



**CONSUMER
ENGAGEMENT
FORUM
OUTCOMES
REPORT**
November 2014



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**Endeavour
Energy**

INTRODUCTION

Endeavour Energy uses meaningful customer feedback to drive its future plans. In March 2014, we held consumer engagement workshops in Penrith and Wollongong to facilitate ongoing engagement with our customers and help them understand our proposed pricing plans for the next five year regulatory period.

A few key themes emerged from these workshops. Many were happy that we had planned for costs to go down and be more stable in the future. They wanted a safe and reliable network maintained. Ways to reduce demand for electricity, increased efficiency and a greater emphasis on renewable sources were also hot topics. This feedback was fed into our plans and used to support our proposal.

As part of our ongoing engagement we held another consumer forum in November 2014 in Parramatta where we focused on providing information about the operation of the network, our proposal, attaining feedback on these plans and reaffirming customer priorities.

In developing the content for the forums, we focused on providing tangible information to attendees so they could make an informed assessment of our plans. The forum focused heavily on issues and concerns from a consumer cost perspective and critically, how Endeavour Energy's plans to maintain its electricity distribution network now and into the future. We did this by discussing our company priorities, our statutory responsibilities (for example, safety and maintaining network reliability standards) and asked for vital consumer feedback on where they would be prepared to compromise to save money.

This report outlines key findings and comments from forum attendees. Some of the feedback is also provided verbatim, to give the reader a clear indication of feedback attained and the priorities of customers.





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KEY FINDINGS

Several themes emerged during the forum. These were gathered during a detailed presentation of our network proposal, group activities, verbal and written questions and comments, and a consumer survey aimed at attaining consumer priorities and preferences. The themes reaffirmed several of findings outlined by consumers at two similar forums held prior held in May 2014.

The main themes were -

1. Attendees were generally happy with the level of reliability and wanted the current level of reliability to be maintained.
2. Approximately two-thirds of attendees were not willing to trade a decreased cost for electricity for decreased reliability.
3. The majority of people want steady changes in their electricity bills and wanted to avoid a boom-bust cycle of price changes.
4. People wanted more information about how they could reduce their electricity bill through effective demand management and increased efficiency. People suggested there should be incentives to reduce bills.
5. People would like to see greater use of green energy in the future. People are interested in learning more about solar power.

Some of the comments are listed verbatim at right. Survey results, including findings regarding price/reliability trade-offs are also enclosed.

“Endeavour to invest in renewals more robustly.”

“Decrease in charges to be passed onto customer especially with increasing use of air con is essential.”

“Improving design”

“I’d like to see people like Endeavour give people electricity usage cost cutting measures i.e. what can we do to cut our bills with smart meters, does this give a breakdown of which appliances use what?”

“When will your company roll out Smart Meters?”

“Priorities as stated seem good”

“Not so many blackouts from 20-30 years ago.”

“Reduce bills”

“Specific vegetation and council requirements about trees and specific requirements and expenditure should also be done.”

“Keep educating people to use energy more efficiently, encourage social practices to help spread load and even our peaks and troughs”

“Being able to access billing through mobile applications. Usage, peak and off peak time easier to understand usage. Concise metered readings and more solar, wind energy.”

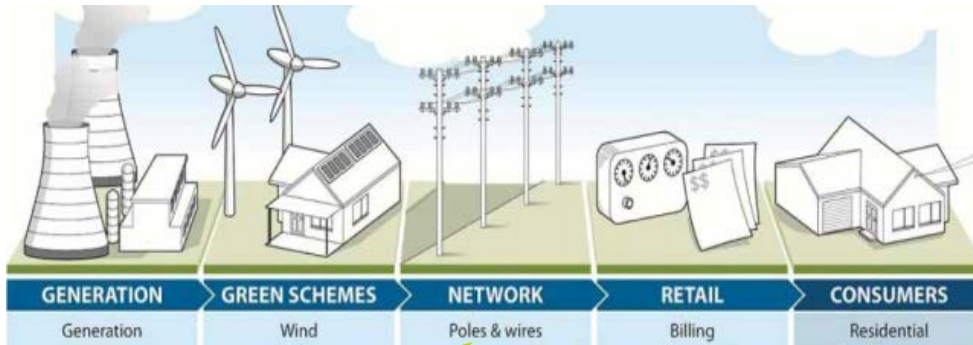


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PRESENTATION SUMMARY

1. THE ELECTRICITY STORY

HOW ELECTRICITY GETS TO HOMES AND BUSINESSES



WHERE WE FIT IN

- Endeavour Energy is a State owned corporation.
- Endeavour Energy builds, maintains and operates the electricity network that transports electricity from the high voltage transmission network to homes and businesses.

THE ELECTRICITY DELIVERY STORY

- Electricity is generated at power stations and via renewable energy sources such as wind and solar farms.
- High voltage transmission lines owned by TransGrid deliver power to distribution networks via substations.
- Substations adjust voltages so electricity can be safely transported over Endeavour Energy's poles and wires.
- Poles and wires carry low voltage electricity to homes and commercial properties.
- Retailers send the bill.

NETWORKS NSW

- In March 2012, the NSW Government announced a restructure of the three NSW electricity distribution organisations: Endeavour Energy, Ausgrid and Essential Energy.
- Electricity distributors manage the networks for specific areas. Your distributor is therefore based on where you live.
- The restructure aims to continuously improve safety performance, maintain network reliability and strives to contain increases to the distribution company's share of your bill so it's at or below CPI.



**Endeavour
Energy**

2. WHO IS ENDEAVOUR ENERGY?

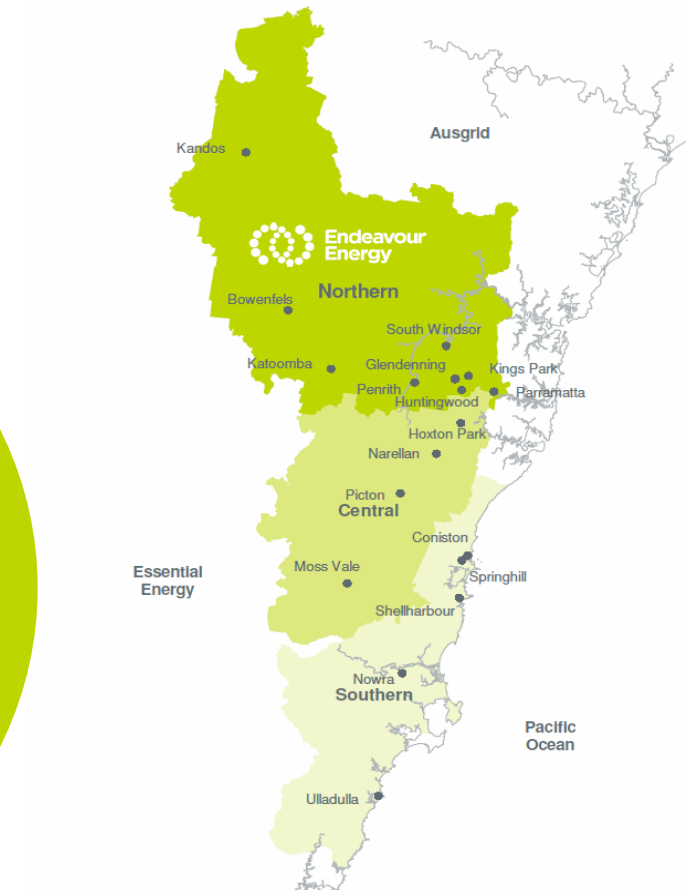
DID YOU KNOW?

Your energy retailer, (i.e. Origin, Energy Australia or AGL) is responsible for selling electricity to you and billing you for it. Network businesses such as Endeavour Energy run the electricity network.

WHERE WE OPERATE

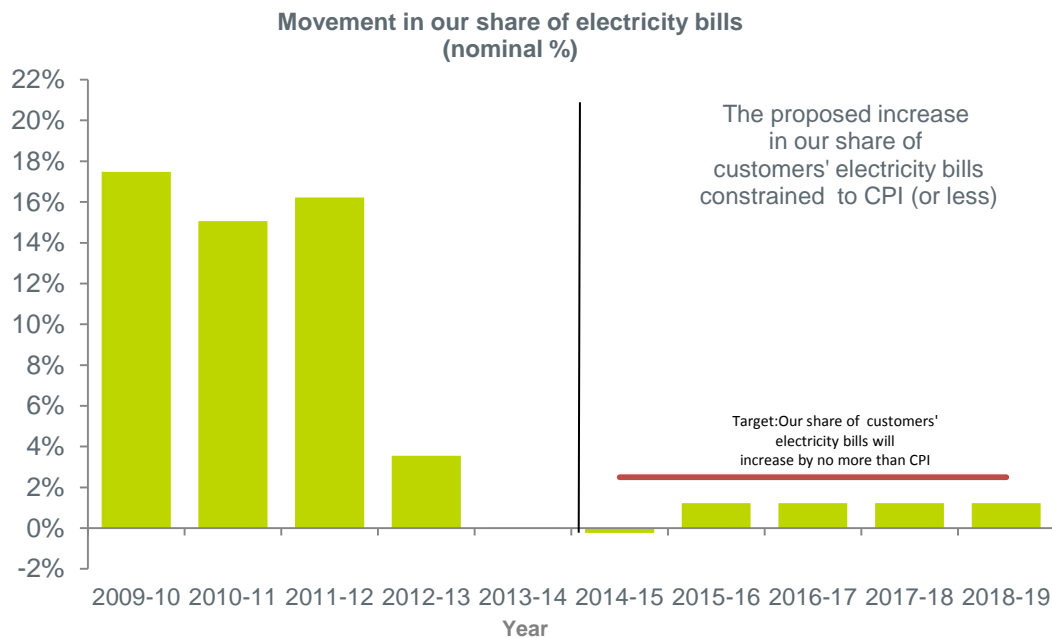
Our network area covers 24,000 square kilometres across:

- Greater Western Sydney
- The Southern Highlands
- The Illawarra and South Coast
- The Blue Mountains



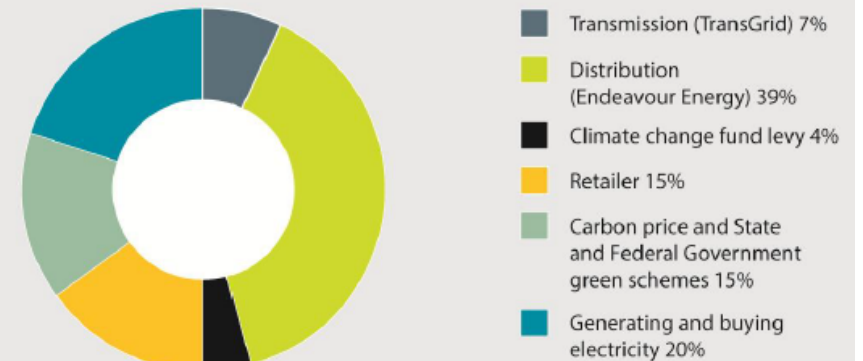
3. ELECTRICITY PRICING AND PLANNING

- Endeavour Energy has developed a proposal for the Australian Energy Regulator that outlines how we plan to operate and maintain the electricity distribution network now, and into the future.
- In developing our proposal to the industry regulator, our objectives place the customer first and promote the long term interests of customers with respect to safety, affordability and reliability.
- Endeavour Energy's costs are around 40% of a customer's electricity bill.



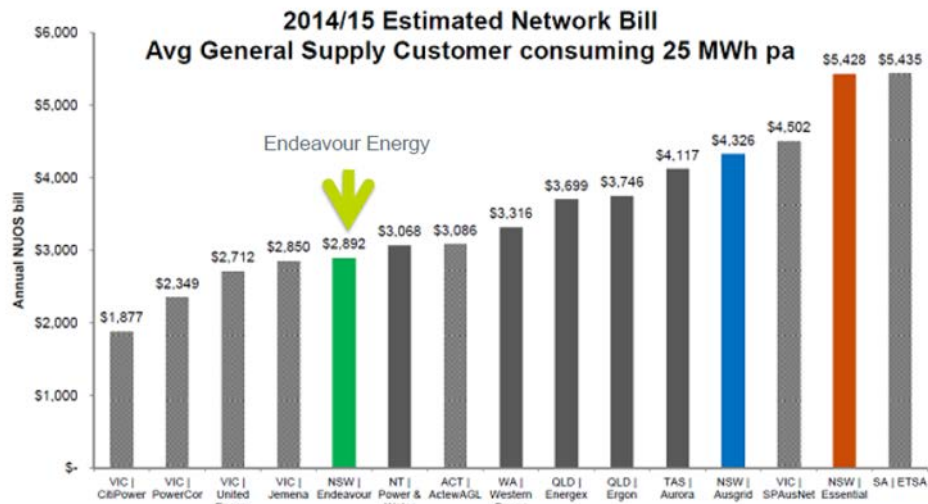
4. UNDERSTANDING YOUR ELECTRICITY BILL

Operating, building and maintaining the electricity network costs millions of dollars every year. When combined with TransGrid's charges, network charges make up about 46% of your bill. On average, customers' electricity bills are made up of the components shown here.

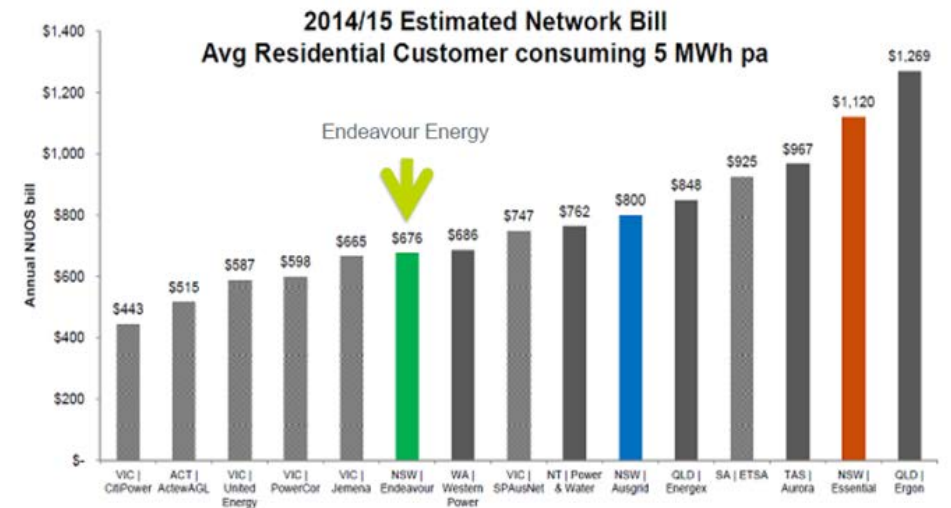


5. OUR SHARE OF A RESIDENTIAL AND SMALL BUSINESS BILL – A COMPARISON

HOW DOES OUR SHARE OF A SMALL BUSINESS BILL COMPARE?



HOW DOES OUR SHARE OF A HOUSEHOLD BILL COMPARE?



6. THE ROLE OF CONSUMER ENGAGEMENT IN OUR PLANS

We told workshop participants about our engagement framework and how this is used to drive our future plans. The approach we take includes:

- **Research:** Understanding customers' needs and preferences, engage customers in setting priorities.
- **Education:** Informing customers and providing support and channels to address knowledge gaps.
- **Consultation:** Involving customers in developing network strategies, plans and regulatory submissions.
- **Review and embed:** Informing customers on progress and embedding engagement in day-to-day operations.

We also summarised the engagement we have undertaken to date which includes:

- Quantitative and qualitative research – surveyed priorities and preferences of more than 900 residents and 300 business customers.
- Analysed two years of existing customer research.
- Joint Networks NSW forum with consumer groups – tariff reform.
- Interactive workshops in Penrith, Wollongong and Parramatta
- Innovative Facebook campaign in conjunction with Ausgrid and Essential Energy.

Customers have told us their key priorities are ...

Affordability	No more price shocks – want affordable , stable prices
Reliability	Satisfied with reliability of network - don't want to pay more for better reliability or less for reduced reliability
Value	Improve customer value without affecting reliability
Safety	Ensure safety of network
Communications	Better communications channels: mobile apps, online

Importantly, these key findings have been incorporated into our plans.

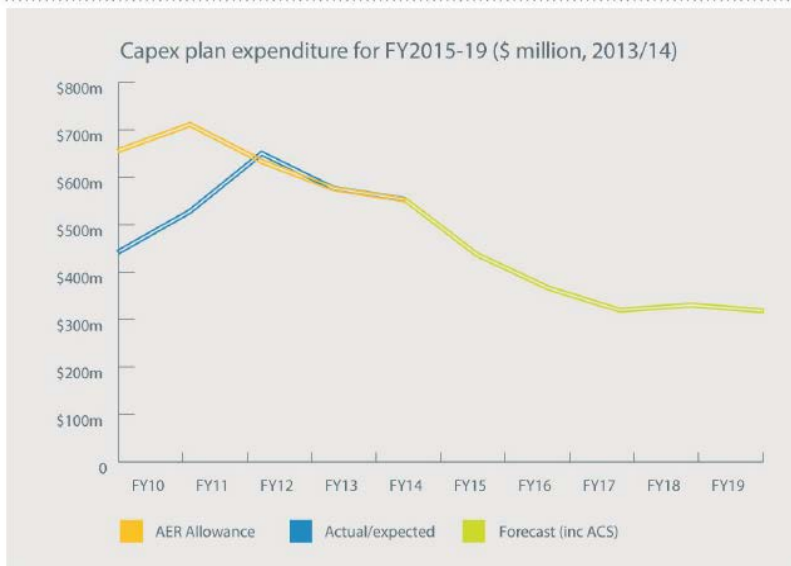
We are continually improving our engagement with customers, our engagement initiatives are a critical part of our strategy implementation and are integrated into our BAU operations.

7. OUR PLANS FOR THE FUTURE – CAPEX AND OPEX

Our Proposal focuses on keeping costs down and operating and maintaining an electricity network that is safe, reliable and affordable for customers. The cost is split into two portions:

1. **CAPITAL EXPENDITURE (CAPEX)** - money needed to build and renew the network and replace ageing equipment.

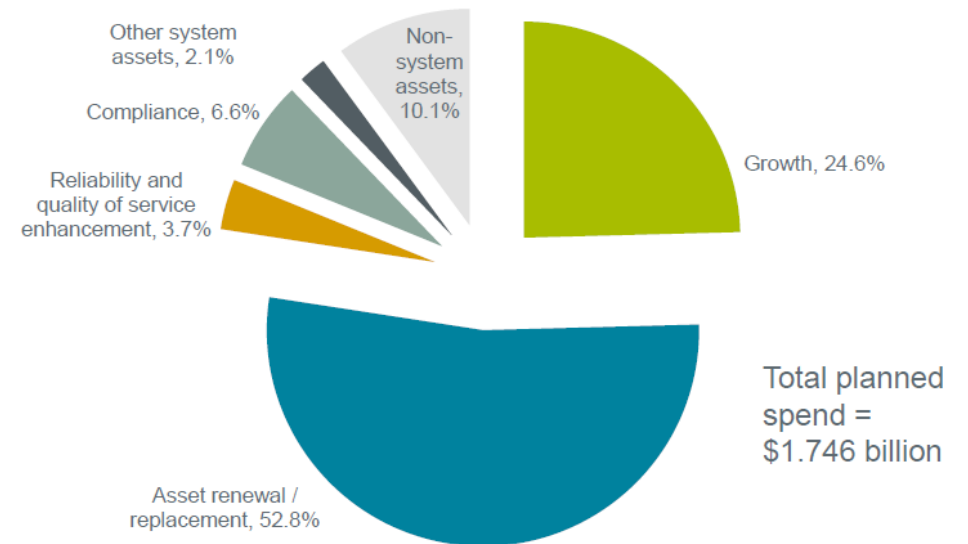
OUR PLAN FOR CAPITAL EXPENDITURE



43%

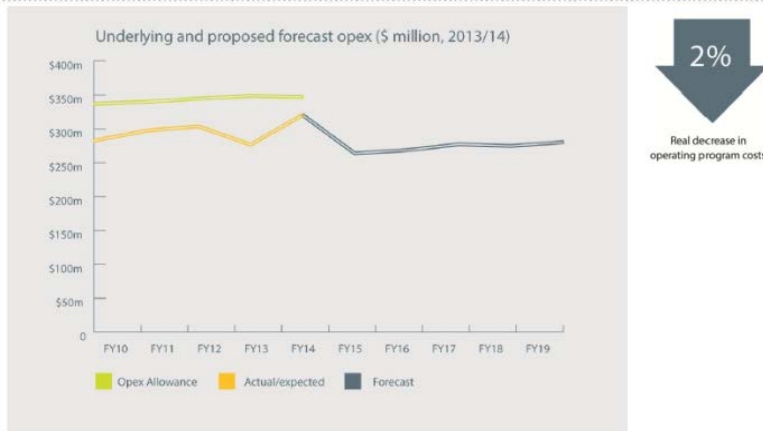
Real reduction in capital program

BREAKDOWN OF CAPITAL EXPENDITURE

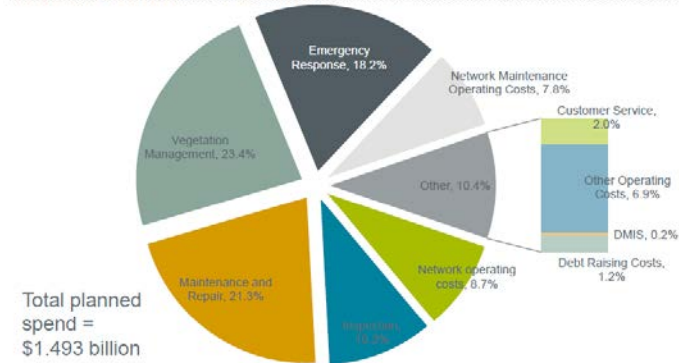


2. OPERATING EXPENDITURE (OPEX) – money required to maintain the existing electricity network.

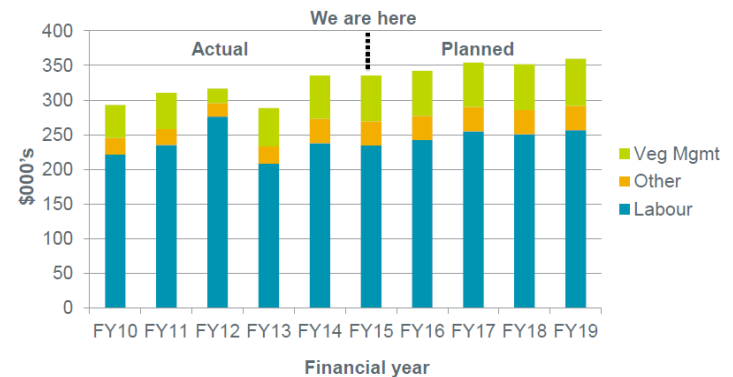
OUR PLAN FOR OPERATIONAL EXPENDITURE



BREAKDOWN OF PLANNED OPERATIONAL EXPENDITURE – 2015-19




OPERATIONAL EXPENDITURE 2009/10 TO 2018/19





8. BENEFITS AND RISKS OF PROPOSAL

BENEFITS



Stability – We propose to keep average increases to our share of customers' electricity bills at or below CPI for five years.



Reliability – We propose to maintain reliability.




Safety – Our capital and operating plans aim to deliver programs that are safe and sustainable for the electricity network and the communities it serves.



Clarity of costs – We are giving customers greater transparency about how much they pay for metering.




New growth areas – Electricity infrastructure for new growth centres will foster local economic development.




Removing cross-subsidies – Customers who don't use specific services (such as special meter test readings) will no longer subsidise those who do.


RISKS




Volatility – The AER has determined that Endeavour Energy's revenue from customers will be capped. If electricity consumption falls further than we forecast, unit prices may increase but total revenue cannot increase.



Reduced reliability – If our capital program is not delivered on time the electricity supply may be less reliable in some areas.



Future prices – Without changes to tariff structures customers who cannot afford to invest in solar technology will be burdened with increased network costs.



New rules – Customers who request a special service may now pay considerably more as the AER said they cannot continue to be subsidised by our general customer base.



What we've heard from consumers so far...

They said:

"Anything Endeavour Energy can do to keep costs down is welcome"

Customers want stable, affordable electricity with no steep increases.

We will...

We'll continue our productivity and efficiency programs which delivered a real decrease in network electricity charges for the first time in a decade in July 2013.

We'll limit increases in the network component of electricity bills to CPI for the next five years.

FEEDBACK FROM PARTICIPANTS

What we heard from participants (NB: comments are reported verbatim)

Questions/comments?	Is anything being done well?	Can anything be done better?	What suggestions do you have to improve the process?	Did you learn anything particularly new or interesting?
<ul style="list-style-type: none"> • Our proposed share of customers' electricity bills continues. Plan for the future will be less or more? • Are movements in network prices for the last 20 years similar to those in the last 4 year segment? • What will happen with pricing if everyone has solar panels? Would the company then place a tax on it? How will you be able to keep prices down with the population growing? • Who governs solar rebates? Will there be a regulator for the retailers? Retailers seem to increase costs once I've signed up and want to charge exit fees. • Will it be compulsory in NSW to have smart meters? • Why are there so many retailers if they just do the same job? Where do you [Endeavour Energy] buy electricity? • Retailers, why does every retailer give different discounts? • Why do we have retailers selling electricity rather 	<ul style="list-style-type: none"> • Priorities as stated seem good • Less electricity cuts • Trimming trees away from wires in my area. Media communication when blackouts occur after/during a storm. • Quality and consistency of service and supply • Sustainable/reliable distribution of energy • Responding to our emergency calls • 99.5% is a good reliable record 	<ul style="list-style-type: none"> • Keep educating people to use energy more efficiently, encourage social practices to help spread load and even out peaks and troughs • In supply and demand instil flexible working hours for industry etc. • More education to the public of how it all works • Yes. Instead of reading the meter in advance, the meter should be read physically every 3 months • Green scheme costs should not be passed onto consumers who cannot afford to participate. Regulator needs to be given more power and teeth. It really has failed. • Smart meters for individual households to monitor usage. 	<ul style="list-style-type: none"> • Inform people of the outcome and the planning activity of Endeavour Energy • Not to make it a difficult process when solar panels are first installed • Customers being informed of how to keep electricity costs down. Be green • Gold plating network costs required, independent regulator and reworked regulations • Viable green scheme, green schemes for renters, but costs not passed on to those who cannot afford it • Regulator needs to have a network wide scheme not be dependent on individuals 	<ul style="list-style-type: none"> • I am very pleased knowing more about Endeavour Energy I know more than before • All very interesting • City subsidises country • Electricity networks are 'live' (always ready to go) i.e. switch to generator distance long. • Yes, did not know there are a wholesaler and retailer • Endeavour Energy only run the line and poles • To run the electricity underground costs 6 times more • You lack credibility. Conflict of interest for



Questions/comments?	Is anything being done well?	Can anything be done better?	What suggestions do you have to improve the process?	Did you learn anything particularly new or interesting?
<p>than the networks themselves selling electricity to consumers?</p> <ul style="list-style-type: none"> • What is the state cost impact and return on investment from Endeavour? • I had no idea my bill was broken up in such a way. Can we question the retailer on their pricing e.g. 15% if falling below at CPI 3% what's the catch? How much is this going to cost tax payers? • Why is Victoria's network cheaper than NSW? • How is the electricity divided around NSW? Is there any renewable energy programs being utilised? • Could savings be made by placing wires underground? Surely this would reduce some maintenance costs? • Green energy - is it financially beneficial for this company. • Does Endeavour energy plan to keep making large profits e.g. in last 2 years, Network NSW handed back 4.2billion to NSW government. Why can Endeavour shift their price increase from 50% (2009-2012) to 2% (next 5 years) suggests unethical values. • What steps have been taken to lower the cost of electricity? Can we as consumers ever witness 	<ul style="list-style-type: none"> • Keeping costs low. Reliability, safety, improved safety performance, community focused with numerous forums • Network is very reliable. • Seeking community feedback. • It's good that it's managed as a business-aimed at generating profits. • Find reliability good. • Notified of problem, problem resolved, notification verified. • No significant outages except those beyond Endeavour's control (major storms) • Good recovery of 	<ul style="list-style-type: none"> • More rewardable energy integrated into the energy network • Pricing, the cost of living is already high. Given the distribution alone is 40% should this fee be broken up by individual tax brackets? • On the bills a description of cost breakdown. If not where to look at websites • As the poles age, instead of repairing, can they be replaced underground but with costs explained to the consumer? • If Solar Panels are efficient and cost effective can Endeavour set up panels in bulk (like wind farms) so we can all benefit rather than giving incentives to individuals with us having to subsidise it for them? • Bills not often easy to read could be broken down more effectively. • Endeavour to invest in renewals more robustly. • Possibly mandate solar panels for 	<ul style="list-style-type: none"> • Needs to be partly shared, Network to have rewardable energy targets • Research into the perpetual energy, research into hydrogen • Have a scheme available to provide solar panels more affordably especially to the low income earners, housing division, Centrelink recipients. • If the private companies do better than the government company, you don't think it's time to review the way they manage? • Being able to access billing through mobile applications. Usage, peak and off peak time easier to understand usage. Concise metered readings and more solar, wind energy • More reasonable charges to benefit customer in current 	<p>the state regulating their own companies.</p> <ul style="list-style-type: none"> • Lights don't take the bulk of energy. It's the costing of heating water or the air conditioning that takes the brunt of energy use • Yes • State owned company • Certain facts e.g. 99.95% uptime renewable energy can't be stored cost effectively. • E.E is not a retailer. • Yes only 20% of the bill goes to the cost of generation. • Copies from my neighbour but the complexity of real time electricity balancing. • Found talk of network being real time in



Questions/comments?	Is anything being done well?	Can anything be done better?	What suggestions do you have to improve the process?	Did you learn anything particularly new or interesting?
<p>lowered bill price? If prioritised, what steps will be taken to prevent the possibilities of a monopoly and with competition out of the way, how will Endeavour Energy keep the prices low?</p> <ul style="list-style-type: none"> • What margin is on the generator when they 'sell' there part? There must be a margin on top of the poles and wire margin and retailer margin? • Hasn't Carbon come off the bill now? • How much was 'gold plated' and does that mean we have lower or more regulated costs? • What is the justification and % of revenue being spent on R&D for things like battery storage and wireless power transmission? • What caused the price increase in 2009 and how can you keep it below CPI? Are we setting ourselves up for another steep increase in years to come because we are not saving/replacing now? • What is climate funding? Who administers it? What carbon prices has this led? What are the green schemes? • Why the sharp bill period (in 2009-2014)? • Why now under CPI" • What proportion of actual electricity generation (not price) comes from household systems (e.g. 	<p>service from damage due to storms and fires etc.</p> <ul style="list-style-type: none"> • Reliability • Lack of overhead lines in new communities and reliability • Response time to down time emergencies • Not so many blackouts from 20-30 years ago. • Maintenance of the system • Provision of electricity 	<p>public housing tenants on a social justice measure - corporate responsibility.</p> <ul style="list-style-type: none"> • Utilising green sources to understanding your bill • Better use of technology to proactively notify consumers of usage patterns e.g. profile my usage and Endeavour communicate in advance how to do it better for the future • Bring our prices into line with the rest of the world, we are the highest. • Make usage date more usable and easy to compare • Better pricing for solar • In home usage monitoring • Decrease in charges to be passed onto customer especially with increasing use of air con is essential. • Incentives to reduce bill • Regular Maintenance • Explanation of difference between 	<p>economic climate.</p> <ul style="list-style-type: none"> • Off grid installations • Why not offer 'leased' solar as part of the package? • Be honest about peak/off peak charges to pricing • Support for local distributed generation-especially in remote areas so that investment in delivery to distant areas is minimised. • Maybe research on local systems/batteries etc. might be an idea. • When will your company roll out Smart Meters? • Maintenance reduced by underground-is it just aesthetics or better in terms of cost of maintenance? • If charging is staggered what/when the wires and poles fail? • The company should help not only the pensioner but the 	<p>motion network interesting is thought provoking.</p> <ul style="list-style-type: none"> • Structure of costings in consumer bills and how the system works. • No! • No education given to customers. PS- I need to get a smart meter from Endeavour because I am on your network. • Lack of awareness of how it works, i.e. retailers and electricity supply • The contribution to state revenue • I had no idea my electricity bill was composed of the various (6) areas. • I was not aware of the percentages and nuts



Questions/comments?	Is anything being done well?	Can anything be done better?	What suggestions do you have to improve the process?	Did you learn anything particularly new or interesting?
<p>PVC)? Is this reflected in price to consumers?</p> <ul style="list-style-type: none"> • Why is there a \$99 Fee for disconnection of a service in NSW? • Why hasn't our solar panels, since being installed, not been inspected by Endeavour energy? • Invest in creating solar etc. with better effectiveness storage etc. on a larger scale for all communities • Should your R&D be propped up/moved up with the same amount that carbon tax has been charged for given the rebate has been kept? • Solar energy. With falling coal or oil price is there any possibility the cost reduction is generating electricity to be passes on to the consumers? • Pricing seem to have increased by about 100-200% in last 5-10 years-why? • If carbon tax put prices up then why have they not come down again? • Very impressive power point presentation 		<p>Endeavour Energy and retailers could be better.</p> <ul style="list-style-type: none"> • Better survey information on underground assets • The pricing process sending out letters claiming to have savings • Look at why we are the highest in the world and why can't the state based ones look at the best practices and industry for the same standards. • Reduce bills • Better advertising of who Endeavour Energy are 	<p>ordinary person</p> <ul style="list-style-type: none"> • More focus on how solar can lessen transmission distance • Lower bills • Provide information on 'averages' usage for say a family of 4. • Commercials / advertising • Showing reverse expenditure • Greater push for solar power • I'd like to see people like Endeavour give people electricity usage cost cutting measures i.e. what can we do to cut our bills with smart meters, does this give a breakdown of which appliances use what? 	<p>and bolts of the electricity industry.</p>

GROUP ACTIVITY - CONSUMER FEEDBACK ON OUR PLANS FOR CAPEX AND OPEX

During our forums, we held group activity sessions which provided a real opportunity for 'everyday' consumers to ask questions about Endeavour Energy's decisions and provide feedback on what they believe is being done well, what could be done better and to discuss suggestions of how things could be improved.

The following pages outline the different topics covered, a snapshot of the information provided and feedback provided by participants on each subject.



1. GROWTH

24.6% of the proposed capex budget is allocated for expanding the network to connect new customers in growth areas and to ensure the network can cope with future demand.

WHAT WE'VE HEARD

Customers want attractive streetscapes, well designed infrastructure, tidy streets and construction sites. Failure do this lessens satisfaction.

OUR COMMITMENTS

- We're preparing to meet this extra growth and maintain our existing network by investing responsibly and efficiently in our network over the next five years.
- We'll keep designing substations to blend with residential streets but spend less on design in industrial areas to save money.
- The infrastructure that we have delivered (relating to capex investment) has been delivered more cheaply than what was historically the case by:
 1. using contractors who work under our direction
 2. doing more work that 'blends' our workforce with external contractors to do things safely, to our standards, but faster and at less cost.

WHAT ARE WE DOING WELL?

"Building and expanding the network but this can be costly over time."

WHAT CAN WE DO BETTER?

"Starting communication between community and Endeavour Energy"

"Improving design"

"Safety upgrades can be costly"

"Innovation"

"Long term sustainability"

WHAT SHOULD WE CONSIDER DOING DIFFERENTLY TO SAVE YOU MONEY?

"Education on demand management"

"Designing different products or improving technology"

2. RENEWAL

52.8% of the proposed capex budget is allocated for asset renewal and replacement. This is for replacement of poles and wires and investment in upgrading and building substations to make sure our reliability is maintained.

WHAT WE'VE HEARD

Most customers rate Endeavour Energy's reliability as very good and don't want to pay more for a better service, nor are they prepared to pay less for poorer reliability.

OUR COMMITMENTS

- Maintain our current level of reliability and improve areas with the poorest reliability.
- Replace network assets at the end of their service life in a planned and efficient manner
- Replace transformers, circuit breakers, power lines and other equipment throughout our network based on condition and serviceability.

3. RELIABILITY

How does Endeavour Energy compare?

WHAT WE'VE HEARD

Most customers rate Endeavour Energy's level of reliability as very good and don't want to pay more for a better service, nor are they prepared to pay less for poorer reliability.

Customers also asked us to improve how we notify them about outages and to improve content.

OUR COMMITMENTS

- We plan to maintain our current level of reliability and improve areas with poorest reliability.
- We're planning a new mobile site to give you live outage information.
- We'll investigate improved notifications using SMS and smart phone apps and review our written interruption notices

WHAT ARE WE DOING WELL?

[Table conducted a survey within their group]

"100 % happy with reliability as is."

"4-8 have experienced a blackout over the last 12 months. 2 were natural 2 were man-made it was inconvenient but understandable."

"Hope the plans work to improve reliability in areas of poor reliability"

WHAT CAN WE DO BETTER?

"Customers need to be kept up to date on what's happening."

WHAT SHOULD WE CONSIDER DOING DIFFERENTLY TO SAVE YOU MONEY?

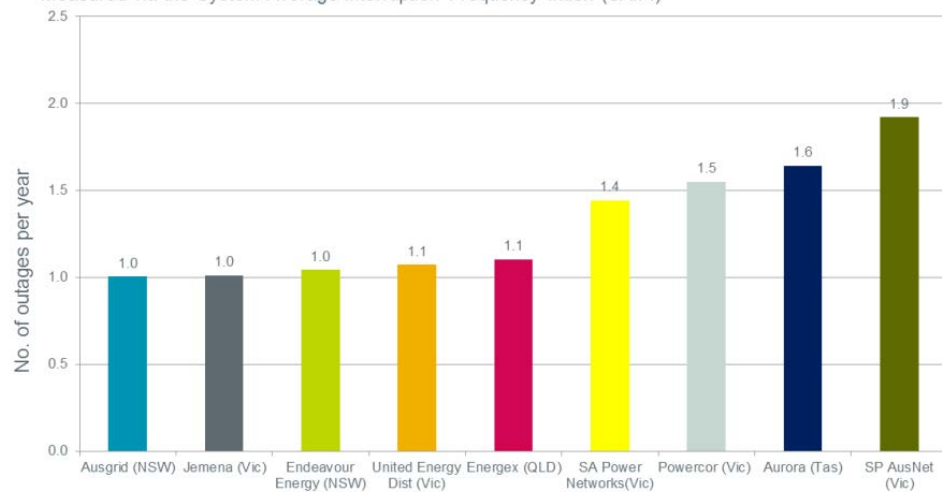
[No additional comments provided for this worksheet]



**Endeavour
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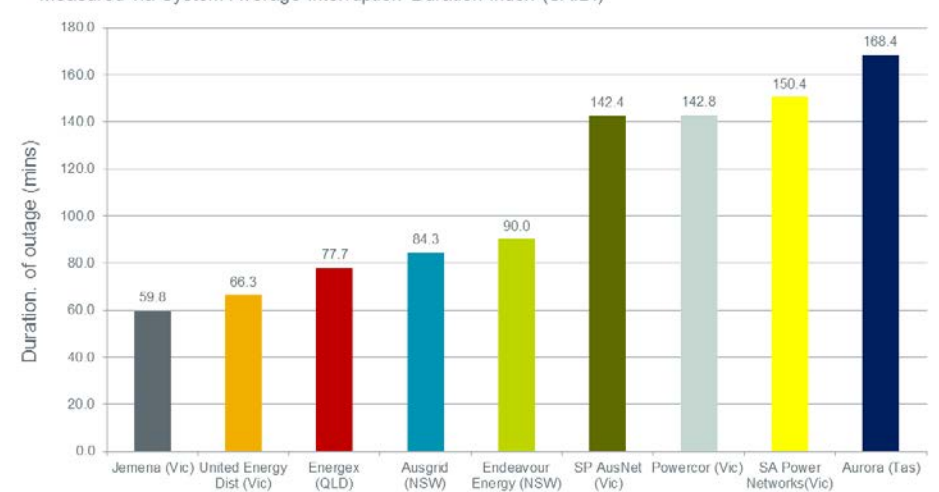
HOW DOES OUR RELIABILITY COMPARE? NUMBER OF OUTAGES PER YEAR

Measured via the System Average Interruption Frequency Index (SAIFI)



HOW DOES OUR RELIABILITY COMPARE? DURATION OF OUTAGE

Measured via System Average Interruption Duration Index (SAIDI)



4. MAINTENANCE AND REPAIR

21.3% of the proposed opex budget is allocated for maintenance and repair activities on network assets.

OUR COMMITMENTS

- We are actively pursuing options to reduce maintenance to an appropriate level. The biggest issue is that safety cannot be compromised. What we're dealing with cannot pose a risk to communities or to our staff.

WHAT ARE WE DOING WELL?

"Network maintenance"

"Emergency response such as power outage."

"Organising or liaising with council about what trees to have."

WHAT CAN WE DO BETTER?

"When doing maintenance you could do better in informing people about unplanned power outages."

"Specific vegetation and council requirements about trees and specific requirements and expenditure should also be done."

WHAT SHOULD WE CONSIDER DOING DIFFERENTLY TO SAVE YOU MONEY?

[No additional comments provided]

5. VEGETATION MANAGEMENT

23.4% of the proposed capex budget is allocated for vegetation management. Carried out by external contractors, the management of trees and shrubs reduces safety hazards and interruptions to supply from damage to overhead electricity power lines.

WHAT WE'VE HEARD

"I understand you need to trim trees for safety but I don't always like the result"

Customers asked that we educate councils and residents about more appropriate plantings.

OUR COMMITMENTS

- To ensure this service is delivered at the most efficient cost to customers, we externally source a significant majority of our vegetation management activities.
- A key driver of our increased costs in this area is upward movements in market delivered contracts secured by Endeavour Energy for the next regulatory control period. We have adopted a prudent approach to sourcing these external contracts and have selected the least cost, compliant provider.
- We must continue to reduce safety hazards by trimming trees. We'll work with Councils to promote new planting of appropriate species in overhead wire areas and we'll keep streets clean too.

WHAT ARE WE DOING WELL?

'Trimming trees to ensure safety.'

WHAT CAN WE DO BETTER?

'Working with council to ensure better more appropriate species are planted.'

'Give ownership to council to manage tree trimming to increase accountability.'

WHAT SHOULD WE CONSIDER DOING DIFFERENTLY TO SAVE YOU MONEY?

"Start a tree replacement process so in the long term more appropriate trees (that don't need to be trimmed) are planted"

02/11/2010

6. EMERGENCY RESPONSE – FAULTS AND EMERGENCY REPAIRS

18.2% of the proposed Opex budget is allocated to cover fault and emergency repairs and restoration of supply for planned and unplanned interruptions caused by events such as storms, equipment failure, acts of vandalism, and damage caused by vehicle collisions.

WHAT WE'VE HEARD

Customers don't want safety and reliability standards to be compromised, even for lower prices.

"I expect safety to be a big priority for such an essential service"

OUR COMMITMENTS

We will continue to restore power to the greatest number of customers in the shortest possible time when storms (or other natural events) cause widespread supply interruptions.

We will improve our safety programs for our staff and contractors.

We will review our services for vulnerable customers, particularly life support customers.

WHAT ARE WE DOING WELL?

"Unplanned outages – network has been reliable."

WHAT CAN WE DO BETTER?

"Provide text alerts to people when there is going to be an outage"

"Explain the reasons to consumers"

"Notify through social media"

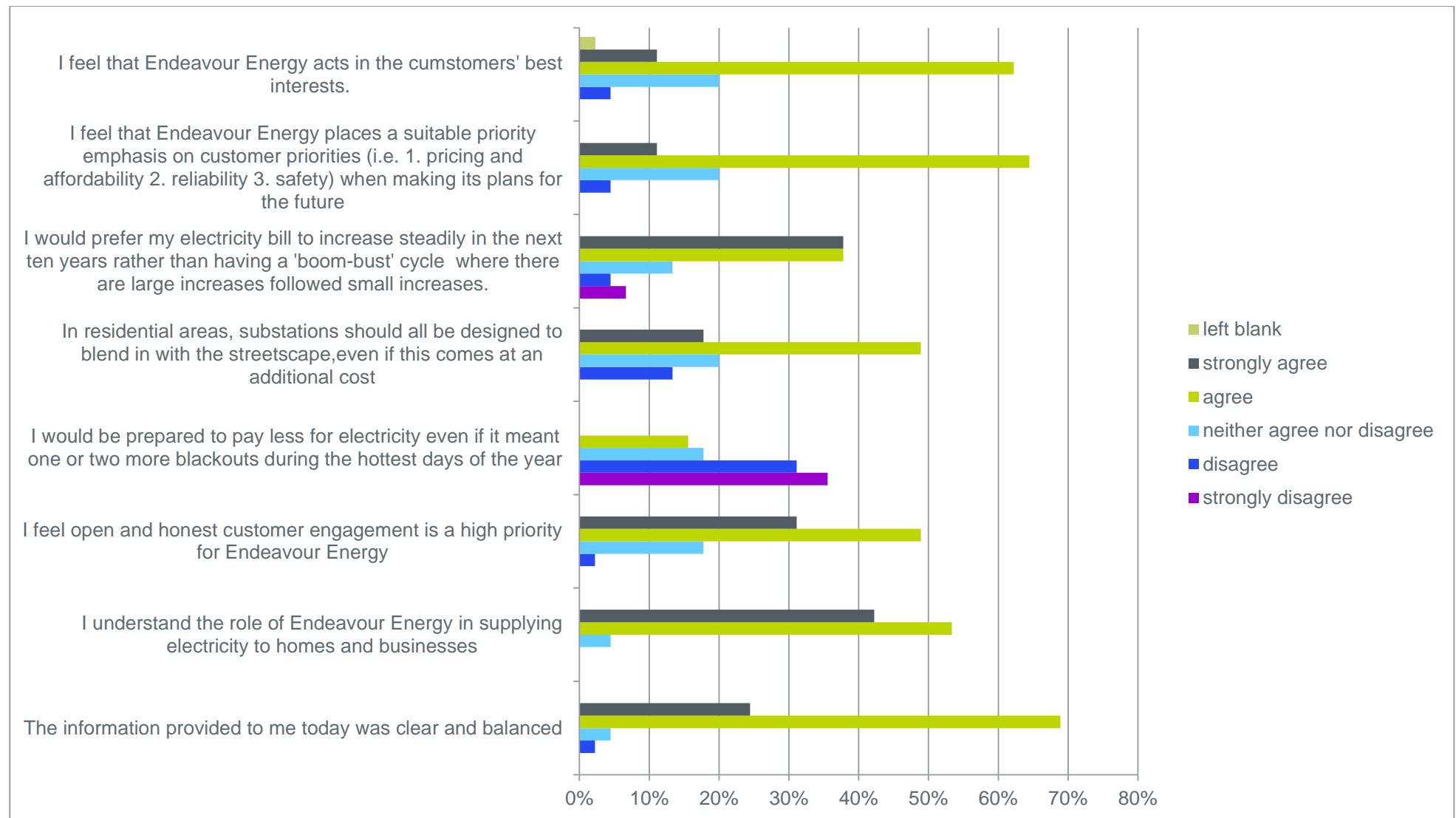
WHAT SHOULD WE CONSIDER DOING DIFFERENTLY TO SAVE YOU MONEY?

"Better communication on a shared platform – that would be less costly, e.g. people all calling a call-center and being bounced around, would be costly and time consuming"



CONSUMER SURVEY RESULTS

RESPONSES TO SURVEY QUESTIONS



(n = 45 residential and small/medium business customers i.e all forum participants surveyed)

RANKING OF SUPPLY AND PRICING SCENARIOS BY IMPORTANCE

Question 9: Please consider the following scenarios in relation to the supply and pricing of your electricity then rank them in order of importance to you? (1 = most important and 7 =least important).

	Affordability and stability of network prices	Maintaining current level of reliability without increasing prices	Paying more for better reliability	Paying less for reduced reliability	Safety of electricity network	Supporting vulnerable households	Having more knowledge about how to decrease my energy consumption
1 (most important)	31%	38%	0%	4%	24%	7%	18%
2	18%	31%	2%	0%	18%	18%	7%
3	18%	7%	13%	9%	31%	11%	9%
4	9%	11%	13%	9%	11%	20%	22%
5	4%	4%	9%	9%	9%	29%	24%
6	13%	7%	31%	22%	2%	11%	9%
7 (least important)	2%	0%	27%	44%	2%	2%	9%
left blank	4%	2%	4%	2%	2%	2%	2%

Key results

- 49% of respondents ranked 'affordability and stability of network prices' as either most important, or second most important. 2% said it was least important.
- 69% of respondents ranked maintaining current reliability most important or second most important. No respondents ranked maintaining reliability as least important.
- 66% of respondents ranked paying less for reduced reliability as their least important or second least important. Four percent ranked reliability as either most important, or second most important

PARTICIPANTS' ENGAGEMENT PREFERENCES

Question: 10. Please rank, in order of preference, how you would like to be engaged by in the future. (1 = most preferred, 5 = least preferred).

	Public forums	Interactive workshops	Email updates	Websites and social media channels like Facebook and Twitter	Through different consumer interest and advocacy groups
1 (most preferred)	40%	22%	13%	7%	11%
2	36%	36%	11%	4%	4%
3	9%	16%	27%	20%	20%
4	4%	7%	20%	24%	38%
5 (least preferred)	4%	13%	20%	36%	20%
left blank	7%	7%	9%	9%	7%

Key results

- 76% of people ranked public forums as either their most preferred or second most preferred form of engagement.
- 58% of people ranked Interactive workshops as either their most preferred or second most preferred form of engagement.

APPENDIX 1 - CONSUMER SURVEY

Customer Engagement Forum Survey - November 2014

Please evaluate the following statements.

1. The information provided to me today was clear and balanced.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

2. I understand the role of Endeavour Energy in supplying electricity to homes and businesses.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

3. I feel open and honest customer engagement is a high priority for Endeavour Energy.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

4. Please consider the following scenarios in relation to the supply and pricing of your electricity then rank them in order of importance to you? (1 = most important and 7 = least important)

<input type="text"/>	Affordability and stability of network prices
<input type="text"/>	Maintaining current level of reliability without increasing prices
<input type="text"/>	Paying more for better reliability
<input type="text"/>	Paying less for reduced reliability
<input type="text"/>	Safety of electricity network
<input type="text"/>	Supporting vulnerable households
<input type="text"/>	Having more knowledge about how to decrease my energy consumption

Customer Engagement Forum Survey – November 2014

5. I would be prepared to pay less for electricity even if it meant one or two more blackouts during the hottest days of the year.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

6. In residential areas, substations should all be designed to blend in with the streetscape, even if this comes at an additional cost.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

7. I would prefer my electricity bill to increase steadily in the next ten years rather than having a 'boom-bust' cycle where there are large increases followed small increases.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

8. I feel that Endeavour Energy places a suitable priority emphasis on customer priorities (i.e. 1. pricing and affordability 2. reliability 3. safety) when making its plans for the future.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

Customer Engagement Forum Survey – November 2014

9. I feel Endeavour Energy acts in the customers' best interests.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

10. Please rank, in order of preference, how you would like to be engaged by in the future.

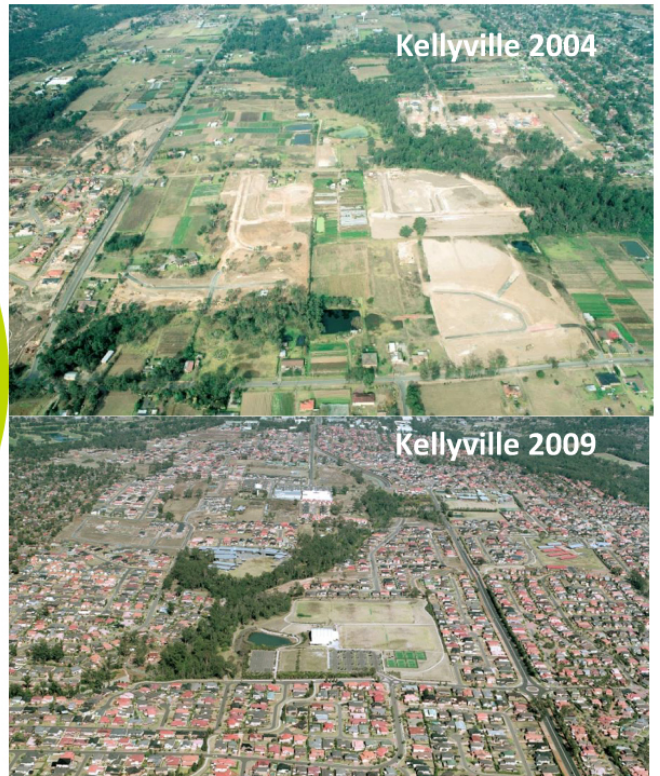
(1 = most preferred, 5 = least preferred).

<input type="text"/>	Public forums
<input type="text"/>	Interactive workshops
<input type="text"/>	Email updates
<input type="text"/>	Websites and social media channels like Facebook and Twitter
<input type="text"/>	Through different consumer interest and advocacy groups

APPENDIX 2 - GROUP ACTIVITY SHEETS

GROWTH

24.6% of the proposed capex budget is allocated for expanding the network to connect new customers in growth areas and to ensure the network can cope with future demand.



GROUP ACTIVITY FACT SHEET

Electricity infrastructure for new growth centres will foster local economic development.

We power some of the fastest growing regional economies in NSW including Sydney's North West and South West Growth Centres – areas earmarked by the NSW Government for future housing. These two areas alone are predicted to become home to more than 500,000 people in more than 180,000 dwellings in areas similar in size to Wollongong and Canberra.

The amount we nominate to spend on growth is based on forecasts. We rely on land release rate forecasts which mean if infrastructure is not required we don't spend the money. In this instance money is not taken from customers because it has not been spent.

When buying new property, part of that money goes towards putting electricity infrastructure underground. That infrastructure then connects to the nearest connection point and flows through the broader network to the nearest substation. From there it requires augmentation to allow for all the consumers to be connected to it. The shared network is paid for by the allocated capital expenditure allowance.

Putting lines underground (versus overground) is between 6 and 10 times more expensive. New substations can cost around \$20-30m. The cost of a substation can vary according to its design which is paid by all bill payers.

Substation designs

There are different design options which are suitable for various areas. For example:

- **New residential subdivisions**– These areas are designed with mainly indoor substations with underground feeders (i.e. power lines). All the electrical equipment is enclosed in building architecturally designed to blend in with the local homes.
- **Existing residential areas** - Substation may be either indoor or outdoor depending on their age. Many older substations have outdoor switchyards
- **Industrial area.** These substations have an outdoor switchyard and there is not as extensive work undertaken on facades and landscaping is not as extensive.

Before building or upgrading a substation design, we consider:

- Technical issues. It is important to locate substations at the centre of the electrical load
- Price
- Safety
- Aesthetics
- Environmental issues
- Heritage implications.

Discussion questions

- Do you have any questions or comments about this topic?
- What have we done well?
- What could we do better?

What we've heard...

Customers want attractive streetscapes, well designed infrastructure, tidy streets and construction sites. Failure to do this lessens satisfaction.

Our commitments

- We're preparing to meet this extra growth and maintain our existing network by investing responsibly and efficiently in our network over the next five years.
- We'll keep designing substations to blend with residential streets but spend less on design in industrial areas to save money.
- The infrastructure that we have delivered (relating to capex investment) has been delivered more cheaply than what was historically the case by:
 1. using contractors who work under our direction
 2. doing more work that 'blends' our workforce with external contractors to do things safely, to our standards, but faster and at less cost.



RENEWAL

(Design,
overground
versus
undergrounding)

GROUP ACTIVITY FACT SHEET

With an estimated value of \$5.3 billion, Endeavour Energy's network spans 24,500 square kilometres and is made up of over 170 major substations, 315,000 power poles and 28,000 smaller substations bound together by 33,000 kilometres of underground and overground cables.

In the last five years we have invested more than \$2 billion in our network to meet licence conditions set by the former NSW Government to improve reliability by replacing ageing 'baby-boomer' assets i.e. assets built in the 1960s, and cater to for growth in new connections.

We appreciate the impact the cost of network infrastructure investment has had on the communities we serve which is why, now that we've delivered the largest reinvestment program that Endeavour Energy has ever seen, we no longer have the need to reinvest in the immediate term and our costs reflect this.



Renewal factsheet cont.

52.8% of the proposed capex budget is allocated for asset renewal and replacement. This is for replacement of poles and wires and investment in upgrading and building substations to make sure our reliability is maintained.

Our focus is on maintaining reliability and making sure assets remain in good condition so that we achieve a sustainable level of network investment, rather than a 'boom-bust' cycle.

There are pockets of our network that don't have the same level of reliability as the rest and we need to invest in those areas to ensure that all customers paying for that electricity see a similar level of reliability.

Topics for discussion

- Do you have any questions or comments about this topic?
- What have we done well?
- What could we do better?
- What should we consider doing differently to save you money?

What we've heard...

Most customers rate Endeavour Energy's reliability as very good and don't want to pay more for a better service, nor are they prepared to pay less for poorer reliability.

Our commitments

- **Maintain our current level of reliability and improve areas with the poorest reliability.**
- **Replace network assets at the end of their service life in a planned and efficient manner**
- **Replace transformers, circuit breakers, power lines and other equipment throughout our network based on their condition and serviceability.**



RELIABILITY

- How does Endeavour Energy compare?

GROUP ACTIVITY FACT SHEET

Endeavour Energy owns and operates one of the most reliable electricity networks in Australia. Endeavour Energy is required by NSW law to provide customers with a safe and reliable electricity supply.

Making sure the network is as reliable as possible has cost implications related to maintenance and providing new infrastructure.

- We spend money replacing, maintaining or improving the necessary network infrastructure (e.g. poles and wires) to deliver a reliable electricity service.
- Making sure the network is as reliable as possible has cost implications related to maintenance and in providing new infrastructure.
- In most cases, we do need to interrupt your supply to work safely on the network. These are known as 'planned outages'. We notify customers of these outages via several methods including a letterbox drop to residents to inform them of dates and time the planned outage (four days ahead of the work) and by providing information on our website.
- Customer electricity supply can also be interrupted for reasons we cannot control e.g. car accidents, storms and bushfires. We call these 'unplanned outages'

The System Average Interruption Frequency Index (SAIFI) is commonly used as a reliability indicator by electric power utilities. SAIFI is the average number of interruptions that a customer would experience in a calendar year. The lower the score, the more reliable the network, but this can come at a cost to the consumer.

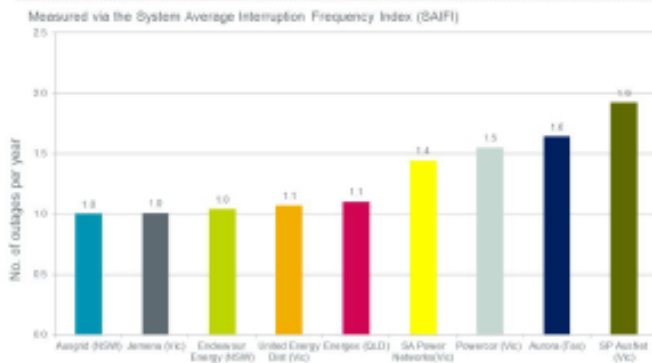


RISKS

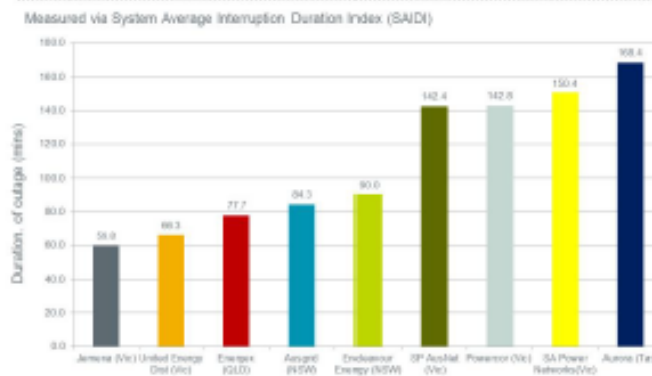
Reduced reliability:

1. If our capital program is not delivered on time the electricity supply may be less reliable in some areas.
2. If we don't receive approval to fund our maintenance program from the AER.

HOW DOES OUR RELIABILITY COMPARE? NUMBER OF OUTAGES PER YEAR



HOW DOES OUR RELIABILITY COMPARE? DURATION OF OUTAGE



Discussion questions

- Have you had an electricity outage in the past 6 months?
- If so, how did you find out how long it would be before power was restored?
- How would you prefer to find out about planned outages and unplanned outages?
- Would you be prepared to experience more frequent or longer outages on the very hottest days of the year if your network charges were significantly less than they are now? (say \$100 less per year).

What we've heard...

Most customers rate Endeavour Energy's level of reliability as very good and don't want to pay more for a better service, nor are they prepared to pay less for poorer reliability.

Customers also asked us to improve how we notify them about outages and to improve content.

Our commitments

- We plan to maintain our current level of reliability and improve areas with poorest reliability.
- We're planning a new mobile site to give you live outage information.
- We'll investigate improved notifications using SMS and smart phone apps and review our written interruption notices.



MAINTENANCE AND REPAIR

21.3% of the proposed opex budget is allocated for maintenance and repair activities on the network assets.

GROUP ACTIVITY FACT SHEET

This category covers all maintenance and repair activities on network assets; it excludes fault and emergency repairs and restoration of supply for planned and unplanned interruptions which are categorised as emergency response.

Components include maintenance and repair of distribution power line equipment, damaged or inoperable switchgear, distribution and zone substations, and customer service mains.

Just like replacing a car, there comes a point in the life of our network assets when it is better to replace the assets rather than continue to maintain 'ageing' assets'.

Topics for discussion

Do you have any questions or comments about this topic?

What have we done well?

What could we do better?

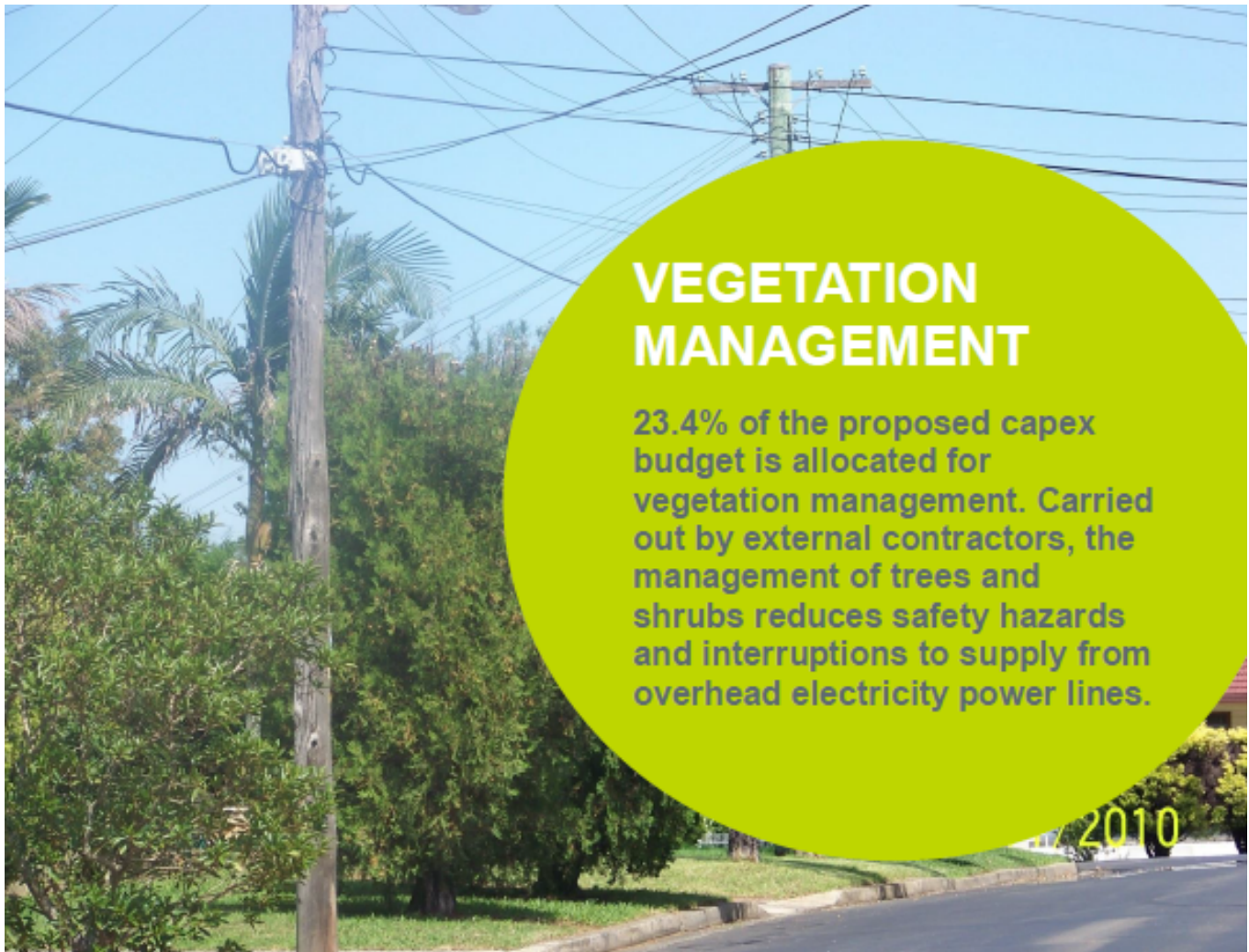
What should we consider doing differently to save you money?

Our commitments

We are actively pursuing options to reduce the levels of maintenance to an appropriate level. The biggest issue is that safety cannot be compromised. What we're dealing with cannot pose a risk to communities or to our staff.



Endeavour
Energy



VEGETATION MANAGEMENT

23.4% of the proposed capex budget is allocated for vegetation management. Carried out by external contractors, the management of trees and shrubs reduces safety hazards and interruptions to supply from overhead electricity power lines.

Electricity and trees do not mix

It is important to keep a safe distance between trees and power lines. The safety clearance prevents people climbing trees and being electrocuted and reduces the inconvenience to customers due to supply interruptions caused by branches touching power lines. Critically, vegetation management minimises the risk of power lines starting bushfires.

- To keep the community safe, we typically need a safety clearance of between 3 and 4.5 metres between trees and power lines.
- Trees planted directly under low voltage power lines need to be managed so they grow no greater than 4.5 metres in height. It is not always possible to maintain the look of large trees planted near power lines in order to achieve safety clearances.
- Pruning prevents the more drastic step of having to remove large trees near power lines. It can look severe at first, but trees grow back fairly quickly.
- Most of the trees pruned by Endeavour Energy are council street trees, planted after the power lines were constructed.
- We provide customers and councils with advice more suitable tree species for new planting.

Topics for discussion

Do you have any questions or comments about this topic?

What have we done well?

What could we do better?

What should we consider doing differently to save you money?

What we've heard...

"I understand you need to trim trees for safety but I don't always like the result"

Customers asked that we educate councils and residents about more appropriate plantings.

Our commitments

To ensure this service is delivered at the most efficient cost to customers we externally source a significant majority of our vegetation management activities.

A key driver of our increased costs in this area is upward movements in market delivered contracts secured by Endeavour Energy for the next regulatory control period. We have adopted a prudent approach to sourcing these external contracts and have selected the least cost, compliant provider.

We must continue to reduce safety hazards by trimming trees. We'll work with Councils to promote new planting of appropriate species in overhead areas and we'll keep streets clean too.



EMERGENCY RESPONSE – FAULTS AND EMERGENCY REPAIRS

GROUP ACTIVITY FACT SHEET

18.2% of the proposed Opex budget is allocated to cover fault and emergency repairs and restoration of supply for planned and unplanned interruptions caused by events such as storms, equipment failures, acts of vandalism, and damage caused by vehicle collisions.

The majority of this budget is to cover labour costs to repair the network.

Strong winds, lightning, flooding and bushfires are natural events that can damage the network that brings power to your home or business.

If widespread interruptions occur, we follow a specific restoration process that's based on our experience and best practices for our industry that is tailored to the customers and communities served by our network. This includes the following actions:

1. Once a large storm is forecast, we cancel planned maintenance, mobilise emergency response crews and move them to the places where it is likely they will be needed most.
2. Our first priority is to keep everyone safe. As part of our initial assessment of damage, we ensure all power lines on the ground are made safe and attend to other life threatening situations.
3. To return power to customers, wherever possible, we open and close switches throughout our network to re-route supply and restore power to as many customers as quickly as possible.

4. We then work to repair transmission lines and damaged equipment in our major substations. Unless we complete repairs here, we cannot restore power to individual homes and businesses.
5. Next we restore power to important public facilities like hospitals, emergency service facilities and sewage treatment plants.
6. Main distribution lines that serve hundreds of customers and central business districts are next, followed by power lines servicing specific neighbourhoods.
7. We then focus on repairing damage to supplies for individual homes and businesses, continuing our work to restore power to all customers.

Topics for discussion

If our proposal is not approved by the AER, it could mean that the response times for our emergency crews in some areas, will increase.

Do you have any questions or comments about this scenario?

What have we done well?

What could we do better?

What should we consider doing differently to save you money?

What we've heard...

Customers don't want safety and reliability standards to be compromised, even for lower prices.

"I expect safety to be a big priority for such an essential service"

Our commitments

We will continue to restore power to the greatest number of customers in the shortest possible time when storms (or other natural events) cause widespread supply interruptions.

We will improve our safety programs for our staff and contractors.

We will review our services for vulnerable customers, particularly life support customers.