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- **Endeavour Energy**
- **2019 Disclosure**

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About the Energy Charter

The Energy Charter is an industry led, world-first initiative focussed on embedding a customer-centric culture and conduct in energy businesses to create real improvements in price and service delivery. It was designed in consultation with Australian energy stakeholders and customer representatives in 2018. Endeavour Energy became a signatory in January 2019.

Signing onto the Energy Charter commits Endeavour Energy to publicly account for how we are delivering against the Charter principles. Our performance will be assessed and evaluated by an independent panel.

Our approach to the Energy Charter has been to assemble a team of senior leaders to identify our strengths and weaknesses against the Energy Charter principles. This work occurred as our 2019 business plan rolled out and helped identify ways it was aligned to the Charter principles and suggest ways to reduce the gaps in what we do. We think this is a sensible approach for a business new to the Energy Charter. We want to continue to embed the Energy Charter principles over the next few years so that all employees understand how the work they do every day contributes to better customer outcomes.

Our customers depend on us to power their homes and businesses so they can go about their daily lives, knowing their electricity is safe, affordable and reliable. They also expect us to plan for their vastly different energy needs as Australia moves to a clean energy future.

While servicing our local communities has always been at the heart of what we do, we recognise there are always opportunities to improve our business and generate better customer outcomes.

That's why Endeavour Energy was pleased to accept an invitation to join 18 other electricity and gas businesses and support the Energy Charter. We think it is a very positive and practical step that will help the industry work together to benefit all customers and help shape a better future for Australia.

This requires an openness to change and industry collaboration, something that Endeavour Energy has always strived to do.

We also signed onto the Energy Charter because its five principles align strongly with our values, business direction and ambition.

Endeavour Energy recently set its sights on becoming Australia's best performing network after transitioning from NSW Government ownership in mid 2017. In order to be the best, we must always strive to be better. Striving to be better requires new ways of working, and an openness to fresh and different thinking.

We think the Charter's values and principles will help challenge us to keep customers at the forefront of planning and decision making. This requires continued cultural change at Endeavour Energy, and across the industry, and this will take some time.

Our first disclosure report sets out our progress over the past year in shaping our business strategy and structure so we can stand out in the future.

We hope that by reporting our progress for all to see, the Charter will initiate conversations with our customers and stakeholders on ways we can further improve our business and the outcomes we deliver for customers.

We look forward to those conversations.



Hon. Robert Webster
Independent Chair



Leanne Pickering
Interim Chief Executive Officer

Serving 2.4 million people with safe, affordable and reliable electricity

We distribute affordable, safe and reliable electricity to 2.4 million people or one million connected customers in homes and businesses across Sydney's Greater West, the Blue Mountains, Southern Highlands, the Illawarra and the South Coast. We are a 'poles and wires' business that lights homes and streets, powers businesses, keeps communities safe, sustains jobs and drives economic growth.

We plan, construct, operate and maintain an electricity network that powers Australia's third largest economy and some of the fastest growing regions in Australia.

Our area includes Sydney's second airport, its surrounding 'aerotropolis', and the NSW Government's priority land release areas in Sydney's North West and South West. Over the next 20 years, these areas will be home to communities similar in size to Wollongong and Canberra. The population of Western Sydney is expected to increase by 900,000 over this time and we expect more than 20,000 new customers will connect to the network each year.

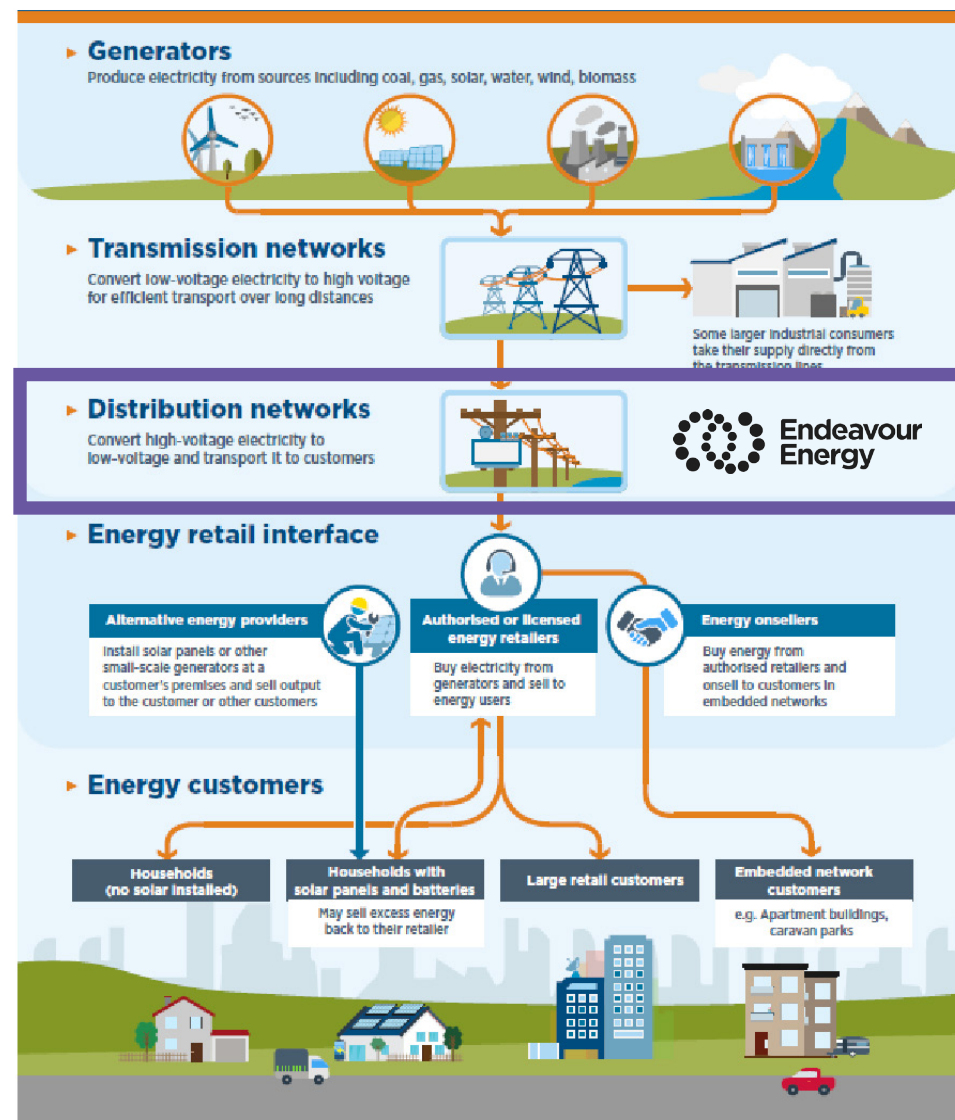
We also serve large cities and urban centres, major medical precincts, manufacturing areas and tourist destinations including the world heritage listed Blue Mountains.

We work with customers, stakeholders and regulators to prepare for Australia's clean energy future where smart meters, batteries and solar will enable customers to generate, store and sell back electricity into the grid.

We also partner with energy innovators to help customers take advantage of new technologies like electric vehicles, microgrids, and artificial intelligence.

We're 50.4% owned by a consortium of private investors operating under a 99-year lease with the remaining balance retained by the NSW Government.

We are not a retailer. We don't buy and sell electricity and we don't send customers their final bill.



Source: AER, *State of the Energy Market*, December 2018, p. 28.

Our business is changing fast

A regulated business

We are a natural monopoly. Our customers are who they are because of where they live and work. As a monopoly, we are subject to strict economic, safety, reliability, critical infrastructure and climate change regulation. We are governed by the National Electricity Rules which are made by the Australian Energy Market Commission under National Electricity Laws.

The revenue we are allowed to earn (and therefore the network prices we are allowed to charge) funds the efficient costs of our operations and is governed by the Australian Energy Regulator. It is set every five years and based on extensive feedback from customers and stakeholders.

This is known as 'incentive-based regulation', because if we are able to make efficiencies and reduce costs below our allowed revenue we can keep the savings for a period of time. Customers benefit from this because the regulator then uses this new information gained in one period to set tougher benchmarks and lower allowed revenues for the next. This means savings made by the business puts downward pressure on customer prices. Endeavour Energy has a history of operating below its regulatory allowances for capital and operating expenditure and benefiting from regulatory incentives designed to improve customer outcomes.

Endeavour Energy's recent [regulatory proposal](#) covers the five years from 2019-24 and was decided by the AER in April 2019 with network prices for all customers approved by the AER from 1 July.

Endeavour Energy's lengthy record of running its business as efficiently as possible means that Endeavour Energy's customers have paid the lowest network charges in NSW since 2012-13, and are likely to see a decade of falling charges to 2024.

The NSW Minister for Energy licences us to operate within the area we serve and also decides the funds our customers must pay to support climate change. The NSW Minister for Energy also requires the Independent Pricing and Regulatory Tribunal to monitor compliance with strict safety, reliability and critical infrastructure obligations.

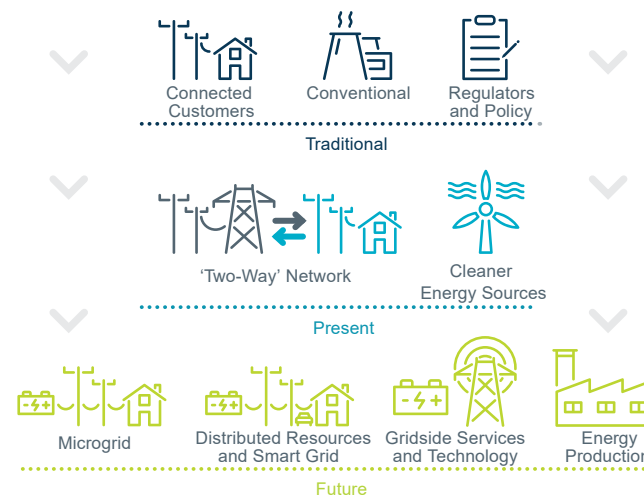
Rapid changes to the industry

Our business is changing fast. What was once a network of poles and wires delivering one way electricity supply to customers is evolving into a two way system, where our customers can send power to the grid via their own mini generation systems, largely made up of roof top solar and increasingly battery systems.

There has been enormous growth in solar for Endeavour Energy. In June 2010, there were just 8,557 solar systems on rooftops. Now there are 130,000 connected to the network.

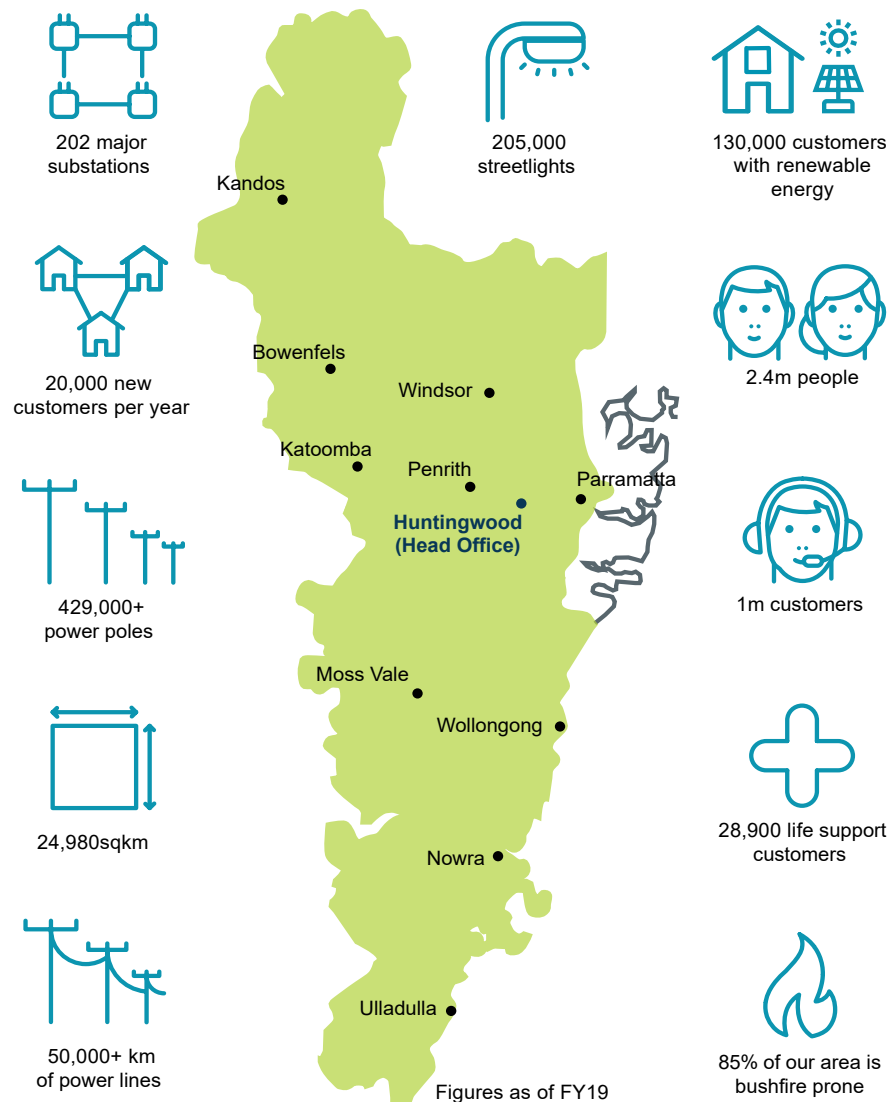
This rapid technological change poses significant opportunities but also challenges for Endeavour Energy to manage the safe and reliable integration of all these distributed energy resources in the network.

If properly managed, solar and storage systems can work together as virtual power plants, reducing the need for investment in poles and wires infrastructure, and ultimately saving customers money on power bills.



To help plan for these changes, the electricity and gas industry invited customer advocates and energy industry stakeholders to help the CSIRO map out a plan called the [Electricity Network Transformation Roadmap](#).

Endeavour Energy's leadership chaired the group that designed the Roadmap and is committed to its implementation. Senior managers are working on innovation projects to maximise opportunities presented by this revolution.



Endeavour Energy has hosted a Customer Committee for more than 20 years, drawing on the advice of representatives from a raft of respected organisations when making decisions that impact our customers and community. In 2019 we revised and broadened its membership to better reflect the diverse interests of the customers we serve, the rapid growth our region and the push towards more environmentally sustainable energy.

This Peak Committee is supported by a number of interest specific working groups. The committee supported our voluntary commitment to the Energy Charter in December 2018. We discussed the benefits for customers of signing up to the Energy Charter and our progress in preparing disclosures with the Committee during meetings and also on an informal basis.

They welcomed Endeavour Energy's involvement and offered supportive and constructive suggestions about improving customer outcomes. Specific suggestions included improving outage communications during major incidents, practical ways to engage with Culturally and Linguistically Diverse communities, the need to prepare balanced disclosures, a request for clarity on our plans to address climate change, and clarity on our demand management strategy and outcome.

The Committee also recognised that, given the first year of the Charter, disclosures were general in nature. The Committee would like to be more involved, and earlier, throughout next year and have asked for regular progress reports on improvement plans.

Key customer outcomes in FY19

Affordability



We locked in plans that will see total network charges for residential and small business customers reduce by

17.7%

by FY24 in real terms



10 years

of declining network charges were 'locked in' from FY14 to FY24



26 initiatives were identified to help reduce long term investment in the network

Reliability



On average, customers experienced one unplanned outage lasting

78 mins

per annum



99.9% reliability

maintained without compromising safety



\$35m was

invested in vegetation management to ensure greater reliability during storms

Customer service & engagement



184,110

fault & emergency calls were answered by our customer service team

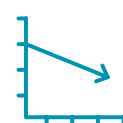


32,443

life support customers were proactively contacted during unplanned interruptions



81% of customer calls were answered within 30 secs



42% reduction in customer complaints compared to FY18



79% is our current Customer Satisfaction Index score



79% of employees participated in our staff engagement survey. 70% said they understood customers' needs

Safety & Environment



27% reduction in total recordable injuries compared to FY15



28% reduction in direct greenhouse gas emissions in the past 5 years



550

primary schools took part in Electricity Safety Week



51,694

LED streetlights have been installed to reduce energy and maintenance costs for local councils



70%

of high voltage distribution feeders have been upgraded to enhance public safety and reduce the risk of bushfires started by powerlines



Saved customers

\$23 million through energy savings programs that avoided investment in expensive infrastructure

Growth



47,605

new customer connections were approved with 88% given same day approval



22,000

new homes and a town centre at Leppington powered by a new zone substation after a mobile substation offset investment



Australian industry first online portal launched to help non-network providers identify the most efficient ways to utilise our network, defer capital investment, and therefore keep downward pressure on prices for our customers

Our focus over the past year has been to deliver our customers' top priorities of affordability, safety, reliability while meeting growth challenges, improving our culture and sustaining business success.

Our new owners and our Board have set Endeavour Energy's sights on being the best performing network in Australia. To achieve this objective, over the past year we have invested significant effort to transform our business.

1. Our People

- improving safety performance by working towards zero incidents and building the ownership of safety outcomes at all levels of our business
- building a high performing, customer-centric culture
- developing the capability of our people to deliver our customers' energy future.

2. Customers

- improving affordability by delivering a decade of declining network charges to 2024
- maintaining affordable, reliable and secure electricity supply with the average unplanned outage per customer at 78 minutes per annum
- helping prosumers to connect solar, batteries, and microgrids by preparing our network and connection services.

3. Commercial success

- efficient capital investment focussed on only that investment required for safe and reliable electricity and to allow new customers to connect at the lowest possible cost to all customers
- efficient debt management to keep downward pressure on electricity prices
- collaborative and respectful engagement between customers and stakeholders working in the long-term interests of customers and finalising our regulatory proposal.

4. Streamlining performance

- transforming our technology platform to deliver better customer self-service, streamlined data and greater efficiencies to keep downward pressure on customers' electricity bills
- cutting red tape so we can be more efficient
- improving the productivity of our workforce to offset the costs of investment.

We have detailed our performance in the following pages aligned to the Energy Charter principles, so you can see how our efforts are delivering better outcomes for our one million connected customers in partnership with stakeholders who affect those results.

A more efficient business

After sustained effort over the past decade to improve efficiency, we're proud to deliver the lowest network charges in NSW for our customers, a trend we expect to continue over the next five years. It means people who live in Greater Western Sydney and the South Coast pay less for their network charges than those who live in other parts of NSW. We've also co-designed new tariffs with customer advocates which should have the long-term effect of helping retailers and customers better manage usage.

We've become a more efficient business without compromising safety or reliability while meeting unique growth challenges. Last year we invested \$542 million to deliver a capital program of approximately \$333 million and operating expenditure of \$209 million. This involved work on 40 major building construction projects, replacing over 20 kilometres of steel mains and 21,000 service mains and completing 45 reliability projects. We also invested \$35 million in making our network more resilient to severe weather events by managing trees growing within safety distances of powerlines. This investment means, on average, each customer had one or two outages in the year for an average time of 78 minutes.

Customer growth

Customer growth in 2019-20 is the driver for an \$83 million investment in new substations, powerlines and cables to provide electricity supply to new residential customers in the Leppington area and new commercial and industrial customers in the Erskine Park area. We are planning to invest \$94 million to replace old infrastructure throughout our network to maintain safe and reliable electricity. The proposed total network capital expenditure for 2019-20 is \$298 million. Importantly, network investment in the coming year is less than previous years as we focus on what is only needed to ensure the safety and reliability of electricity supply and to allow new customers to connect at the lowest possible cost to all our customers.

We have steadily improved our safety performance for employees but believe more needs to be done to embed a safety culture and improve public safety, reflected in a new executive leadership role.

Aligning our structure to improve customer outcomes

Our analysis also showed we have some way to go before we provide great service to our customers and highlighted an opportunity to rethink the way we organise our people to best serve our customers. We're planning a new team with a new executive role to focus wholly on improving our customer experience.

Plans to improve

We signed the Energy Charter because customers have a right to have a say in the services we deliver; to help us account for our performance and to identify service improvements. In working through the Energy Charter principles in action, we have identified 44 key business improvement opportunities which we will track and report progress to our Board. Embedding the Energy Charter's principles will take time, and we're up to that challenge.

Understanding our customers

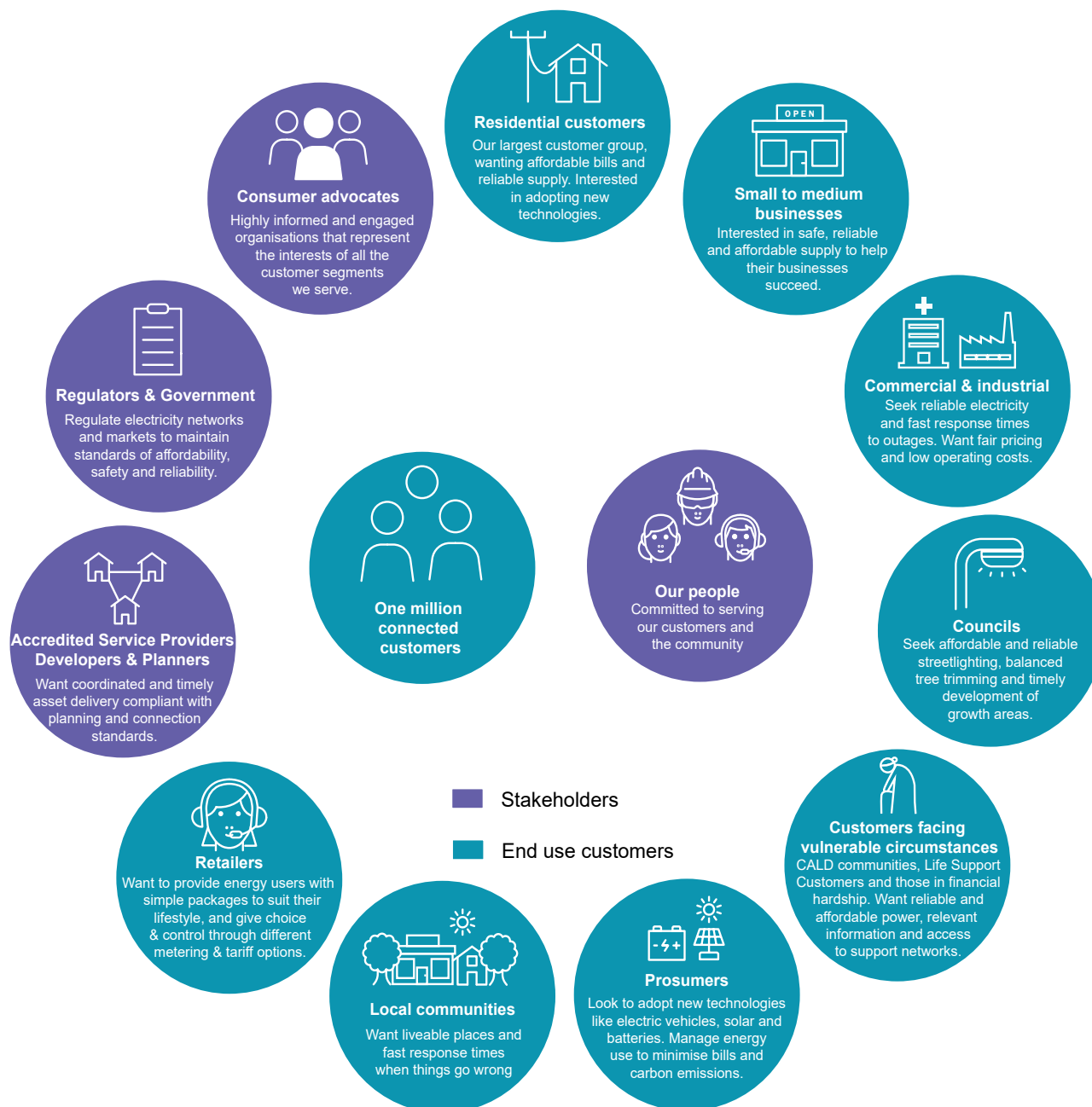
While we have traditionally segmented customers according to electricity consumption, we show our main customer segments here according to their needs. This helps us to design improved services.

The largest segment includes 931,593 households located within urban and surrounding rural areas. A rapidly growing subset of this group includes 28,900 life support customers, who depend on reliable electricity to power medical equipment. We also have 130,000 solar customers. We expect this group to continue to grow as battery storage becomes more accessible in terms of price and quality.

We serve 79,352 commercial customers and 5,580 industrial customers who consume large amounts of electricity and so depend on affordable and reliable electricity for their business success. They include local councils, hospitals, some government businesses, major shopping centres, manufacturers, and a group of high voltage customers. These customers rely on Endeavour Energy for a safe and reliable connection to the network so their businesses keep running week in, week out.

We regard retailers as both customers and stakeholders. Stakeholder actions also affect end use customers and we aim to work collaboratively with them to ensure service delivery is customer focussed and reflects market developments.

Type	Electricity use	Number
Residential	<160MWh per annum	931,593
Commercial	<160 MWh per annum	79,352
Industrial	>160 MWh per annum	5,580
Site specific	>40 GWh per annum or 10MVA	40





Principle One: We will put customers at the centre of our business and the energy system

Having the right culture underpins the way we behave, the decisions we make and the outcomes we deliver. We recognise that getting the culture right for our customers is crucial not only to deliver on our customer commitments, but also to the long-term success of our businesses. We will develop the culture within our businesses that puts the customer at the centre and will work together and with our stakeholders to deliver the safe, affordable, reliable and sustainable energy system the community expects. - The Energy Charter

Why this matters - improving culture

Our Board sets the 'tone at the top' and fosters a culture where our people are safety focussed, customer-centred, performance driven, fair and just, and ethical at all times. This is important because we manage the Endeavour Energy network and assets on behalf of the communities we serve. Our communities expect Endeavour Energy to look after their interests and protect their rights. By working ethically, Endeavour Energy instils confidence in customers, maintains good business relationships, meets its regulatory and legal obligations and builds a sustainable business with high performance over the long term.

Key customer outcomes



1.1 Have a Board that actively oversees the business' culture so as to be aligned with Energy Charter Principles.

Evidence

- The Board has approved our [Code of Conduct](#) and [Statement of Business Ethics](#). Together, they set expected behaviour, define five corporate values and the set of ethical principles which guide everything we do.
- One of our values is our **customer and community focus**. It requires all employees to deliver value and reliable service to our customers and communities, use resources responsibly and efficiently and be environmentally and socially responsible.
- Our Board visits our workplaces, attends annual recognition awards, supports

leadership programs and talks to staff at all levels in the organisation to foster a safe, customer focussed culture. This is a key improvement in transitioning the business from government to private ownership.

- The Board receives reports on subjects designed to drive Endeavour Energy's culture:
 - progress against the Energy Charter principles and how they translate to improved customer outcomes
 - management updates on safety, customer satisfaction with network services and electricity supply
 - the business' engagement with regulators, customer groups and stakeholders
 - progress with cultural change initiatives including our Employee Engagement Survey and related action plans
 - alignment of the community partnership program with corporate values and business objectives
 - oversight of Endeavour Energy's advocacy program, which includes understanding our customers' energy priorities and developing deeper and more collaborative relationships with regulators and stakeholders.

Continuous improvement

- We will report monthly analysis of customer complaints to the Board from August 2019.

1.2 Have management operationally accountable for embedding a 'customer at the centre' culture.

Evidence

- Our Executive are measured in part against a range of customer-related KPIs. They are responsible for cascading these across their teams.
- All Endeavour Energy managers have their performance assessed twice yearly against a [leadership competency framework](#) that includes a strong customer focus and objectives aligned with business priorities.

Continuous improvement

- We are creating two new executive positions: one is dedicated to health, safety and the environment; and one will lead a new customer experience group. This group brings together customer-facing functions.



Principle One: We will put customers at the centre of our business and the energy system

1.3 Ensure their work force is engaged and incentives are aligned to drive positive customer outcomes

Evidence

- In December 2018, 79% of employees completed Endeavour Energy's new AON Hewitt engagement survey. This survey showed an overall engagement score of 51%, three points below the ANZ energy industry (energy industry is inclusive of transmission, distribution and retail). Prior to this engagement survey, a quarterly pulse survey was conducted with 25% of employees invited to have their say. Key measures from this survey were included in the AON Hewitt Engagement survey for continuity. In December 2018, all measures had increased by at least 8%, showing engagement trending in a positive direction.
- New development programs were introduced with 30 employees attending our emerging leader program and 37 participating in the operational leadership program. Also, the Women in Leadership Program alumni and Women in Trades network were launched with 20 members.

Continuous improvement

- Endeavour-wide and local engagement action plans are in place, supported by regular communications and ELT monthly reviews to monitor progress. Our target is to be in the top quartile for employee engagement when compared to energy sector peers by FY24.

Case study 1 - employee engagement

A company-wide response to the employee engagement survey saw 1700 employees take part in 58 strategy workshops over 17 locations from March to June. These workshops were designed to provide insight into the future of the industry and to give people the opportunity to have a say about our plans. More than 2000 ideas to improve the business or customer outcomes were generated. This marked a step change in employee engagement linked to strong customer outcomes for Endeavour Energy.

Importantly, our people were also asked for their views on values to help drive our culture, behaviour and how we make decisions. More than 85% of our people rated customer satisfaction as the top value.

These workshops also introduced our refreshed brand essence and values to our people. Our new brand essence, strongly advocated by our CEO and welcomed by employees, is to deliver superior outcomes for customers.

Case study 2 - fostering high performance

We launched a new program to recognise the contribution of our people and drive a performance culture. So far 480 awards have been given to those who have gone the extra mile. The inaugural Standing Ovation Awards showcased 32 award recipients and 20 highly commended employees who improved business and customer outcomes across safety, customer service, innovation, leadership and our unsung heroes.

1.4 Have robust processes to determine customer and community needs and be accountable on how feedback has been considered and incorporated into decision making.

Improved engagement across our business is shaping better outcomes for customers and communities. Our customers want network charges to be kept as low as possible while we deliver a grid ready for the future.

Evidence

- We sought constructive and respectful engagement with customers and their advocates to shape our five-year revenue and pricing plans as well as the design of new tariffs. This helped us to co-design plans with consumer groups to sustain downward pressure on our contribution to customers' electricity bills and reduce unnecessary capital investment. According to the AER, Endeavour Energy has led the industry in adhering to the customer impact principle in developing its new tariffs designed to give customers greater choice and control over their usage and bills. Further detail is discussed in principle in action 3.2.
- Endeavour Energy independently evaluated our approach to engagement, inviting candid feedback on our performance and acting on those results. As a result, our leadership team speaks directly to customers and stakeholders to provide these key groups with direct access to decision-makers.

Senior executives have led bi-lateral meetings with priority stakeholders, chaired peak consumer group discussions, and led presentations at focus groups, deliberative forums and deep dive workshops.

We invite consumer advocates, industry representatives and industry regulators to all major engagement initiatives and share customer research with industry counterparts. [Customer and stakeholder engagement reports](#) can be found on our [Your Say Endeavour Energy](#) engagement portal set up in 2017.



Principle One: We will put customers at the centre of our business and the energy system

- Our five year regulatory plans demonstrate that material changes in key customer priorities such as price, reliability, tariff choices and controlled investment have occurred as a direct result. We have welcomed feedback from stakeholder organisations on how they want to be engaged and adjusted our activities accordingly. Major customer and stakeholder engagement processes include:
 - a detailed four-phase engagement plan to inform our regulatory plans
 - engagement with government planning departments to better coordinate significant regional developments
 - consultation on capital and maintenance projects
 - regular consultation with councils on streetlighting and vegetation management.
- We revised the purpose and membership of our Peak Customer and Stakeholder Committee in 2019 and broadened its membership base, acting on feedback about our engagement processes. The meetings are chaired by an Executive member to give customer representatives direct access to our top leaders. Our Interim CEO participates in all meetings.

Continuous improvement

To further improve customer and stakeholder engagement we will:

- embed a more robust engagement process by the end of FY20 where our new Peak Customer and Stakeholder Committee and related working groups will help identify customer priorities and partner with us to drive improvements
- share learnings on effective engagement across the energy industry via the Energy Charter's Better Together Working group
- independently review regulatory engagement to identify opportunities for improvement and map stakeholders for 2024-29
- complete a benchmarking exercise of our engagement with CALD communities and identify ways to better engage with them through the most appropriate channels

1.5 Demonstrate a culture of innovation and collaboration for positive customer outcomes, including through the sharing of insights with government, research institutions and across the supply chain, as well as joint advocacy on regulatory, policy and operational issues.

Evidence

- Endeavour Energy gave evidence to The NSW Legislative Council Select Committee on Electricity Supply, Demand and Prices in late 2018. Its focus was to investigate the reasons for the large increases in the price of electricity; the impact of the deregulation of electricity prices in 2014; any price gouging by energy retailers; an

assessment of the effectiveness of current regulatory standards and guidelines; the adequacy of programs to assist low income earners; and the level of planning to meet future electricity demand in NSW.

Endeavour Energy provided a [written submission](#) to the Committee on 8 June 2018. This submission explained our past role in increasing electricity costs and emphasised Endeavour Energy's record of running its business as efficiently as possible to keep downward pressure on our portion of customers' final electricity bill without compromising the safety and reliability of electricity supply. Central to this submission was that Endeavour Energy's customers paid the lowest network charges in NSW since 2012-13, and would see a decade of falling charges.

Case study 3 - Australian Power Quality & Reliability Centre

Endeavour Energy recognises the need for practical research and development to maintain and improve services to customers amid the rapid growth in distributed energy resources, particularly regarding the quality of electrical supply and the development of future power systems.

In 1996, Endeavour Energy entered into a partnership with the University of Wollongong to establish the Australian Power Quality and Reliability Centre. It is Australia's only recognised power quality research centre, is recognised internationally as a centre of excellence in power systems research and is an important part of training the next generation of engineers for the power industry.

The strength of the Centre comes from its wide-ranging expertise in both power systems and customer loads, its strong contacts with industry and its knowledge of international research efforts.

In 2019 Endeavour Energy extended its collaboration through continued financial and in-kind support to the Centre to 2022.

Customer benefits include:

- detailed technical studies to address power factor correction, harmonic distortion, voltage sag mitigation, transient over voltages, domestic energy saving devices, load control systems and domestic energy storage
- saving large companies hundreds of thousands of dollars in avoided electricity cost by helping them to operate their businesses within the capabilities of the network
- piloting innovative technology aimed at improving power reliability to customers and reducing the cost of energy with the better control of distributed energy resources

Continuous improvement

- Continue to fund the Australian Power Quality & Reliability Centre's research to support Endeavour Energy and the broader electricity supply industry in improving power quality and reliability for customers.



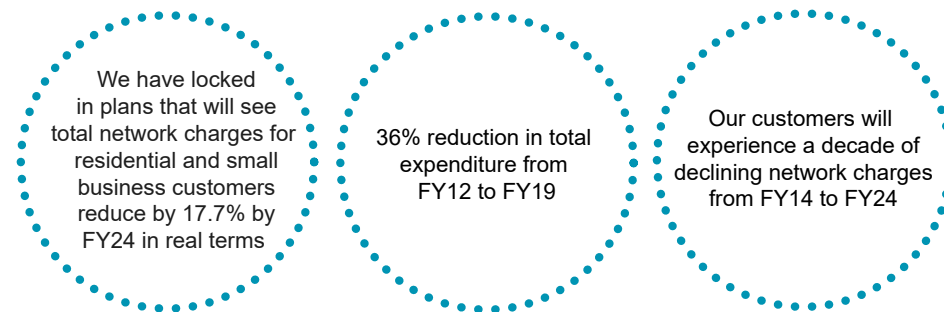
Principle Two: We will improve energy affordability for customers

We recognise that affordable energy is essential for Australian households and businesses. We will do what we can to make energy more affordable, by running our businesses efficiently so customers benefit, by offering customers energy deals that best meet their needs, helping them manage their energy use, and by working together to put downward pressure on price, as well as innovating for cost effective solutions that meet residential and business customer needs. - The Energy Charter

Why this matters:

Our costs make up about 31 cents in every dollar paid by an average residential customer, down from a high of around 44 cents in 2014. We can improve affordability by being more efficient without comprising safety and reliability and by designing tariffs that help customers manage their use and costs. We work with customer advocates, our regulator and retailers to do this.

Key customer outcomes



2.1 Ensure that investment, commercial and operational decisions are cost efficient, and explain how customers benefit from these decisions.

Evidence

- Endeavour Energy's organisation-wide efficiency programs have cut annual total expenditure by 36% from \$1,055.2 million in 2011-12 (real, 2018-19) to \$670.5 million (real, 2018-19) in 2018-19.
- Our 2018-19 operating expenditure was \$82.6 million (real 2018-19) lower than it was in 2011-12 and is now better than the benchmark amount set by the AER. This reduction has directly decreased prices for customers.
- We have engaged our people to help identify new ways of working to deliver the same level of service, reliability and safety at lower costs to customers. These programs have made our workforce more competitive and improved the commercial aspects of our asset management decisions.

- Over the next five years we will continue to put downward pressure on electricity bills while maintaining a safe and reliable network, servicing population growth, and facilitating greater customer control over energy use. We plan to do this in five key ways by:
 - **containing investment** to only that required to ensure safe and reliable electricity for an expected 105,000 new connections and to replace ageing equipment built in the 1960-70s with new, more efficient technology
 - **becoming more efficient** and offsetting the costs of necessary investment as far as possible so we can pass savings onto customers. We will do this by delaying expensive capital investment with demand management programs, reducing overheads, developing a flexible workforce and an agile, innovative culture
 - **developing new ways** for customers to control their own electricity costs by preparing the network to connect solar, batteries, microgrids and smart meters, and offering customers a greater variety of tariff options
 - **more efficient utilisation** of our network to reduce peak demand and keep downward pressure on electricity prices
 - **developing contingency plans** for future developments such as the Western Sydney Airport so customers don't pay for new infrastructure until it's needed.
- Investing in new and replacement infrastructure represents a significant portion of Endeavour Energy's annual expenditure. In developing investment programs, it is important to achieve an appropriate balance between safety and loss of supply risks and the impact of expenditure on network prices.
- These combined initiatives mean in FY20, residential and small business customers on average received a reduction of around 3.8% to the Endeavour Energy charges in their final electricity bill. This outcome has been achieved despite the added cost pressures of needing to extend our network to meet growth in new connections, managing an ageing asset base and meeting increased compliance to vegetation management standards.



Principle Two: We will improve energy affordability for customers

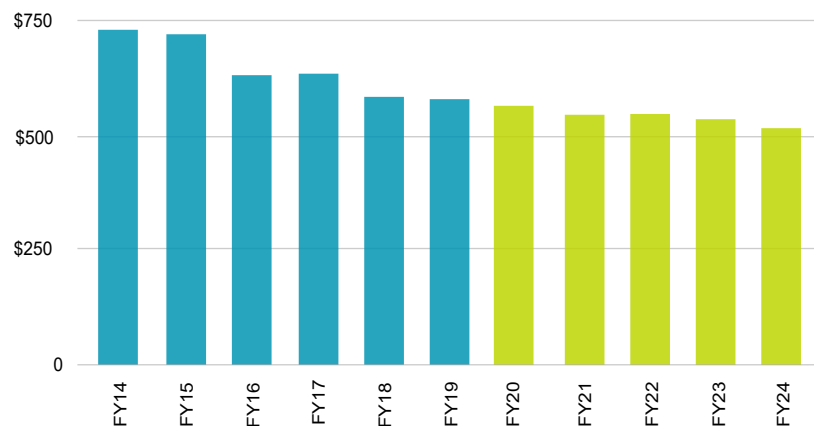
Continuous improvement

Total network charges will reduce by 17.7% by FY24 in real terms. This equates to an average reduction of 3.7% per annum. The savings to our network charges over the next five years are:

Residential customers	Electricity use
\$89 per year less in 2024 than residential customers paid in 2018-19	\$141 less per year in 2024 than business customers paid in 2018-19
\$257 saved by 2024 compared to 2014 charges	\$315 saved by 2024 compared to 2014 charges

* The savings are based on average consumption and prices in real FY19 dollars excluding inflation

Average network charges for residential and small business customers



2.2 Offer customers energy deals that best meet their needs, supported by effective tools and incentives for customers to manage their energy use and cost.

Why this matters

The way customers use and consume electricity is changing as well as the technology to use it. Smart meters are now rolling out across our area and solar and battery uptake is growing. While we aren't a retailer, we can help customers reduce costs through well designed network tariffs coupled with education, demand management and incentives. Our objective is to lower costs for everyone by enabling customers' energy choices and encouraging more informed consumption of electricity.

Evidence

- On 1 July 2019 we introduced more cost reflective demand and time of use tariffs to help customers make informed choices about how and when they use electricity supplied from the network. These charges show customers when their electricity consumption drives an increase in future network expenditure. It will also help retailers develop offers that deliver customers better value from their energy choices.
- We co-designed tariff principles with consumer advocates so we could test how well they meet customer outcomes. We agreed on: transparency; predictability; efficiency; and equity.
- If our new tariffs are passed on by retailers, customers will have the option to take greater control over their bills while lowering the future price of electricity for everyone connected to the network. We are mindful however that not all customers will have the same level of desire, readiness or opportunity to take control over their consumption. So we have provided flexibility for customers to opt in or out of the tariff reform, which is being introduced in stages.
- From 1 July 2019, new customers and existing customers whose basic meter is upgraded to a digital meter will be placed on the transitional demand tariff by default, with the right to opt-out to a flat tariff if they prefer. Customers who already have a smart meter can choose to opt-in to the new demand and time of use tariffs to gain the greatest benefit from their investment in solar, batteries or electric vehicles.

2.3 Work cooperatively across the supply chain and with other stakeholders to improve affordability over the short and long term

Evidence

- We have worked closely with the AER and our key stakeholders to plan for network price decreases over an extended period. To resolve outstanding matters from our 2014-19 regulatory proposal, in 2018 we submitted a proposal supported by key customer advocacy groups that 'locked in' a \$75 reduction in network charges for the average residential customer from FY13 to FY18. This was also due to a decade of efficiency programs.
- Endeavour Energy pioneered whole of sector 'deep dive' workshops in 2017 as part of consultation on its five year plans. They brought together regulators, retailers, other distributors, developers, consumer advocates and representatives of our Board to increase transparency of our plans, better understand customer priorities and assess trade-offs regarding our five year capital and operating expenditure plans. Customers directly benefited because the workshops significantly reduced our proposed investments and reversed a capital contributions policy.



Principle Two: We will improve energy affordability for customers

Continuous improvement - 2.2 & 2.3

- We will review how we set our prices to meet customers changing energy needs and retailers' preference for simplified network tariffs that are easily understood by customers, and we will monitor their use of the new tariffs.
- We will share our learnings on effective tariff design with the Energy Charter's Better Together tariff team.

2.4 Innovate to deliver competitive energy solutions for business and residential customers.

Case Study 4 - customer mapping portal

Endeavour Energy developed an Australian industry first with a digital customer portal featuring two interactive maps in a simple to understand visual format. We did this because customers pay much less in their final bill for expensive infrastructure if we can help developers and battery providers understand where there is excess capacity or constraint in the network. Constraints are driven by the number and type of connections, particularly where they are concentrated in the same area. If network capacity becomes scarce, connection costs dramatically increase, which can result in premature network investment and poor customer outcomes. Conversely, there are portions of the network where spare network capacity exists that offer the opportunity for lower connection costs.

For this information to be useful to customers, it needs to be easy to access and understand. It also promotes innovation as more options are generated from good quality information and ultimately leads to better investment decisions. There are two types:

1. a [network opportunities map](#) to show where network capacity exists for developers of residential and industrial areas and major spot loads for commercial and industrial developments
2. a [non-network opportunities map](#) to improve the accessibility of information for service providers to develop demand management proposals in a more efficient and cost-effective way to defer further network capital investment. This map provides detailed network asset and planning information for third parties to help integrate demand-side solutions that result in improved services and lower network prices.

These maps are a practical example of listening to our stakeholders and responding to their input as we design the network of the future. Customers benefit because growth is more likely to occur where we have capacity or committed investment as well as developers being aware of alternate options in areas where it may be expensive or uneconomic for grid connection.

Continuous improvement

- We have improved investment planning by:
 - moving to a risk quantification model where all investment benefits and future risk reductions are quantified to enable an accurate comparison of all investments
 - engaging with internal and external stakeholders on the acceptable level of risk reviewing the approach for investment decisions
 - moving away from considering discrete items to portfolio consideration and resulting risk outcomes.
- The next step for the program is to invest in a more capable assessment tool that will enable more sophisticated optimisation and achieve multiple conflicting objectives. The program is delivering outcomes for customers by investing where need is greatest.

2.5 Advocate on behalf of customers to improve energy affordability through engagement in regulatory and policy processes.

Our [Revised Regulatory Proposal 2019-24](#) details our advocacy for customer outcomes on demand and time of use tariffs. These tariff structures were developed and changed based on direct feedback from customer advocates through our deep dive process that supported our regulatory proposals to the AER. While we believe that the new structures will provide the framework and tools for customers engaged with their energy use to optimise the value for their services, with flow on effects for the whole of our cost to serve, we recognise that not everyone is able to engage to the same degree.

To safeguard customer choice, and provide opportunity for customers to learn about cost reflective pricing approaches and how they can make the most out of them, Endeavour Energy along with customer advocates PIAC and ECA sought to preserve choice within the most recent AER decision for Endeavour Energy. We advocated the need for a transition path for implementing new pricing structures as the "default" price path. We also argued for protections to allow customers to forego the transition if they were ready to fully engage now with new ways of pricing, as well as opt-out arrangements for customers who are unable or unwilling to engage with new ways of pricing. See Principle in Action 2.2.

Continuous improvement

- We will improve consultation with retailers on tariff design. We will assess the use of the new tariffs by retailers and identify whole of sector collaboration opportunities.



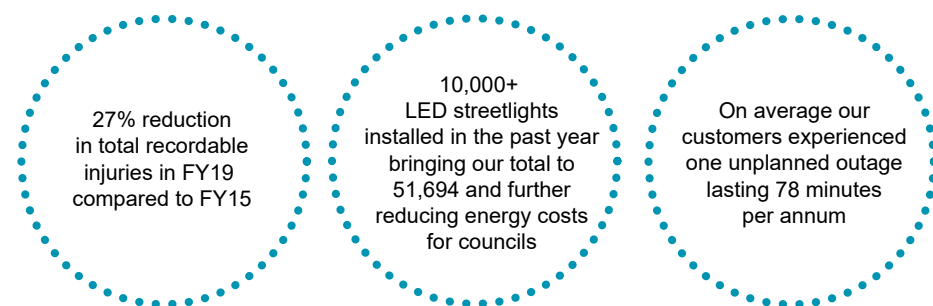
Principle Three: We will provide energy safely, sustainably and reliably

We recognise the essential nature of energy and the need to deliver and use energy safely, sustainably and reliably. We recognise the role of energy businesses to respond to the shift to a cleaner energy system that is already underway. We understand the value energy brings to the community and the potential consequences and impacts for customers when reliability and quality of energy supply is compromised. We will provide energy safely, sustainably and reliably. We will listen to customer preferences and demonstrate how they inform decisions and outcomes and how the community benefits. - The Energy Charter

Why this matters

Electricity is an essential service, used by everyone, every day. Keeping the power on is very important for our people and communities. We also have a moral and legal obligation to protect people from the risk of serious injury or fatality, protect the environment and prepare for a low carbon future.

Key customer outcomes



3.1 - Maintain the highest standards of safety for its people, the community and the environment

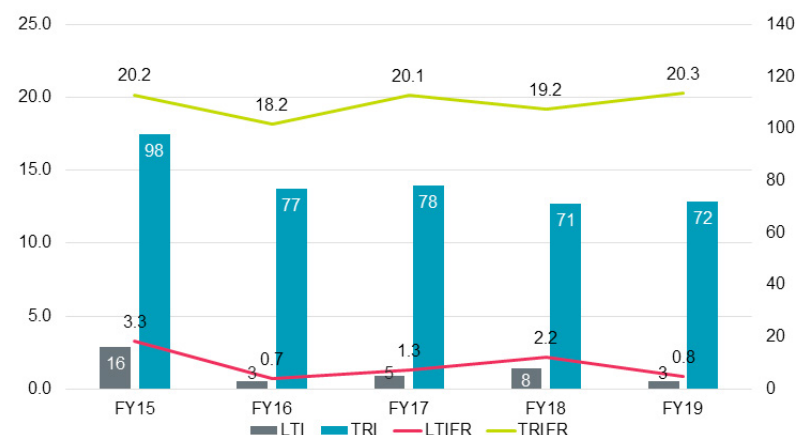
Evidence

- Delivering electricity safely, without harm to people, the community or the environment is Endeavour Energy's highest priority. Our Health, Safety and Environment Strategic Plan sets out the direction.
- We aim to achieve Destination Zero through strong safety and environmental leadership embedded as the way we do things around here, adapting to emerging risks, and with a constant pre-occupation with what can go wrong.



- We monitor accident and injury rates and near misses for our workforce and the public and report serious breaches to the Board and regulator. Our safety performance has been gradually improving but we know it can be better. Several private contractor accidents and a concern to strengthen our safety culture led to a new position in our Executive.

Lost time injury frequency rate and total recordable injuries 2014-15 to 2018-19



- We continue to focus on behavioural safety – encouraging our people to take responsibility for their safety and that of others and supporting our people to challenge unsafe behaviour through our Safety Is Defence program. Ninety-seven people have been trained as coaches to implement this program.
- We educate our customers, community and electrical workers about electrical safety. Risks to customer safety are documented in our Public Safety Formal Safety Assessment, which forms part of our Electricity Network Safety Management System.
- Our Public Electrical Safety Awareness Plan targets tradespeople and outdoor workers; primary-aged school children; landholders with private electricity lines and poles in bushfire prone areas; boat operators navigating waterways with powerline crossings; emergency services workers who may come into contact with powerlines during emergency situations; and home renovators.



Principle Three: We will provide energy safely, sustainably and reliably

Case study 5 - Electricity Safety Week

For more than a decade, students at more than 550 primary schools (94% of the total) across the network learn how to avoid electric shocks and stay safe around electricity as part of Electricity Safety Week. Electricity Safety Week forms part of Endeavour Energy's Public Electrical Safety Awareness Plan and provides young children an early introduction to electrical safety to help them understand how electricity and people can live, learn and work together safely. Teachers receive detailed lessons developed in collaboration with the Department of Education. While delivering important practical lessons about electrical safety, Electricity Safety Week helps teachers meet the Science & Technology and PDHPE syllabus outcomes for years K-6.

Case study 6 - protecting lives and limiting injury

Our Protection Group has made an extraordinary contribution to saving lives and reducing the severity of injuries by putting a different lens on safety through engineering and innovating for better outcomes. Their work on renewing older assets and protection settings, has massively reduced the seriousness of arc-flash incident injuries.

When an apprentice plumber mistakenly chiselled an underground cable thinking it was a tree root, he escaped serious burns thanks to their ingenuity and dedication. This innovative solution is an Australian first and recently won our annual safety award.

Thanks to the Protection Group, who continue to lead the way in reducing safety incidents, 70% of high voltage distribution feeders have been upgraded to improve public safety and reduce the risk of bushfires started by powerlines. This means there are also far fewer 'mains on the ground' incidents following faults, a lower bushfire ignition risk and less inadvertent trips because of design errors.

The Environment

Why this matters

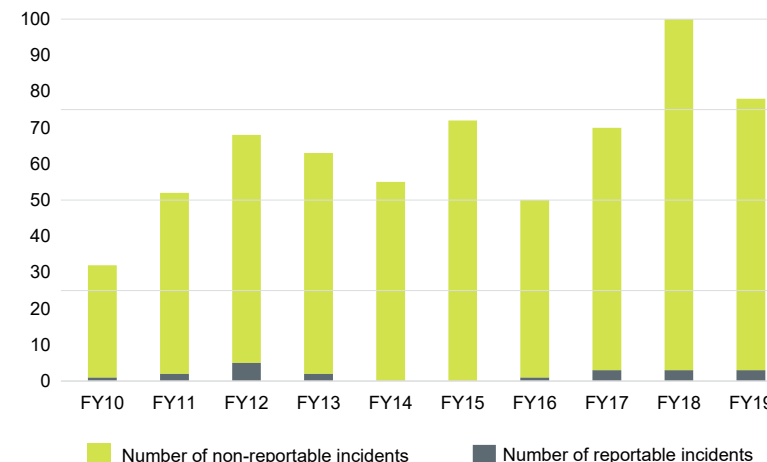
Our values require us to be environmentally responsible in our operations, when working in communities and in protecting the natural environment. This builds customers' and stakeholders' confidence that we are committed to exceeding our statutory obligations.

Evidence

- We operate in a way that reduces our environmental footprint and respects the communities in which we work. We continue to maintain, design and construct the electrical network in a manner that considers the community's needs. Large network projects include comprehensive community engagement and are publicly displayed and assessed in accordance with the [NSW Code of Practice for Authorised Network Operators](#).

- Our Environmental Management System (EMS) was certified with IS14001:2015 Environmental Management in December 2017 and applies to all our activities.
- We continue to divert waste from landfill by encouraging recycling or re-use of products. In the coming year, we are aiming to divert more than 340 tonnes of old timber poles from landfill for recycling as building products.
- We are installing 1.9 megawatts of solar power at 13 of our sites. Following completion, we expect to shave up to 40% off our existing electricity bills on these sites and reduce greenhouse gas emissions from our operations by 1,778 tonnes per year.
- During 2018-19, 78 environmental incidents were reported. Three incidents were reported to regulators, with two deemed uncontrollable. Corrective actions have been put in place to prevent the one controllable incident reoccurring.

Reportable and non-reportable Incidents FY10-FY19





Principle Three: We will provide energy safely, sustainably and reliably

Continuous improvement

- The new Executive General Manager Safety, Health & Environment will review our safety strategy, declutter safety procedures and sharpen our cultural focus on safety. They will also lead our decarbonisation strategy across the business.
- Continue to promote Safety is Defence as our business-wide cultural safety program.
- Improve safety awareness among general public workers following the fatality of a roofing contractor due to misadventure. We are collaborating with SafeWork NSW and Dial-Before-You-Dig NSW/ACT to design a new campaign that addresses scaffolding, machinery and plant coming within safe approach distances to overhead and underground assets and to raise awareness about appropriate safety control measures to manage the risks of working near the network.

3.2 Engage with customers and the community on investments, and manage operations in line with their expectations, demonstrating how communities benefit.

Evidence

- In 2018/19 we finalised extensive engagement on our plans for the next five years. This included new co-designed tariffs to prepare customers for the roll out of smart meters across our network. Initiatives included:
 - ten focus groups to understand customer attitudes and priorities about electricity
 - two deliberative forums where customers told us what they expected regarding safety, reliability, affordability, supplying growth areas, and enabling their future energy choices
 - four deep dives and one feedback forum which provided input into our capital and operating expenditure plans, new tariff structures and investments
 - online community to test priorities and attain feedback from customers on our engagement processes
 - regular Customer Consultative Committee meetings with peak stakeholders and customer advocates to provide feedback on our consultation process and determine priorities.
- We designed open engagement processes on tariff design inviting other networks, regulators, consumer advocates and operations managers to participate. Engagement sessions were led by our CEO. The AER commended our work with consumer groups to address the impact of these changes on customers. The AER cited ECA feedback on this research which said: "...the engagement on the tariff structure proposals was effective and collaborative, leading to an innovative proposal from Endeavour Energy that responded to issues raised by stakeholders".

- We know from our engagement program that affordability remains the number one concern for our customers, but not at the cost of reliability or safety. We have committed over the next five years to reduce our capital expenditure forecast by 21% in the interests of customer affordability while maintaining current network reliability.
- We met 21 councils twice a year to understand their expectations around street lighting and tariffs. This led to an accelerated rollout of more sustainable LED streetlights and:
 1. An overall real reduction in public lighting charges of 8% followed by annual CPI increases until 2024.
 2. A pricing differential between LED and non-LED luminaries of 15% to further encourage their use and reflect expected maintenance savings.
 3. More efficient roll out LED lighting without the additional cost of paying off all residual values of existing mercury vapour luminaries. This commenced in 2017 under the Western Regional Organisation of Councils Lighting the Way project and continues to expand.
- Using this program, we have replaced 10,423 streetlights with LED luminaries over the past year, bringing the total installed to 51,694, which will see local councils' total energy costs decrease. Further savings will be progressively realised by councils as LEDs become the standard through reduced maintenance costs over time.

Case study 7 - fixing street lighting charges

Our regulator told us that some of the tools we use to communicate the costs and prices of different technologies are too complicated, so we have simplified street lighting charges for customers.

We heard that prices based on the technology used were informative but didn't help customers to work out the best asset for them and created additional complexity in bills. With this in mind we used an outcomes-based approach for defining our lighting services. Rather than focusing on the assets used we have sought to present the pricing in terms of the size of the area illuminated: small, medium, large and extra-large.

By having a direct case study of how to provide prices for services, rather than assets, we are hoping to develop a basis for further engagement with councils on how we can not only deliver the services they want for lower prices but also extend this into meeting their information needs about these services.

Continuous improvement

- We will continue to help councils transition to lower cost LED streetlights to save costs.
- We will progress the ten priority areas for action identified by our customers in our 2019-24 regulatory proposal and report progress to the Board on a six-monthly basis.



Principle Three: We will provide energy safely, sustainably and reliably

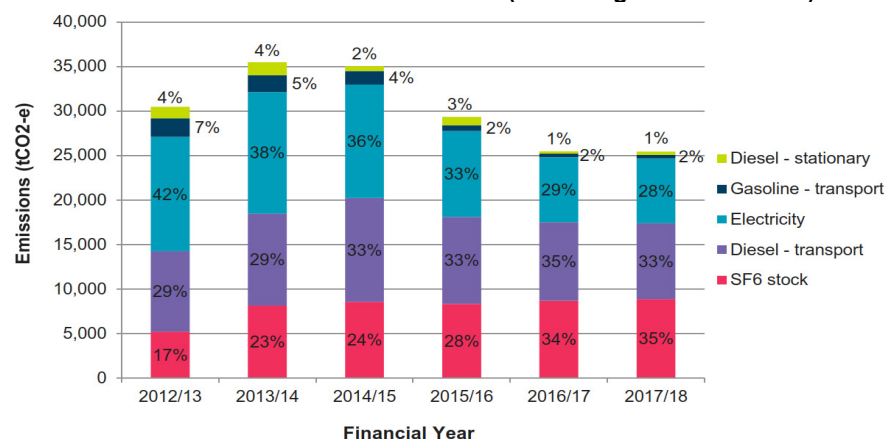
3.3 Develop business strategy and manage operations to respond to the shift to a cleaner energy system that is already underway.

Endeavour Energy's network is enabling the transition to Australia's low-emissions energy future. It supports distributed renewable power generation while keeping electricity supply reliable and costs down for customers. Our network connects over 130,000 rooftop solar systems, storage devices and high-tech appliances for customers to reduce the environmental impact of their energy use.

Evidence

- We recognise that greater emphasis needs to be placed on an integrated strategy to support the transition to a low emissions energy future. The Board has created a new General Manager Health, Safety & Environment to lead this work.
- We report greenhouse gas emissions, energy production and energy consumption annually under the National Greenhouse and Energy Reporting Act 2007 and aim to reduce our carbon footprint. Direct emissions from our operations have decreased by 28% over the past five years. Analysis of the emission data from 2012-13 to 2017-18 shows that network losses constitute, on average, 95.2% of the total.

Carbon Emissions 2012-13 to 2017-18 (excluding network losses)



- We have reduced network losses by: using higher voltages to transfer energy over longer distances; specifying low loss transformers for all new work; managing peak demand by offering controlled load tariffs and time of use tariffs; and collaborated with universities and technology development companies.

- Separating network losses from total carbon emission highlights sustainability improvements in other areas including reducing electricity consumption at our field service centres and offices and maintaining the consumption of diesel in our plant, equipment and fleet at historical levels.
- We are currently trialling electric vehicles (EVs) in a long-term strategy to replace small passenger diesel vehicles from the fleet, with EV charge points having been installed at two of our large operating centres
- To guide this transition, the [Electricity Network Transformation Roadmap](#) was developed as a partnership between Australia's national science agency CSIRO and Australia's electricity networks to provide detailed milestones and actions to guide an efficient and timely transformation over the coming decade. Endeavour Energy made a significant contribution to the development of the Roadmap and its pathway for electricity networks to transform into an intelligent, clean customer centric network.

To date, the Roadmap has been the basis for our future network strategy and has shaped our business strategies and operations, to respond to the shift to a cleaner energy system in an efficient way. Between 2016 and 2022, we will have invested over \$60 million to develop 24 initiatives across five focus areas to realise \$169 million in customer net present value as shown below.

		Budgeted Expenditure	Value Created
	Customer Oriented Electricity	- Improve trust with customers - Provide a service platform	\$1.5m \$40m
	Power System Security	- Frameworks for power system security - Services for power system security	\$9.5m \$74m
	Carbon Abatement	- Secure a stable carbon policy - Review scope for consensus on more efficiency carbon pricing	\$10m \$12m
	Incentives & Network Regulation	- Incentivise efficiency and innovation - Transform efficiency of energy delivery with orchestration of distributed energy resources	\$6.1m
	Intelligent Networks & Markets	- Develop information tools for a cost effective integrated grid - Establish active distribution system operations and markets	\$33m \$43m

The initiatives are listed in our [Future Networks](#) report. Key initiatives include the:

- Pending implementation of an **advanced distribution management system** for automated outage identification, restoration and optimisation of network performance to drive efficiencies that benefit customers through a reliable supply of electricity.
- Trial of **residential and grid-support energy storage systems** to support the network times of peak demand, provide customers with more choice and control and keep downward pressure on electricity bills - see Principle 4.3.



Principle Three: We will provide energy safely, sustainably and reliably

- **Integration of smart meter data** with our proposed advanced distribution management system to provide a comprehensive view of network health at the edge of the grid and monitor safety, reliability and security of supply.
- Implementation of a **demand response app** to educate customers and help them actively participate in demand management initiatives in real time.
- Development of a **load estimator to support customers' choice** to connect distributed energy resources without risking network safety, reliability or security, and to accelerate the transition to be an intelligent network.

Case study 8 - NSW's largest grid support battery

We have installed NSW's largest (1.5MW hour) grid support battery at West Dapto to sustain load growth in the West Lakes Illawarra development area. Battery storage systems have significant potential to reduce network capital costs, help manage load growth, peak demand, power quality and supply interruptions

The experience gained from this trial will help Endeavour Energy build and operate a secure, reliable and affordable network for customers in the future. It will further enable Endeavour Energy to quantify the benefits of battery storage in a real, grid-scale setting and provide the expertise to utilise this technology as future needs arise.

The trial at West Dapto could reduce our network investment by up to \$1 million per year to keep downward pressure on our network charges. Similar battery systems could be deployed in other growth areas of Endeavour Energy's network to defer the construction of up to four new zone substations by 2024.

Continuous improvement

- Endeavour Energy has commenced a decarbonisation project which will enable us to set science-based targets to guide our approach for emissions reduction over the long term. This involves:
 1. understanding our emissions profile and current emissions trajectory (Scope 1, 2 & 3 emissions)
 2. examining the range of carbon reduction and energy savings opportunities available
 3. developing a science-based emissions reduction pathway relevant to the asset we manage.

The first step in this process includes internal stakeholder workshops to develop energy and emissions baseline data as the foundation of science-based targets. By early 2020, we will have identified targets and projects to deliver further emission reductions across the business.

- Track and report Environmental Sustainability Strategy improvement opportunities to enable a more sustainable business. Key focus areas are:
 - preventing pollution of the environment
 - protecting flora, fauna and heritage
 - better managing waste and contaminated materials
 - reducing greenhouse gas emissions
 - consider the impact on the environment across the life cycle of our decisions.

3.4 Work with government, other energy businesses, the community and industry bodies to develop a planned transition to a cleaner energy system.

Evidence

- Two case studies on electric vehicle charging infrastructure and an ARENA DER trial demonstrate our work with government, other energy businesses and industry bodies to develop a planned transition to a cleaner energy system. See page 20.
- We work with the Greater Sydney Commission, the NSW Government, business chambers, local councils and their communities, and developers to plan development of our network in a sustainable manner at the least cost to the community.
- We participate in Urban Development Institute of Australia (UDIA) NSW committees and presentations to the developer forums to advise them on network development plans and inform them of non-network options and emerging approaches such as batteries and microgrids. The UDIA NSW represents more than 500-member companies and agencies across the public and private sector. This keeps downward pressure on network charges by allowing for the efficient connection of new customers where there is existing capacity or committed investment and makes developers aware of alternate options in areas where it is not economic for grid connection.
- Endeavour Energy is an active participant in the Greater Sydney Commission's Growth Infrastructure Compacts which brings government, business and the community together to match housing and jobs growth with timely and cost-effective delivery of infrastructure. A Growth Infrastructure Compact starts by identifying where significant residential and employment growth could occur. Government agencies, the community and industry then work together to develop a shared vision for those areas and develop scenarios looking at what new and enhanced infrastructure is needed to support the growth. Endeavour Energy helps in this process by helping the Greater Sydney Commission make informed decisions about land use scenarios and understand the impact on network development costs.



Principle Three: We will provide energy safely, sustainably and reliably

- We are using the Electricity Transformation Roadmap as the basis for our future network strategy to develop business strategies and changes to our operations as we shift to a cleaner energy system - see Principle 3.3.
- The [NSW Government's Climate Change Fund](#) has been operating since 2007. NSW electricity distribution networks are required to contribute to the Fund as a jurisdictional scheme under the National Electricity Rules. Endeavour Energy collected \$85 million in 2018-19 which makes up about 9% of an average residential customers' network bill. Residential customers are limited to contributing no more than 25% of the total funds, with the remainder spread across all other tariff classes.

The NSW Office of Environment and Heritage advises that over the 10 years expenditure from the Climate Change Fund, it has delivered:

- an estimated \$186,894,769 in household energy bill savings or an average saving of \$61 per household per year as of 2017–18
- total estimated greenhouse gas savings of more than 28 million tCO₂-e
- improved energy affordability and reduce emissions for households and small businesses by delivering
- 500 lighting upgrade projects with estimated bill savings of \$244,079 per year
- 14,800 replacement fridges and televisions for eligible households with expected energy bill savings of more than \$3 million per year
- upskilled small businesses to save money on energy bills by providing training to 1066 businesses across New South Wales
- launched a new consumer-focussed website which makes it simple, clear and fast for households and small businesses to understand how to reduce their energy usage.

Case study 9 - EV charging infrastructure

The NSW Government is working with the Australian EV Council and other stakeholders to develop an electric vehicle charging infrastructure map and to review distribution network tariffs for electric vehicle charging, with a focus on the infrastructure required to facilitate customer adoption of the technology.

We're engaging with Transport NSW to help enable the NSW Electric and Hybrid Vehicle Plan. The plan will maximise the benefits of a transition to more electric and hybrid vehicles for NSW to realise the significant economic and environmental benefits of EVs. To enhance customer confidence in the emerging technology, one of the three key actions within the Plan is to develop charging points and investigate commercial models for their operation over the next five years.

The plan is to ensure agreement between Endeavour Energy and Transport NSW on the on-going connection strategy of EV chargers on the Endeavour Energy network. Numerous independent studies have indicated that if EV charging remains unmanaged, it could lead to significant power quality issues to the electricity grid once the penetration of EV passes certain volumes.

Endeavour Energy will play an important role in the adoption of EVs by enabling local councils and the Roads and Maritime Services to access the network at strategically significant locations. This will provide either localised grid support with vehicle to grid technology or high valued locations (i.e. CBD or local shopping precinct) to allow customer ease of access to charging points.

Case study 10 - new trial launched to boost mini power plants

We have joined an innovative trial of new ways to monitor and control the network to keep downward pressure on electricity prices and smooth the transition to a cleaner energy future. The trial is co-funded with the Australian Renewable Energy Agency, Australian National University, the NSW Department of Planning, Industry & Environment, Zeppelin Bend Pty Ltd and other NSW and Queensland electricity distributors to enable customers to choose to install DER even in locations where it would breach technical limits of the electricity network.

This trial will develop the systems required to send signals to customers on how much electricity they can export to avoid more expensive network investment. It will also help identify where network upgrades were required and co-ordinate power flows in those areas with a high penetration of customer solar and battery systems. The trial will be completed in 2022.

Continuous improvement

- We will partner with Transport NSW to design an electric vehicle connection strategy across our network.



Principle Three: We will provide energy safely, sustainably and reliably

3.5 Facilitate new services and technologies that support sustainable energy solutions that meet the changing needs of the market.

Evidence

- Endeavour Energy has successfully implemented demand management solutions in the past and continues to investigate further initiatives. We have worked with approximately 180 industrial and commercial customers over 11 programs to implement 280 initiatives to reduce network risk efficiently and to defer capital expenditure to keep downward pressure on prices for customers. Principle 4.3 details the residential demand management trials undertaken since 2011.

The program aligns with the Energy Networks Australia Electricity Networks Transformation Roadmap, addressing all key elements of the framework, with a focus on customer-oriented electricity, power system security and intelligent networks and markets. The fundamental aim of these trials is to “operationalise” these newer technology solutions, such that they become part of the everyday design of the future network.

Continuous improvement

- Endeavour Energy's Future Networks program consists of 24 individual projects, some of which span several years. Some of the key projects include:
 - installing a grid connected battery south of Wollongong - see Case Study 8
 - deployment of a customer battery scheme within a demand constrained area which has direct financial benefits for the customers involved in the trial as well as deferring system augmentation
 - trial of static var compensator technology that will increase the capability of the local network to host additional customer generation such as roof top photovoltaic cells.
 - installation of grid automation that enables the network to locate and switch around damaged areas automatically, thus restoring supply to customers far more quickly than traditional manual systems.
- The Future Networks program has tested and proven many of these new and emerging technologies that will provide our customers with safer, more reliable and more affordable energy. We will continue to implement the program and report progress.

3.6 Implement solutions across the supply chain:

a) that support energy connection, service and reliability that meets customers' needs.

b) to resolve service issues that impact customers and the community

Reliability: We work hard to keep the lights on all year round

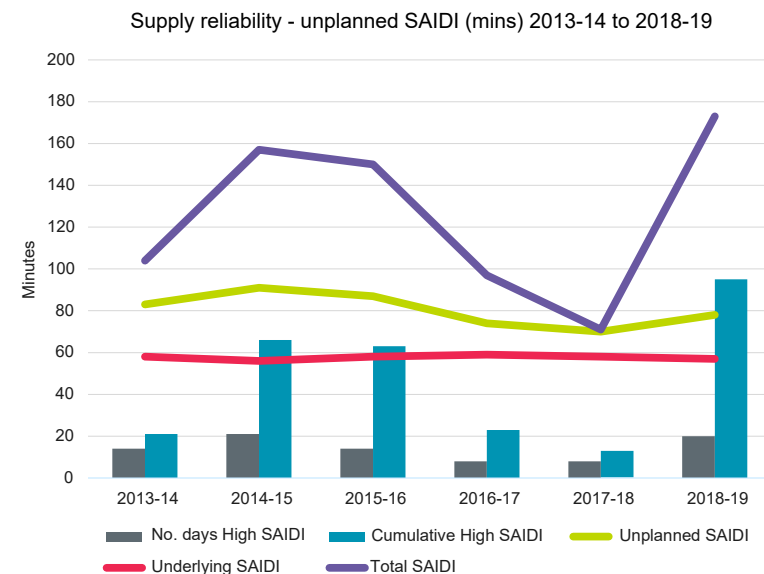
Our network is very reliable. It is built and maintained to Australian industry standards and we monitor its performance closely.

Overall network reliability declined from 70 minutes in 2017-18 (a record for our network) to 78 minutes in unplanned SAIDI in 2018-19, largely due to weather.

Our objective is to maintain network reliability at current levels. Customers have told us they do not want bills to increase so as to fund improved reliability, nor are most willing to trade lower bills for lower reliability.

We met the reliability performance targets set out in NSW distribution licence conditions which ensure customers connected to the worst-performing parts of the network receive at least the minimum specified levels of reliability.

These licence conditions are determined under the *Electricity Supply Act 1995* by the NSW Minister for Energy and Environment with compliance monitored by the Independent Pricing and Regulatory Tribunal.





Principle Three: We will provide energy safely, sustainably and reliably

Case study 11 - advocacy for customers on simple fault fixes

Endeavour Energy field staff can now rectify simple customer faults to restore power, following successful advocacy of the NSW Department of Energy and the AER.

Under initial ring-fencing guidelines, distributors were not permitted to undertake these services as they were not “classified” by the AER as regulated services being on the customer side of the meter.

This meant a customer would remain without power until they could arrange for an electrician to arrive and then pay for the service. Endeavour Energy knew customers’ interests were best served if we were already on site by replacing the fuse (about \$15 in cost) with labour and travel costs already incurred.

Under the new decision, all NSW networks field staff can now carry out simple rectification work if the problem is discovered in the course of providing distribution services, the work performed is the minimum required to restore safe supply and work can be performed in less than 20 minutes.

Alternative approaches had been considered by other networks, with some adopting strict compliance by not resolving the issue and advising customers to call an electrician, or only completing the fix in the case of vulnerability or hardship. We did not consider that it was appropriate to require field staff to decide this, and that the loss of electricity itself increased customers’ vulnerability.

After joint advocacy with other networks on behalf of customers, the AER revised the service classification decision for the NSW networks in November 2018 to recognise the importance of the issue to customers’ experiences and the potential for harm.

Network Connections

- Our connections policies and processes have been developed to provide the simplest, fastest and lowest-cost service to our customers. We work to a customer service standard of processing connection applications within ten business days of the receipt of a compliant application. Customers receive either permission to connect or an offer for standard connection services if contestable works to extend or augment the network are required.
- We received 47,605 connection applications last year due to rapid urban development in the Priority Growth Centres and the uptake of solar generators.
- We developed an automated online connection portal to improve the speed and efficiency of issuing permission to connect to small urban properties, micro embedded generators (up to 30kW) and temporary builder’s supply. 42,159 customer applications (88% of all applications received) were granted immediate permission to connect through this portal in the past financial year.

- Customers who receive a permission to connect can then arrange a service connection through their own Level 2 Accredited Service Provider. We developed a mobile Notification of Service Works app to allow Level 2 Accredited Service Providers to electronically submit data for meter installations, removals and upgrades directly to the market. This has resulted in significant improvements in the processing of service and metering work data and allowed electricity retailers to access connection information soon after the connection works are completed. In effect, this process allows a customer to apply and connect to the network on the same day.
- We processed a further 5,446 manually submitted connection applications. The majority of manually submitted applications are complex, meaning they are unable to be processed through our online connection process. In the past financial year, we processed an average of 97% of these more complex applications with the ten-business day target.
- In 2018-19, we issued 79% of design briefs and 88% of design certifications within our customer service standard of ten business days. We certified 1618 contestable works designs throughout the year. Historically the performance for issuing of design briefs and their subsequent design certification have been largely influenced by the levels of work being received, complexity of the works and the resources available to service demand.

Continuous improvement

- We have set a customer service standard of processing 85% of design briefs and 90% of design certifications within ten business days. To achieve this revised target in a sustainable manner, we are working on improved processes to improve communications between Endeavour Energy and Level 3 Accredited Service Providers on these more complex matters.
- Endeavour Energy is chairing a joint working group with EWON, Ausgrid and Essential Energy to develop a set of principles to manage claims from residential and small business customers for loss or damage caused by electricity supply related to voltage variation incidents.
- We will improve outage notification for customers. Endeavour Energy has joined an Energy Charter Better Together industry working group comprising Essential Energy, TransGrid and Jemena to improve outage notifications for customers.
- We will review and improve our communication to customers on licenced Customer Service Guarantees - see page 26.



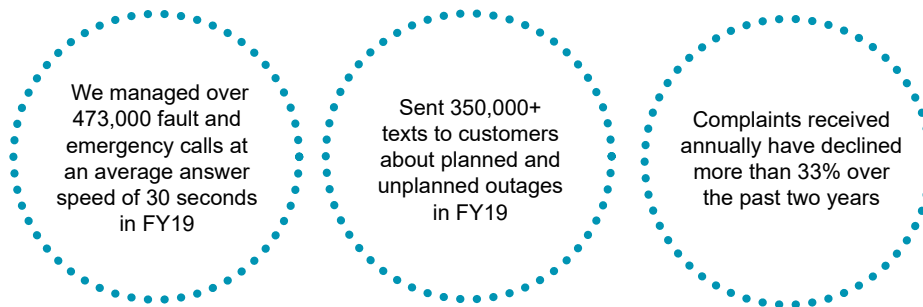
Principle Four: We will improve customer experience

We recognise that it should be easy for customers to make informed decisions about their energy use and services that outcomes should be transparent, and all customers should benefit from the transformation of the energy system. Customer service from energy businesses should be respectful, efficient and seamless, particularly if things go wrong. We will make it easy for everyone to get the best product or service for them regardless of their ability to engage, or interest in, the energy market. We will continually improve our processes and communication and will work together to provide better services across the supply chain to meet customer needs. - The Energy Charter

Why this matters

Many customers have told us they don't always understand what different parts of the industry do and find it hard to navigate their way. Regardless of their interest in, or ability to engage with the industry, customers experience and our service delivery helps homes and businesses thrive.

Key customer outcomes



4.1 Enable customers to get fair outcomes regardless of their ability or desire to participate in the energy market.

Evidence

- We researched the views of our customers and stakeholders in the development of our AER revenue proposal for 2019-24. This research is identified in the [Plain English Overview](#) of our plans which identified the following ten priority areas: affordability; reliability; safety and security; fair pricing; growth; transformation, choice and control; customers facing vulnerable circumstances; vegetation management; street lighting; and education and engagement. These customer insights were key in developing our proposal to the AER about how we improve, maintain and operate our network in the most efficient way.
- To embed the voice of customers and other stakeholders, we revitalised our Peak Customer and Stakeholder Committee in May 2019 and expanded membership to include customer advocates who represent difficult to reach communities, including vulnerable and CALD communities.

- We asked 1,800 customers to tell us about their experience against the main customer touch points of: reliability and quality of electricity supply; vegetation management; maintenance and construction; meter reading; and the ways in which they interact with us. Our overall customer satisfaction index is currently 79%.
- Our customer contact centres managed over 473,000 fault and emergency calls (of which 184,110 were answered by our Customer Service Providers) at an average answer speed of 30 seconds. We exceeded our STPIS customer service target for the year with over 81% of calls answered by an operator within 30 seconds, substantially favourable to the target of 75%. STPIS incentivises electricity networks to maintain and improve service performance to customers.
- Protecting customers facing vulnerable circumstances continues to be a high priority for us. We proactively contacted over 32,000 life support customers during 2018-19 to check on their welfare and offer our help when they were affected by prolonged, unplanned supply interruptions.

Continuous improvement

- We have a major technology project underway which includes development of a new Customer Relationship Management system to support best practice customer service and consolidate key touch points into a single view of the customer. This will streamline processes and better segment communication.
- We have set new customer service levels in our contact service to meet the revised STPIS target of answering 81% of calls in 30 seconds on average.
- We are refreshing our customer satisfaction surveys to focus on the key customer outcomes of planned outage management, unplanned outage management, general enquiries and will benchmark our performance against industry peers.



Principle Four: We will improve customer experience

4.2 Empower customers by:

- Making sure all communication is clear, in plain terms, accessible and understandable;
- Providing insightful and useful information and accessible tools; and
- Streamlining access to, and portability of, customer energy data.

Evidence

- We planned a new [customer experience strategy](#) to significantly improve performance in this area. This strategy will drive customer journey mapping, improved segmentation and enhanced understanding of end-to-end customer processes.
- Self service tools include a [mobile outage app](#). Customers can download this to receive immediate outage information and restoration times, or report a broken streetlight. Through our website, customers can also claim compensation for loss or damage, access safety tips, learn ways to reduce usage and keep costs down, and request energy usage data.
- Connecting to Endeavour Energy's network is easier for new or existing customers; who can connect immediately after applying online.
- Our online engagement portal [Your Say Endeavour Energy](#) has been specifically designed to engage with customer segments on issues including priorities, prices, tariffs, and network development in new areas.
- We introduced a self-reporting outage service on our website homepage after major storms resulted in large call volumes to our contact centres and long wait times for customers reporting supply interruptions.

Continuous improvement

- We're planning a new website to meet minimum accessibility standards and improve user experience. A key design element will be to meet the international accessibility standard [WCAG 2.1 Level AA](#).
- We're expanding social media use to reach large online communities in FY20.

4.3 Ensure that innovation and design in products and services, as well as communication platforms and tools, are driven by customers' needs and preferences.

- Most customers have indicated a preference for SMS messages about their power supply. We are currently sending SMS messages to customers for outages, sending over 350,000 texts to customers about planned and unplanned outages in 2018-19.
- Research for our 2019-24 regulatory proposal told us customers want:
 - clear information on how to reduce their energy use as this is central to them feeling empowered. In response to this expectation, our website contains self-service tools and advice on how to use energy-intensive appliances such as stoves, ovens, hot water systems and pool pumps more efficiently
 - Endeavour Energy to promote demand management to delay and offset capital investment, and trial new technologies like battery storage so reliability is not compromised as more distributed energy resources come online.
- Our [energy-saving programs](#) like *CoolSaver* and *PeakSaver* which in conjunction with the Rooty Hill Energy Savers program have saved customers an estimated \$23 million in expensive infrastructure. Also see Principle 3.3 for further details. The potential benefits of residential demand management trials held since 2011 are outlined below.

Program	PeakSaver	CoolSaver	SolarSaver	PoolSaver
Participants	200	100	40	39
Location(s)	Rooty Hill & Glenmore Park	Rooty Hill, Parklea & Penrith	Parklea	Broad-based
Implemented	2011, 2013	2011, 2018	2017	2015
Demand management approach	Monitor consumption via smart meter & incentivise load reduction	Air-conditioner control via ripple control or 3G	Virtual Power Plant using photovoltaics & res. battery energy storage system	Pool pump control via ripple control
Peak demand reduction (per participant)	1.6kVA	1.5kVA	2.5kVA	0.3kVA
Outcome	Effective if customers are engaged and consumption data is available in real-time	Technology proven viable, but recruitment of participants is challenging given our hot climate	Technology proven viable, but a critical mass of customers with solar and batteries is currently not available	Pool pumps now permitted on controlled load circuit



Principle Four: We will improve customer experience

Continuous improvement

- We will promote customer engagement and interest in demand management programs by trialling a mobile app to provide better access to demand management information for 1,000 residential customers in areas of high electricity demand. Funded by our demand management innovation allowance, it will give customers ready access to energy efficiency advice to decrease their demand, and receive financial incentives when they reduce their electricity consumption.
- We will complete customer journey mapping for all customer service touch points. This research will enable us to refine our touch points and expand tools and calculators, so customers can access real data on the benefits of changing energy usage.

4.4 Have effective and accessible dispute resolution processes, co-ordinated across the supply chain, to resolve customer issues and implement process improvements in response.

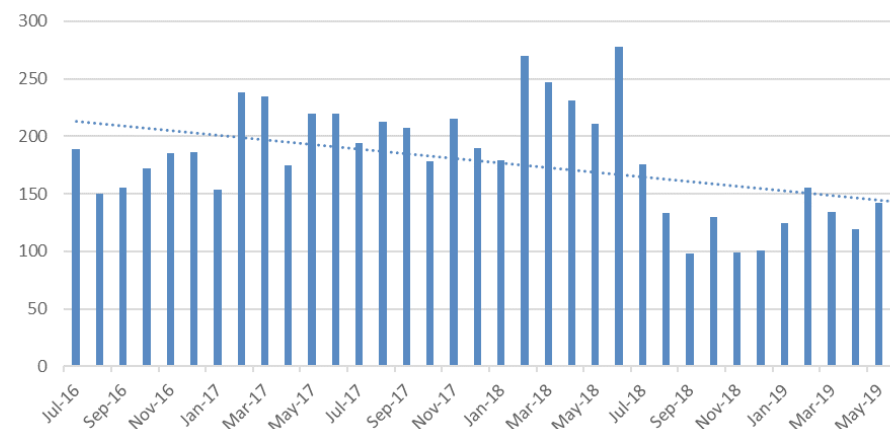
- The number of complaints received annually has declined more than 33% over the past two years from 2,279 in FY18 to 1,512 in FY19. This is despite an increase in the number of customers connected to the network.

Top five customer complaint issues and total complaints received FY17 to FY19

Top 5 Issues	FY17 (total complaints 2,279)		FY18 (total complaints 2,613)		FY19 (total complaints 1,512)	
1	Estimate account received	401	Estimate account received	552	Not notified of planned outage	240
2	Not notified of planned outage	163	Not notified of planned outage	328	Unhappy with tree trimming	86
3	No. of supply failures (unplanned)	138	Property damaged	134	Planned outage inconvenient	81
4	Property damaged	131	Site not restored	123	Site not restored	79
5	Site not restored	96	Planned outage inconvenient	119	No of supply failures (unplanned)	75

- Complaints reduced by 42% in the past year compared to 2017-18. This is primarily due to a decrease in estimated meter reading complaints received from retailers on behalf of customers. In addition, new SMS and mail notifications for planned outages has significantly decreased complaints regarding planned outages.

Complaints Received
2016-17 to 2018-19



- The current target turnaround for complaints is 75% resolved within seven days. In 2018-19, we achieved 74% of complaints resolved within 7 days and currently tracking at 70% as at the end of July 2019.
- Complaint data informs Endeavour Energy of customer expectations and provides opportunities to improve service delivery. Monthly reports are now provided to our Board and senior management.
- Changes in business processes over the past year have improved service levels to customers and decreased complaints. Our planned outage notification has improved since October 2018 in a move away from hand distributed notices to using SMS message or post (where customer contact details were not available).
- From October 2018 to June 2019 the number of customer complaints received regarding lack of notification reduced to 0.08% of the total customers interrupted for planned maintenance, compared to 0.14% of total interrupted customers in the previous financial year prior to this improvement.



Principle Four: We will improve customer experience

- As a result of the significant storm damage in December 2018 and February 2019, we are focussing on a range of initiatives to better prepare and respond to future events. As an immediate improvement, Endeavour Energy has implemented SMS communications to affected customers during unplanned outages to provide safety advice and information on estimated restoration times.
- We have updated our website to enable customers to log supply interruptions online rather than having to wait in a call queue. In addition, our IVR messaging can be updated in real time to provide the latest information for customers during an event.
- Endeavour Energy is an active participant in the NSW Energy & Water Ombudsman scheme and works with them to improve the delivery of quality customer service. The number of cases referred to EWON by Endeavour Energy customers has decreased by 17% from 345 in 2015-16 to 285 in 2017-18. The table below compares performance with the other NSW electricity distributors. EWON's 2018-19 Annual Report is yet to be published.

Company	FY16 – cases received	FY17 – cases received	FY18 – cases received	FY18 - cases received per 10,000 customers
Endeavour Energy	345	285	284	3
Ausgrid	380	354	369	2
Essential Energy	343	291	281	3

- Most EWON cases during the latter part of 2018-19 related to claims for losses associated with storm damage. Claims management is inherently complex when managing customer expectations and, despite our best efforts, cases are escalated to EWON for independent assessment. Our Deemed Standard Connection Contract limits our liability for customer damages to \$5,000. While we do consider extenuating circumstances, this limitation is difficult for some customers to accept when they have experienced uninsured financial losses above \$5,000.

Continuous improvement

- We plan to revise our online feedback and complaints forms and processes to improve resolution times. We want to improve our capability to report and resolve streetlight outage complaints and customer safety concerns based on the frequency of follow up calls from customers.
- We will review key customer communications to provide clear and accessible information regarding planned outages.
- We will promote our community relations tool kit to help deliver high standards of contact with our customers and workforce in FY20.

Case study 12 - Customer Service Guarantees

The New South Wales Government introduced Customer Service Standards for reliability in 2006 to provide financial compensation for customers experiencing too many power outages in a year or if their supply was interrupted for too long. Under Endeavour Energy's NSW Distribution Network Service Provider's Licence, we must take reasonable steps to make customers aware of the availability and the criteria for these payments.

We have complied by publishing an annual notice in metropolitan newspapers, however, our regulator has asked that Endeavour Energy improve our approach as we receive significantly less claims than other NSW distributors, even when accounting for differences in population and the reliability performance of the respective networks. We will also improve our approach to raise awareness of the availability of payments for customers.



Principle Five: We will support customers facing vulnerable circumstances

We recognise that some households and businesses may experience vulnerability that requires support from energy providers, which may require collaboration with governments and community service organisations. Not all experiences of vulnerability will be the same and providing support requires solutions tailored for different circumstances. We will establish processes for early recognition of, and engagement with, customers facing vulnerable circumstances, support customers to navigate periods of vulnerability and collaborate with the community and government to assist those who need it most. - The Energy Charter

Why this matters

The most vulnerable customer to a network business is a customer without power for life supporting medical equipment. It's hard to be safe without access to electricity. We recognise vulnerability exists in many forms: it can be temporary, sporadic or permanent. It can create stress on customers, affects their lives and makes it difficult for them to seek help.

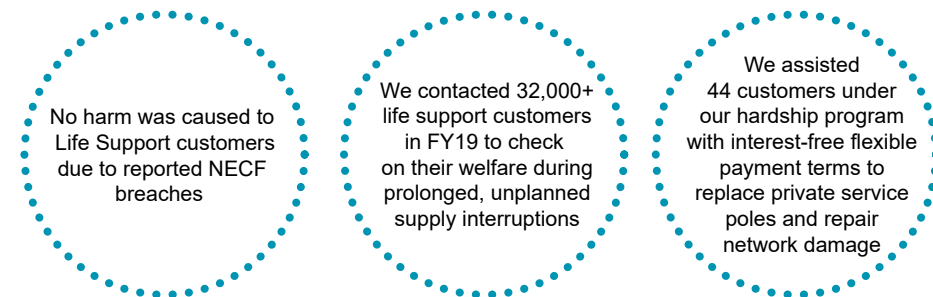
While vulnerability is typically defined in terms of a customer's capacity to pay for electricity, Endeavour Energy adopts a broader approach.

We provide extra levels of care and flexibility to keep customers connected to our network when they:

- depend on power for medical equipment
- are coping with significant financial stress
- have limited capacity, resources, energy or time
- are limited in accessing English or
- are dealing with sudden or unforeseen changes in circumstances.

Frontline staff who are the first point of contact for customers must be trained, and be empathetic about the varied and underlying causes of vulnerability, and skilled in facilitating the right conversations with customers.

Key customer outcomes



5.1 Have processes to enable early identification of and engagement with customers at risk of vulnerability, coupled with intervention measures that can prevent customers falling into hardship.

The number of customers with registered home medical equipment connected to the Endeavour Energy network increased 18% to over 28,900 this year. Protecting customers facing vulnerable circumstances is a high priority and demands a greater focus on customer care and planning for supply interruptions.

Customers who rely on registered life support equipment in their homes are identified, registered and their details maintained to provide the relevant support so they can be managed during the impact of outages. We perform regular checks to maintain a register of life support customers in conjunction with electricity retailers, key internal stakeholders and our customer management systems.

Evidence

- Endeavour Energy notifies life support customers prior to planned interruptions so they can make alternative arrangements. In addition, where we have mobile phone numbers we will SMS a reminder 48-hours before a planned outage.
- We reported 90 'immediately reportable' NECF Life Support breaches to the AER from January to June 2019. 87 breaches were identified and reported after a self initiated review of controls for revised Life Support regulations introduced in February. These breaches were of an administrative nature and no customers experienced harm as a result. We're working with the AER to further strengthen our procedures for registering and deregistering Life Support customers.
- We proactively contacted over 32,000 life support customers during 2018-19 to check on their welfare and offer our help when they were affected by prolonged, unplanned supply interruptions.
- We encouraged customers in financial hardship to contact us to discuss their individual circumstances and eligibility for assistance. We aim to respond to customers early and in a non-judgemental manner.



Principle Five: We will support customers facing vulnerable circumstances

- Endeavour Energy considers disconnection of customers as a last resort and would do so generally to protect public safety or when all other remedies have been exhausted. If a customer in hardship has defective equipment or has damaged our network, we will not disconnect supply but make all reasonable attempts to seek agreement to a payment plan and ensure any damage to the network and possible safety risk is fixed.
- Customer service facing staff are trained in the use of our [financial hardship policy](#). Our policy was shared with Ausgrid and Essential Energy in 2015 as the basis for better practice. We encourage customers to self-identify as being in financial stress or hardship to access the support we provide. Customers may be eligible for assistance under our hardship policy across 12 broad criteria - see link above for detail.
- Endeavour Energy participated in EWON's annual Anti-Poverty Week in 2018 where we aimed to raise awareness of the issues affecting customers in financial hardship, provide information on how we can help households stay connected, and provide access to other relevant community services. Our participation in this event builds stronger connections with community advocates, government and non-government workers and volunteers assisting low income and vulnerable consumers.
- Our customer interaction centres provide translation services for customers who do not speak English as their first language. The translations are given in the seven community languages that are the most prevalent in our network area. The availability of this service is promoted through our website and written communications regularly sent to customers such as notices for planned interruptions, electrical defects and disconnection for non-payment from their retailer.
- We have translated two safety brochures into several community languages to help these customer segments recognise and prevent electrical dangers in and around their homes. The brochures also provide information on the necessary safety precautions to take after storms or strong winds damage powerlines in their street.

Continuous improvement

- We're planning further training of frontline customer service staff to broaden the capacity of our staff to identify and assist customers facing vulnerable circumstances. We've worked with our field staff who undertake pole and meter disconnections to help identify customers in hardship and engage with their retailer.
- We will attend further EWON Anti-Poverty Week events to increase electricity literacy among community advocates and volunteers assisting low income and vulnerable consumers, as well as broaden the scope of our customer service.

- Our new website is designed to WCAG 2.1 Level AA accessibility standards. This is the minimum required standard set by Service NSW. In recognition of the culturally diversity of our customers, we are planning to embed Google Translate into the new website. The app translates text into over 100 languages to make our website more accessible to the 30% of our customers who are born overseas, half of which identify as not being proficient in English.
- We will expand the reach of outage notice updates to community radio stations and Facebook groups.

5.2 Provide products and services that are tailored to customers facing vulnerable circumstances and support them to get back on track.

Evidence

- Our hardship program includes financial help, interest-free flexible payment terms based on the customer's capacity to pay, and a contribution towards a portion of the total costs, where appropriate. We assisted 44 customers under this policy in 2018-19 by providing them with personally tailored no-interest payment plans to replace private service poles (20 customers) or where they were liable for damage to the network (24 customers).
- Once customers have been identified as being in financial stress or hardship, we provide access to meaningful and appropriate assistance based on their circumstances. This may include:
 - further information regarding maintenance or rectification works and the cost and time in which works need to be completed
 - flexible payment options based on mutually agreed interest-free payment plans. This allows customers to pay off outstanding debts/damage costs over an agreed period of time. In assessing a customer's capacity to pay, we take into consideration the amount of the debt and the ability of the customer to make repayments. This assessment is based on their individual circumstances and we always look to ensure the customer's ability to maintain a basic standard of living for themselves and their families is not compromised
 - referring them to government departments, their retailer or other community support agencies to ensure they access all relevant assistance available to them
 - waiving of part, or all of the rectification costs in exceptional circumstances.
- Customers are protected from debt recovery or legal action while meeting agreed arrangements.



Principle Five: We will support customers facing vulnerable circumstances

- Endeavour Energy considers food spoilage claims where the customer has been without power supply for longer than ten hours due to bushfires, floods and other natural disasters. We provide a discretionary goodwill payment to customers of up to \$300 and direct customers to find further assistance from either their insurer or the NSW Government's natural disaster assistance arrangements.
- We provide goodwill payments up to \$250 to customers who have been affected by a storm and have been without power supply for longer than 18 hours. This is to cover essential items where customers are in immediate need of assistance.

Continuous improvement

- Endeavour Energy is developing an enhanced storm response process based on learnings from the 2018-19 summer storm season. In early 2019, we undertook analysis to improve our support to customers during these events including:
 - improving the consistency and frequency of communication across a greater variety of channels that customers prefer
 - reviewing the process for setting and changing automated estimated restoration times given to customers during prolonged outages
 - providing better self-service channels for customers, scalable for all outages.

5.3 Provide flexible solutions that are easy to access and are provided by specially trained frontline staff with expertise in supporting those customers who face additional barriers to engaging with the energy market.

- Please see 5.1 and 5.2 above.

5.4 Take a collaborative approach, partnering across the energy supply chain, and with government and community service organisations to implement innovative solutions that improve outcomes (affordability or experience) for customers facing vulnerable circumstances.

Evidence

- We are members of two 'Better Together' Energy Charter working groups - one designed to build robust customer engagement processes and the other to improve outage notifications.

- Our Customer Committee has for several years included PIAC, Multicultural NSW and Energy Consumers Australia. We have recently broadened membership to include EWON and the Ethnic Communities Council to give a greater voice to CALD communities and customers facing challenging financial circumstances. We also engage with major retailers to determine opportunities to improve service outcomes for customers.
- Since January this year, Endeavour Energy has chaired a working group with EWON, Ausgrid and Essential Energy to develop a consistent set of principles across the three NSW distribution networks for the management of voltage variation claims.

Continuous improvement

- We plan to better present information to CALD communities on network electricity issues which matter to them. Part of this will look at the best way to reach communities that do not access written and digital English channels.

Accredited Service Providers are electrical contractors accredited and authorised to undertake contestable works.

Australian Energy Market Commission make and revise the rules under the national energy laws as well as advise government on overall energy market development.

Australian Energy Regulator (AER) regulates electricity networks in the National Electricity Market, including setting the maximum amount of revenue they can earn.

Australian Power Quality and Reliability Centre is a centre of excellence based at the University of Wollongong.

Australian Renewable Energy Agency (ARENA) is an Australian Government agency established to improve the competitiveness of renewable energy technologies and increase the supply of renewable energy in Australia.

CALD communities - culturally and linguistically diverse communities.

Dial Before You Dig - a free national referral service designed to assist in preventing damage and disruption to Australia's essential infrastructure networks.

DER - distributed energy resources.

ECA - Energy Consumers Australia. ECA is an independent advocate for residential and small business energy consumers.

Electricity Network Transformation Roadmap is a blue print for transitioning Australia's electricity system to enable better customer outcomes.

Electricity Safety Week is an industry safety initiative to raise awareness and teach children to stay safe around electricity at home and outdoors.

Environmental Management System refers to the system managing Endeavour Energy's environmental programs.

EWON - Energy & Water Ombudsman NSW.

Greater Sydney Commission leads metropolitan planning for the NSW Government for Greater Sydney to coordinate development, transport and housing across the region.

IPART - Independent Pricing and Regulatory Tribunal NSW.

LED – light emitting diode. LEDs convert electricity into light and are more energy efficient and less maintenance intensive than older streetlighting technologies.

Life support customer - customers with registered medical equipment in their homes

LTIFR - Lost Time Injury Frequency Rate.

MW – megawatts are a measurement of power, describing the rate at which electricity is being used at a specific moment.

NSW Climate Change Fund - the NSW Government's fund to deliver measures to help homes, businesses, communities and government save energy and water, reduce greenhouse gas emissions, and manage the impacts of climate change.

NSW Electric and Hybrid Vehicle Plan is the NSW Government's plan to maximise the benefits of a transition to more electric and hybrid vehicles in NSW.

Peak Customer and Stakeholder Committee – Endeavour Energy's peak advisory committee key customer and stakeholder organisations (our Customer Committee).

PIAC - Public Interest Advocacy Centre.

Priority Development Areas are parcels of land identified for accelerated development by the NSW Government to provide a planned approach to urban growth in Sydney.

Regional Organisation of Councils are voluntary collaborative partnerships between neighbouring local councils in a particular region or area.

Regulatory proposal – refers to the five-year investment plan prepared with customers and stakeholders to build, operate and maintain the Endeavour Energy network.

Transport NSW - the lead agency of the NSW Government's Transport cluster.

Safety is Defence is Endeavour Energy's safety program for managing risk in the field.

SafeWork NSW is the workplace health and safety regulator for NSW.

System Average Interruption Duration Index (SAIDI) is the total duration of sustained interruptions divided by the total number of customers served.

Urban Development Institute of Australia (UDIA) NSW represents more than 500 public and private members on planning, housing and infrastructure matters.

WCAG - Web Content Accessibility Guidelines.

Western Sydney Aerotropolis is 11,200 hectares of land centred around the planned Western Sydney Airport dedicated to delivering new jobs, homes, infrastructure and other services.

Appendix - continuous improvement commitments

Principle in Action	We have listed the 44 improvement projects we identified throughout the report to help customers understand our areas of focus and to help track and report our progress to our Board and Customer Committee.
1.1	1. We will report monthly analysis of customer complaints to the Board from August 2019.
1.2	2. We are creating two new Executive positions: one dedicated to health, safety and the environment; and one who will lead a new customer experience group. This group brings together customer-facing functions
1.3	3. Endeavour-wide and local engagement action plans are in place to improve employee engagement, supported by regular communications and ELT monthly reviews to monitor progress. Endeavour's target is to be in the top quartile for employee engagement when compared to energy sector peers by FY24.
1.4	To further improve customer and stakeholder engagement we will: 4. embed a more robust engagement process by the end of FY20 where our new Peak Customer and Stakeholder Committee and related working groups will help identify customer priorities and partner with us to drive improvements 5. share learnings on effective engagement across the energy industry via the Energy Charter's Better Together Working group 6. independently review regulatory engagement to identify opportunities for improvement and map stakeholders for 2024-29 7. benchmarking our engagement with CALD communities and identify ways to better engage with them through the most appropriate channels.
1.5	8. Continue to fund the Australian Power Quality & Reliability Centre's research to support Endeavour Energy and the broader electricity supply industry in improving power quality and reliability for customers.
2.1	9. Total network charges will reduce by 17.7% by FY24 in real terms. This equates to an average reduction of 3.7% per annum. The savings are based on average consumption and prices in real FY19 dollars excluding inflation.
2.2 & 2.3	10. We will review how we set our prices to meet customers changing energy needs and retailers' preference for simplified network tariffs that are easily understood by customers, and we will monitor their use of the new tariffs. 11. We will share our learnings on effective tariff design with the Energy Charter's Better Together tariff team.
2.4	12. We have improved investment planning by: - moving to a risk quantification model where all investment benefits and future risk reductions are quantified to enable an accurate comparison of all investments - engaging with internal and external stakeholders on the acceptable level of risk reviewing the approach for investment decisions - moving away from considering of discrete items to portfolio consideration and resulting risk outcomes. The next step for the program is to invest in a more capable assessment tool that will enable more sophisticated optimisation and achieve multiple conflicting, objectives. The program is delivering outcomes for customers by investing where need is greatest.
2.5	13. We will improve consultation with retailers on tariff design. We will assess the use of the new tariffs by retailers and identify whole of sector collaboration opportunities.
3.1	(see 2.)The new Executive General Manager Safety, Health & Environment will review our safety strategy, declutter safety procedures and sharpen our cultural focus on safety. 14. Continue to promote Safety is Defence as our business-wide cultural safety program. 15. Improve safety awareness among general public workers following the fatality of a roofing contractor due to misadventure. We are collaborating with SafeWork NSW and Dial-Before-You-Dig NSW/ACT to design a new campaign that addresses scaffolding, machinery and plant coming within safe approach distances to overhead and underground assets and to raise awareness about appropriate safety control measures to manage the risks of working near the network.
3.2	16. We will continue to help councils transition to lower cost LED streetlights to save costs. 17. We will progress the ten priority areas for action identified by our customers in our 2019-24 regulatory proposal and report progress to the Board on a six-monthly basis.

Appendix - continuous improvement commitments

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3.3	18. Endeavour Energy has commenced a decarbonisation project which will enable us to set science-based targets to guide our approach for emissions reduction over the long term. This involves: - understanding our emissions profile and current emissions trajectory (Scope 1, 2 & 3 emissions) - examining the range of carbon reduction and energy savings opportunities available - developing a science-based emissions reduction pathway relevant to the asset we manage. The first step in this process includes internal stakeholder workshops to develop energy and emissions baseline data as the foundation of science-based targets. By early 2020, we will have identified targets and projects to deliver further emission reductions across the business. 19. Track and report Environmental Sustainability Strategy improvement opportunities to enable a more sustainable business. Key focus areas are: - preventing pollution of the environment - protecting flora, fauna and heritage - better managing waste and contaminated materials - reducing greenhouse gas emissions - consider the impact on the environment across the life cycle of our decisions.
3.4	20. We will partner with Transport NSW to design an electric vehicle connection strategy across our network.
3.5	Endeavour Energy's future networks program consists of 24 individual projects, some of which span several years. Some of the key projects include: 21. installing a grid connected battery south of Wollongong - see Case Study 8 22. deployment of a customer battery scheme within a demand constrained area which has direct financial benefits for the customers involved in the trial as well as deferring system augmentation 23. trial of static var compensator technology that will increase the capability of the local network to host additional customer generation such as roof top photovoltaic cells. 24. install grid automation that enables the network to locate and switch around damaged areas automatically, thus restoring supply to customers far more quickly than traditional manual systems. 25. The future networks program has tested and proven many of these new and emerging technologies that will provide our customers with safer, more reliable and more affordable energy. We will continue to implement the program and report progress.
3.6	26. We have set a customer service standard of processing 85% of design briefs and 90% of design certifications within ten business days. To achieve this revised target, we will improve communications between Endeavour Energy and Level 3 Accredited Service Providers on these more complex matters. 27. Endeavour Energy is chairing a joint working group with EWON, Ausgrid and Essential Energy to develop a set of principles to manage claims from residential and small business customers for loss or damage caused by electricity supply related to voltage variation incidents. 28. We will improve outage notification for customers. Endeavour Energy has joined an Energy Charter Better Together industry working group comprising Essential Energy, TransGrid and Jemena to improve outage notifications. 29. We will review and improve our communication to customers on licenced Customer Service Guarantees.
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Principle in Action	We have listed the 44 improvement projects we identified throughout the report to help customers understand our areas of focus and to help track and report our progress to our Board and Customer Committee.
4.3	35. We will promote customer engagement and interest in demand management programs by trialling a mobile app to provide better access to DM information for 1,000 residential customers in areas of high electricity demand. Funded by our demand management innovation allowance, it will give customers ready access to energy efficiency advice to decrease their demand and receive financial incentives when they reduce their electricity consumption. 36. We will complete customer journey mapping for major customer service touch points. This research will enable us to refine our touch points and expand tools and calculators, so customers can access real data on the benefits of changing energy usage.
4.4	37. We plan to revise our online feedback and complaints forms and processes to improve resolution times. We want to improve our capability to report and resolve streetlight outage complaints and customer safety concerns based on the frequency of follow up calls from customers. 38. We will review key customer communication to provide clear and accessible information regarding planned outages. 39. We will promote our community relations tool kit to help deliver high standards of contact with our customers and workforce in FY20.
5.1, 5.2 & 5.3	40. We're planning further training of frontline customer service staff to broaden the capacity of our staff to identify and assist customers facing vulnerable circumstances. We've worked with our field staff who undertake pole and meter disconnections to help identify customers in hardship and engage with their retailer. 41. We will attend further EWON Anti-Poverty Week events within our network to increase electricity literacy among community advocates and volunteers assisting low income and vulnerable consumers as well as broaden the scope of our customer service. (see 33.) Our new website is designed to accessibility standards called WCAG 2.1 Level AA. This is the minimum required standard set by Service NSW. In recognition of the culturally diverse of our customers, we are planning to embed Google Translate into the new website. The app translates text into over 100 languages to make our website more accessible to the 30% of our customers who are born overseas, of whom half identify as not being proficient in English. 42. We will expand the reach of outage notice updates to community radio stations and Facebook groups. 43. Endeavour Energy is developing an enhanced storm response process based on learnings from the 2018-19 summer storm season. In early 2019, we undertook analysis to improve our support to customers including: - improving the consistency and frequency of communication across a greater variety of channels that customers prefer - reviewing the process for setting and changing automated estimated restoration times given to customers during prolonged outages - providing better self-service channels for customers, scalable for all outages.
5.4	44. We plan to better present information to CALD communities on network electricity issues which matter to them. Part of this will look at the best way to reach communities that do not access written and digital English channels.

Feedback

We welcome your feedback on any aspect of our report.

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