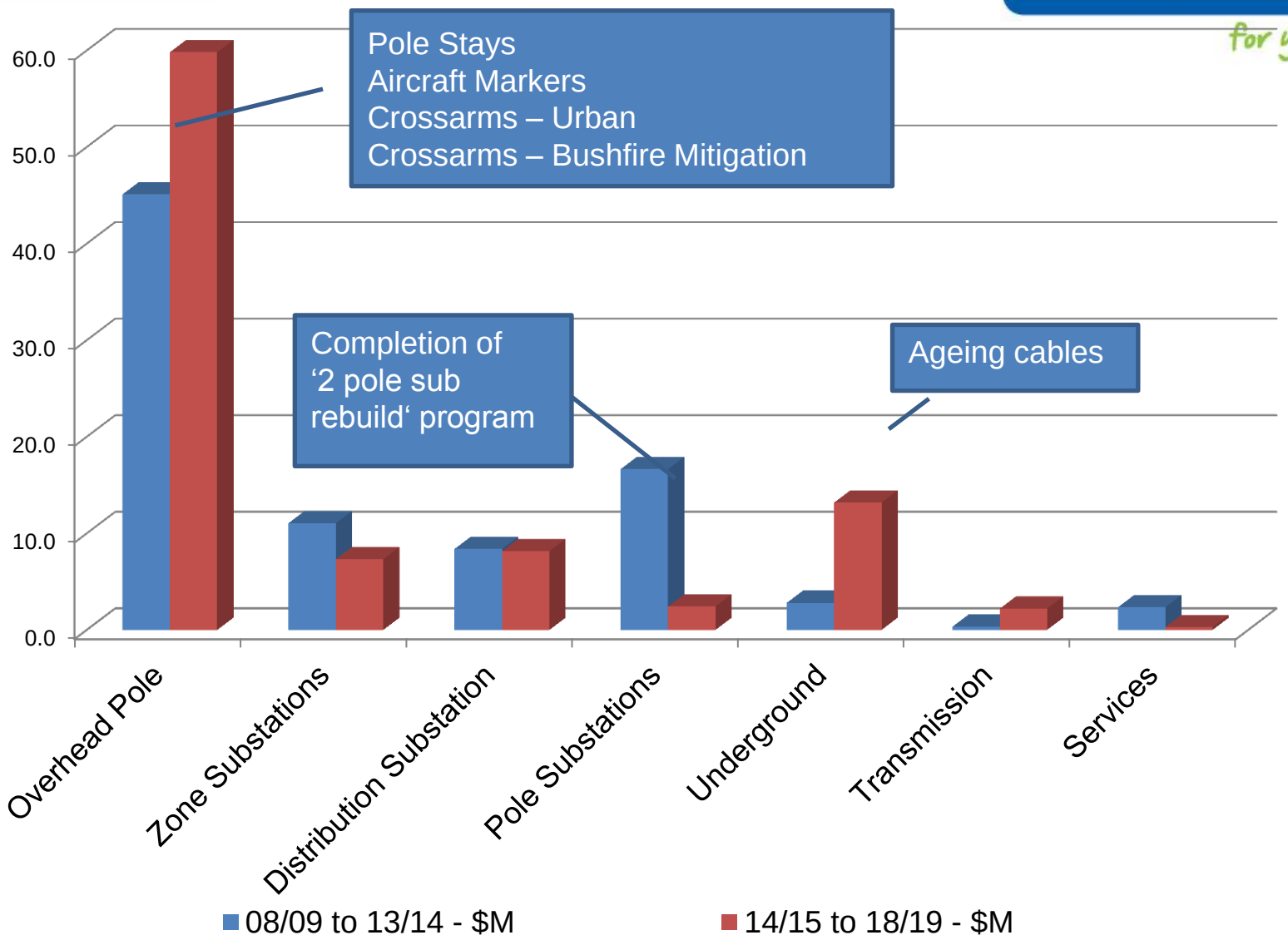
- Continue major projects and asset replacement programs begun during 2009–14
- Asset augmentation (up 10%)
  - New zone substation at Molonglo to meet demand from new suburbs
  - Stage 2 of the Southern Supply to ACT project to improve the security of supply
  - Driven by local network constraints and summer peak
- Asset replacement programs (up 46%)
  - Increased expenditure to address ageing asset base
  - Pole replacement program to replace aging assets and improve safety
  - Underground cable replacement program to reduce underground cable faults

Capital program – Augmentation

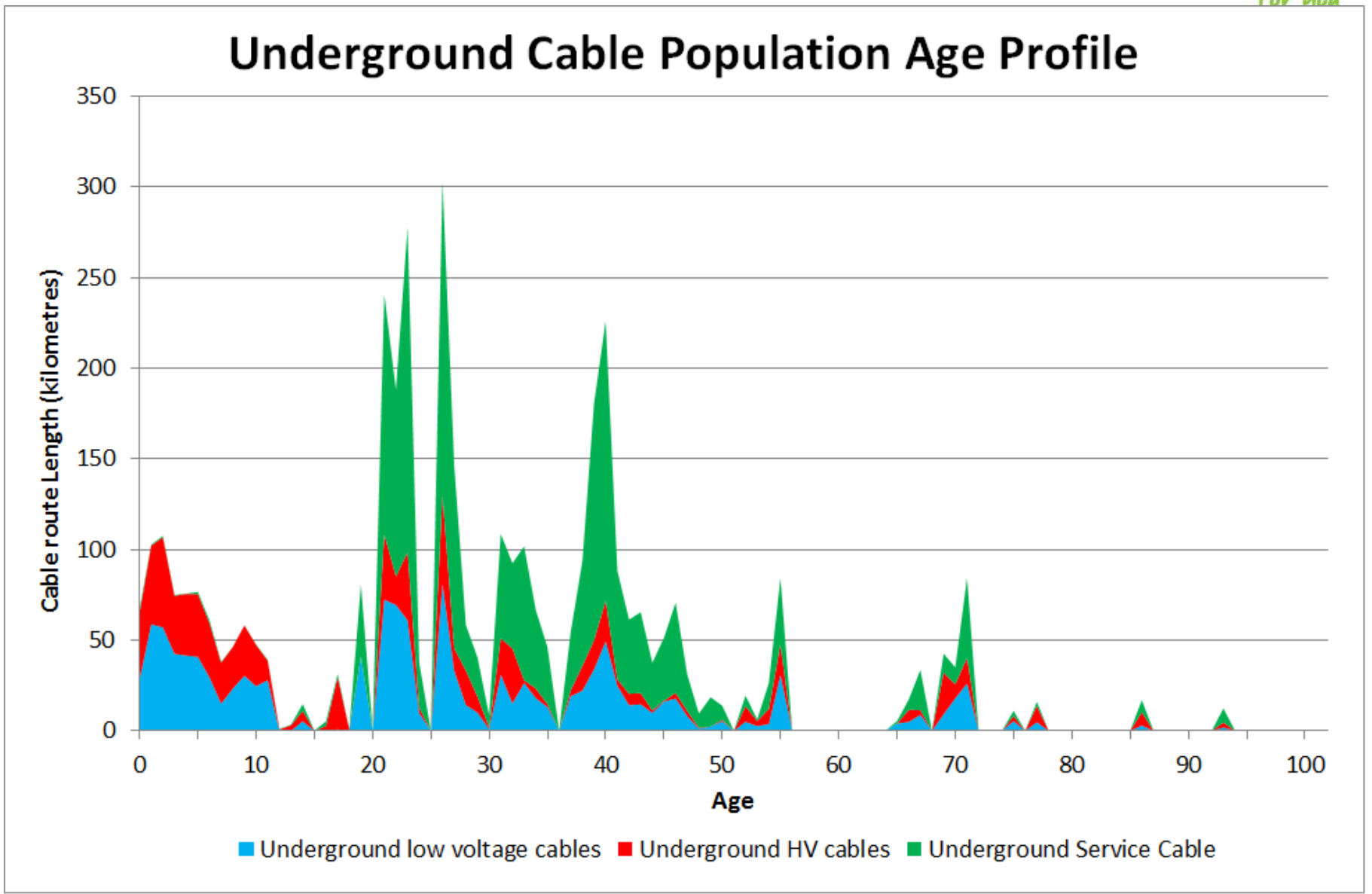
Augmentation Projects 2014-19



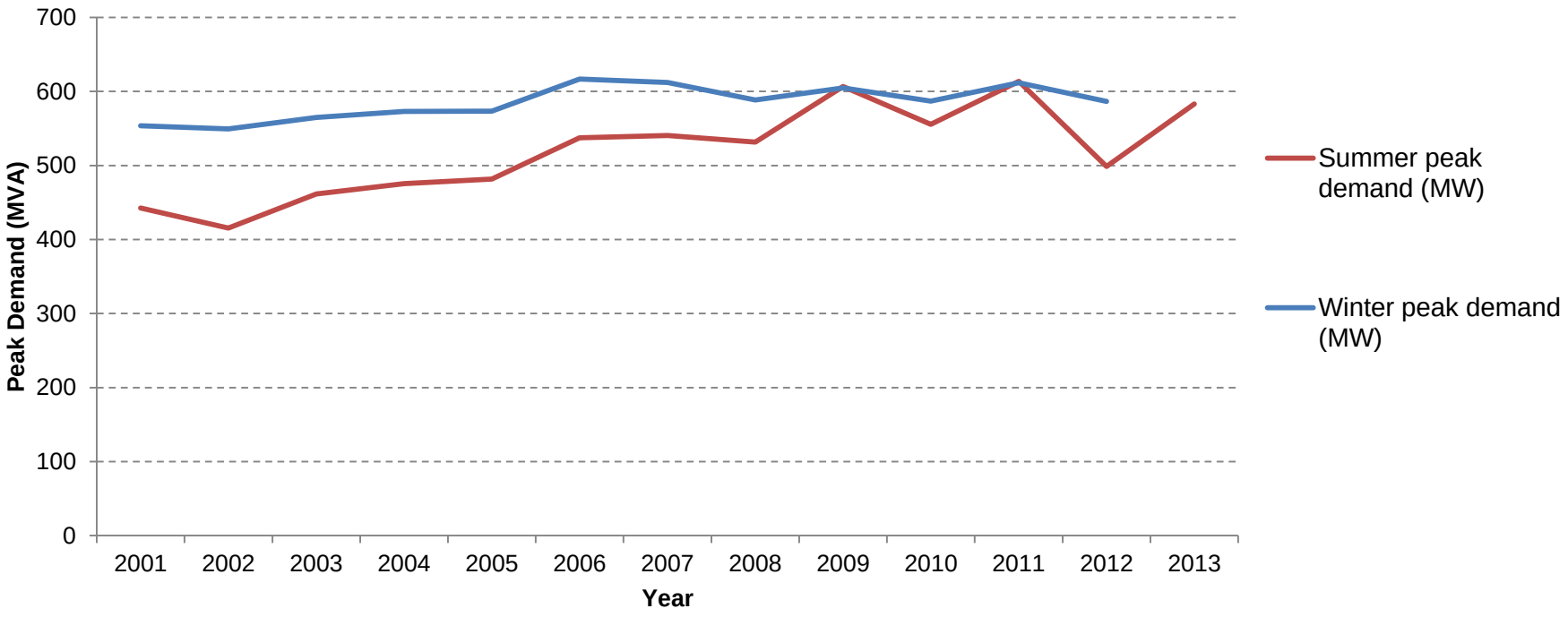
Replacement Projects 09-14 and 14-19



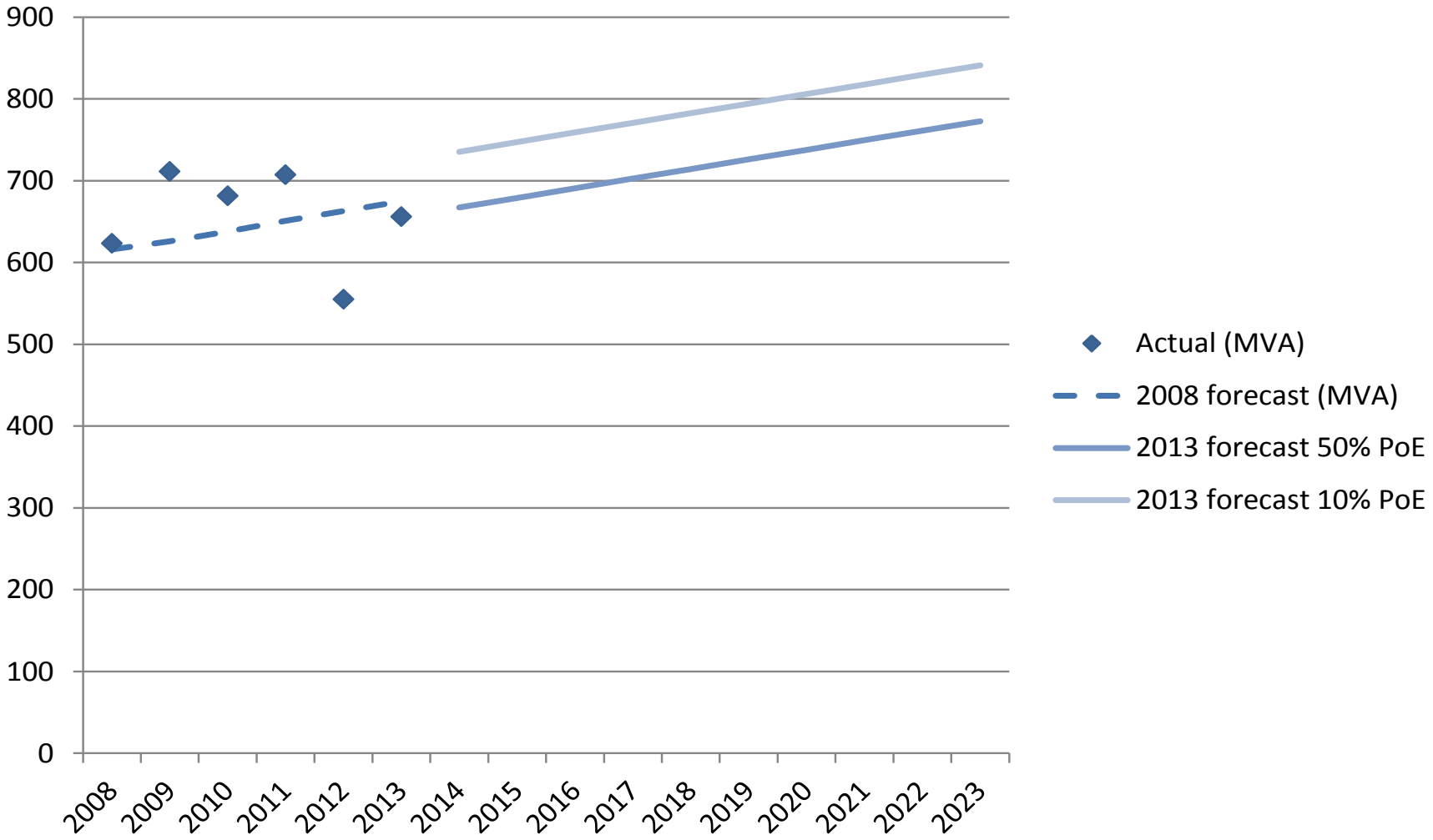
Replacement Projects 2014-19



Electricity peak demand



System summer maximum demand



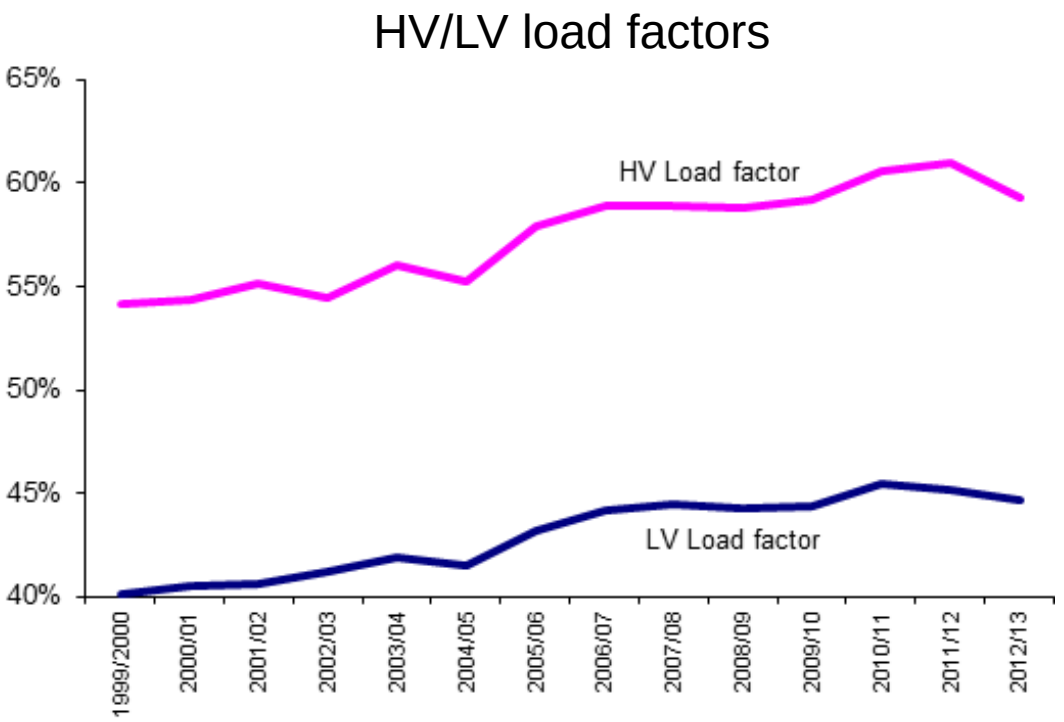
Capex and demand management

- Tariff incentive structures
  - successful demand management tool
  - ongoing tariff reform initiatives
  - TOU default tariff
- Demand Side Engagement Strategy
- Possible demand side management initiatives
- Non-network alternatives considered as part of the network planning process

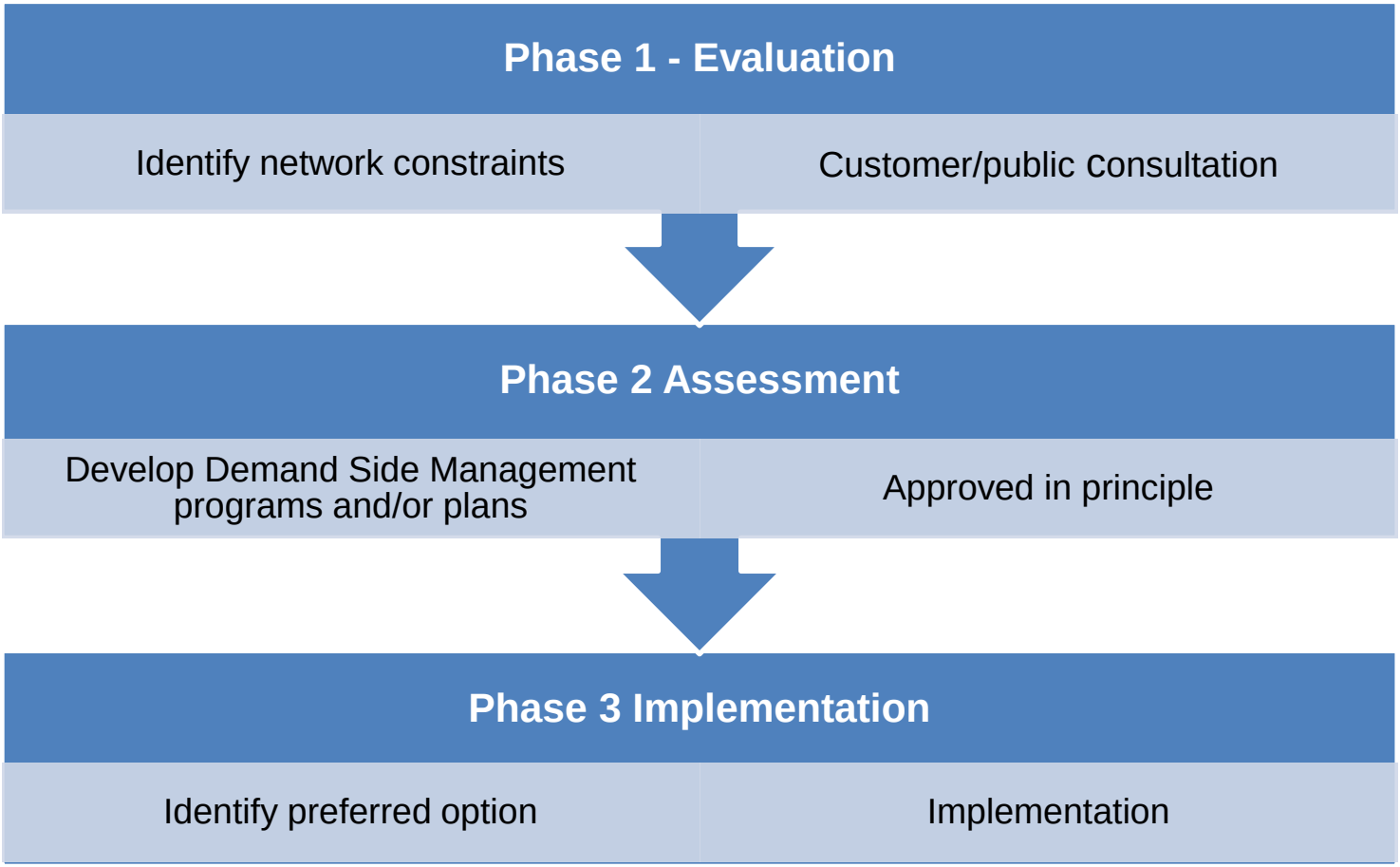
Demand management - Pricing

Network tariffs – Time of use pricing

- Since 1 October 2010 all customers connecting a new premises are put on a time of use (TOU) network tariff, unless they choose an alternative rate
- Customers can save if they shift their consumption from peak to shoulder or off-peak times.
- On a long–term basis, shifting a household's electricity load to off peak times has the potential to reduce the impact on the electricity network and maintenance requirements



Our Network Planning Process



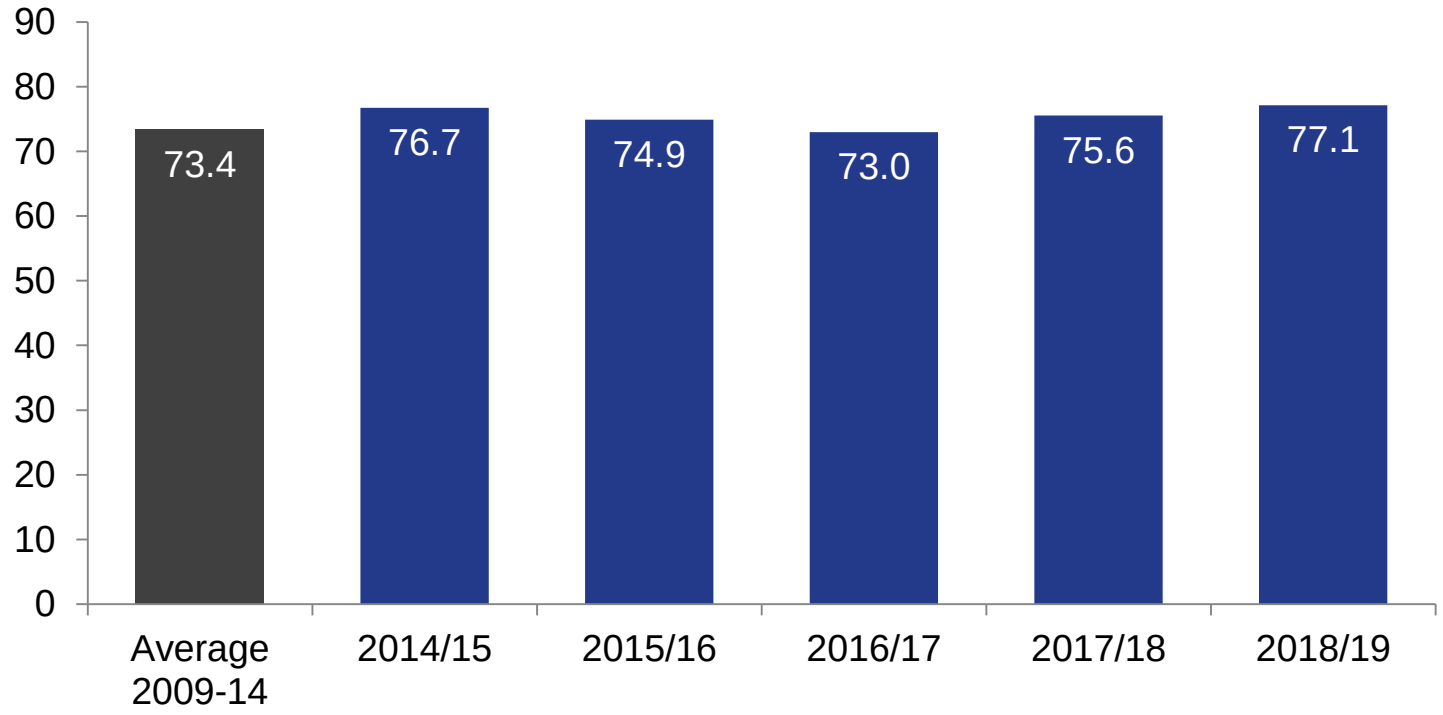
Current DMPs

DMP/ Program	Scope	Deliverables/Outcomes	Performance Target
Mitchell Large Commercial Load (Data Centre)	Solar PV, chilled water storage, Peak lopping by skid and embedded generation, Climate control, fuel switching	Incentive schemes DR contracts **Outcome:** Deferral of Mitchell ZS	5 to 15MVA customer generation
ANU DR & Load Curtailment Program	Chilled water storage, Climate control, peak lopping by skid and embedded generation, Curtailment, fuel switching, HV PFC	Incentive schemes, DR contracts **Outcome:** Deferral of two proposed feeders	7.5 MVA demand reduction
Westfield Woden DR Program	Chilled water storage, Climate control, peak lopping by skid and embedded generation	Incentive schemes, DR contracts **Outcome:** Woden ZS Peak demand management	5 MVA demand reduction
Westfield Belconnen DR Program	Chilled water storage, Climate control, peak lopping by skid and embedded generation	Incentive schemes, DR contracts **Outcome:** Deferral of feeders to Belconnen Trade Centre	5 MVA demand reduction

Operating expenditure 2014-19

- Operating expenditure will remain relatively stable over 2014–19
- Consistent with average expenditure in last period

ActewAGL Distribution's forecast annual operating expenditure 2014–19
($million, real 2013/14 dollars)



Operating expenditure drivers

- Operating cost drivers 2014-19 include:
  - Safety of our staff, contractors and the public
  - Maintenance of ageing assets
  - Vegetation management
  - Operating the network in unique circumstances (eg. backyard reticulation)
  - Meeting legislative and regulatory obligations
  - A shared services model (costs includes replacement of critical shared systems).

Opex Program – Customer benefits

The opex program will serve the long term interests of consumers by allowing us to:

- improve the safety of our staff, contractors and the public
- manage, operate and maintain the safety, reliability, quality and security of the ACT's electricity distribution system
- ensure we continue to meet existing and new legislative and regulatory requirements
- improve the way we engage with our consumers by implementing a new consumer engagement strategy
- increase the accessibility and scope of information on our network and business, either directly from us and through additional regulatory reporting

Consumer focus and engagement

- Willingness to pay studies
- Publication of pricing methodology statements
- Major projects consultation
- Major/critical customer engagement
- Demand side engagement strategy
- Meetings with key stakeholders on elements of the proposal (eg. the connection policy)
- Other customer communications including:
  - Website content and social media
  - Network safety communications including advertising campaigns and media releases

Major projects consultation

- Targeted stakeholder consultation on major capital projects during the planning and construction phases
- Examples:
  - East Lake zone substation
  - Yamba feeder replacement
  - Second Supply to ACT Stage 1

East Lake zone substation 132KV Gas Insulated Switchgear installation

Second Supply to ACT Stage 1

- 132 kV transmission line from Williamsdale to Theodore
- Line traversed 7 rural leases and a public road
- *"the concerns of stakeholders were used to define the most suitable route- achieving ActewAGL's goals and those of the various stakeholders"*
- **Lessees** engaged throughout the project
  - during project planning (May 2006, March 2007, July 2007)
    - engagement included individual interviews, FAQs
    - they got to tell us about their plans- final route based on the issues raised by lessees
  - during construction: ActewAGL and contractors in regular contact with lessees
  - post construction: lessees consulted on restoration works

- **Local community groups** engaged
  - Southern ACT Catchment Group
  - Ngunnawal Elders

- **Government agencies** engaged
  - NCA, ACTPLA, ACT Parks Conservation and Lands, ACT Heritage Council, Roads ACT, DEWHA for EPBC legislation compliance

Major/critical customer engagement

- Focus on major customer and major project liaison
- Dedicated account managers are in regular contact with existing and prospective large customers to assist their operations or future planning
- For major proposals such as a new ACT urban development like Molonglo or the Canberra Airport Expansion, joint working groups are established with monthly meetings between the key parties.

Demand management engagement

Actions taken to date to promote non-network options

- Demand Side Engagement Strategy (DSES) – The strategy was developed and published on 31st August 2013
- Demand side management planning process – The process was developed and incorporated into AAD Network planning and expansion framework
- Demand Management Website – Portal for Demand Management information was added to AAD Internet site including a register for interested parties to engage with AAD DM Plans and propose non-network solutions

How we will continue to engage

- Our *consumer engagement strategy* further develops our consumer engagement approach
- Stage 1 of the strategy has been prepared and will be rolled out over the first 3 years of the coming regulatory period. Stage 2 will then follow.
- ActewAGL Distribution seeks to achieve an even greater understanding of the views, expectation and preferences of its consumers

Our key messages

1. Our electricity prices will remain the lowest in Australia
2. Our network costs will continue to be the lowest in Australia
3. Our network reliability will remain amongst the best in Australia
4. Our customer satisfaction will remain high as a result of our plans and performance
5. Our 2014-19 Regulatory Proposal represents prudent investment to maintain this situation whilst tackling emerging challenges facing all electricity distribution businesses

~ End of presentation ~