

Submission
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INQUIRY INTO ELECTRICITY SUPPLY, DEMAND AND PRICES IN NEW SOUTH WALES

Organisation: Endeavour Energy

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LEGISLATIVE COUNCIL SELECT COMMITTEE

Inquiry into Electricity Supply, Demand and Prices in NSW

Submission by Endeavour Energy

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1.0 INTRODUCTION

Endeavour Energy welcomes this opportunity to make a submission to the NSW Legislative Council's Select Committee *Inquiry into Electricity Supply, Demand and Prices in NSW*.

Endeavour Energy plans, builds, operates and maintains the electricity distribution network that provides an affordable, safe and reliable power supply to and from households and businesses across Sydney's Greater West, the Blue Mountains, Southern Highlands, the Illawarra and the South Coast.

The timely and efficient provision of these services creates and sustains jobs, underpins economic development and keeps communities safe across one of the fastest growing metropolitan and regional economies in Australia.

Endeavour Energy's network serves a diverse population of 2.4 million people, or almost one million customers, across 24,980 square kilometres. Most of our customers are households and small to medium businesses located in urban and developing rural areas. We also serve large urban areas, medical precincts, manufacturing and industrial customers who have specific needs for a safe and reliable supply; and we provide high voltage support directly to large businesses.

Our network area includes significant development zones such as Sydney's second airport, and its surrounding 'aerotropolis'. It's also home to Sydney's North West and South West Priority Growth sectors, planned as new release areas to house communities similar in size to Wollongong and Canberra. The population of Western Sydney is expected to swell by 900,000 over the next 20 years with more than 20,000 new customers connecting to our network each year.

In addition to population growth, we face the challenge of our existing customers having the third highest energy density and second highest demand density in the National Electricity Market (NEM). This means that our customers consume a relatively high amount of energy, particularly so during peak times (4pm to 8pm). This is largely due to a combination of higher summer temperatures, often up to 10 degrees higher than the Sydney CBD, and energy-intensive economic activity.

The NSW Government announced a change in ownership for Endeavour Energy in May 2017. We are 50.4% owned by an Australian-led consortium of long-term investors in the private sector operating the network under a 99-year lease with the remaining balance held by the State of NSW. The private sector consortium comprises of funds and clients managed by Australia's Macquarie Infrastructure and Real Assets, AMP Capital on behalf of REST Industry Super, Canada's British Columbia Investment Management Corporation and the Qatar Investment Authority.

This change in ownership means we can leverage the vast infrastructure management experience of the consortium to transform Endeavour Energy into a world-class utility, delivering further improvements in safety, operating efficiency and customer service outcomes.

The consortium has identified five priorities that will shape the future direction of Endeavour Energy's business:

- improving safety for staff and the community
- developing a stronger, flexible and better skilled workforce
- investing to improve network resilience and customer outcomes
- over time, reducing customers' bills
- supporting future growth in Western Sydney and across the network.

2.0 REGULATION OF NETWORK CHARGES

Endeavour Energy's network charges are regulated by the Australian Energy Regulator (AER) in the long-term interests of customers.

The National Electricity Law and Rules set out the regulatory framework for electricity networks. Every five years we work closely with customers and stakeholders to prepare investment plans to build, operate and maintain our vast electricity network.

This plan is reviewed by the AER, which considers feedback and decides the revenue to be recovered from customers to fund our operations.

Chapter 6 of the National Electricity Rules sets out the framework for the regulation of distribution networks by setting a ceiling on the revenues or prices that a network can earn or charge during a regulatory period, which is typically five years.

Under the regulatory framework, if consumption increases result in revenue above the cap being collected within a year, the network must return the excess revenue to customers by reducing prices in the following year. This is called a "true up". The reverse also applies.

Network charges can fluctuate as forecasts are updated, the weather in a particular year is abnormal, or there are changes in economic activity or customer behaviour e.g. an increase in the use of solar panels, electric vehicles or battery technology.

In determining the revenues and charges that network businesses can apply, the AER forecasts how much revenue a business needs to cover its efficient costs (including operating and maintenance expenditure, capital expenditure, asset depreciation costs and taxation liabilities) and provide a commercial return on capital.

Under the Rules, network business must transition to charges that reflect the efficient costs of providing services to our customers.

3.0 RESPONSE TO THE TERMS OF REFERENCE

3.1 The reasons for recent large increases in the price of electricity

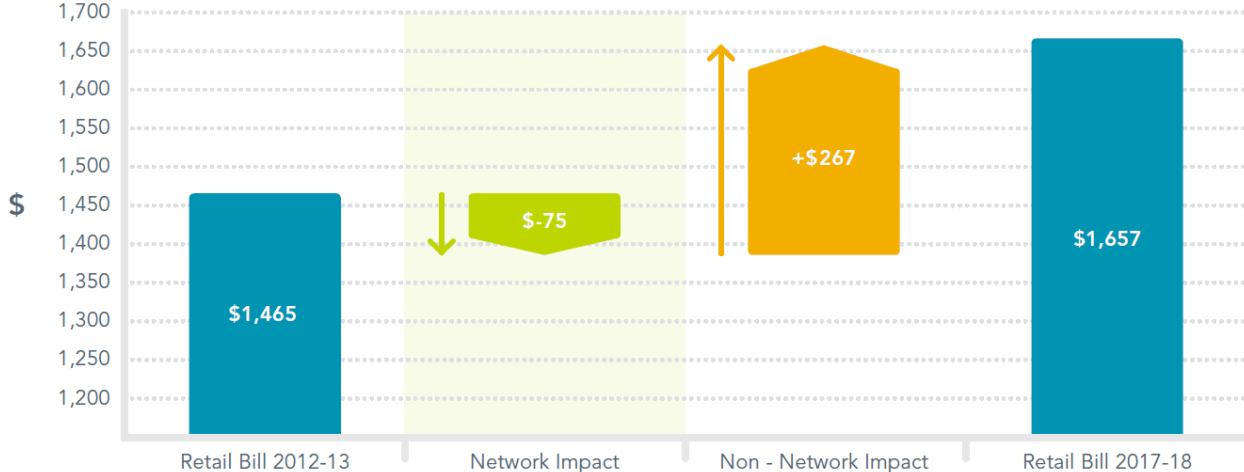
Since 2012-13, Endeavour Energy's customers have paid the lowest network charges in NSW due to a long term, organisation-wide efficiency program¹.

This means our network charges currently make up about 30% of the average residential customers' electricity bill.

Endeavour Energy's annual network charge is now \$75 less than it was in 2012-13 for an average residential customer, even though wholesale and retail electricity costs have been rising.

¹ based on the network price lists of Ausgrid, Endeavour Energy and Essential Energy including distribution use of system charges, transmission use of system charges, NSW Climate Change Fund and meter charges.

Chart 1: Change in average annual residential retail bills over the past five years



Notes:

- calculated on the basis of Origin Energy’s standing offer for residential customers in Endeavour Energy’s network
- network impact includes distribution, transmission and NSW Climate Change Fund contributions
- non-network impact includes generation government green schemes and retails services.

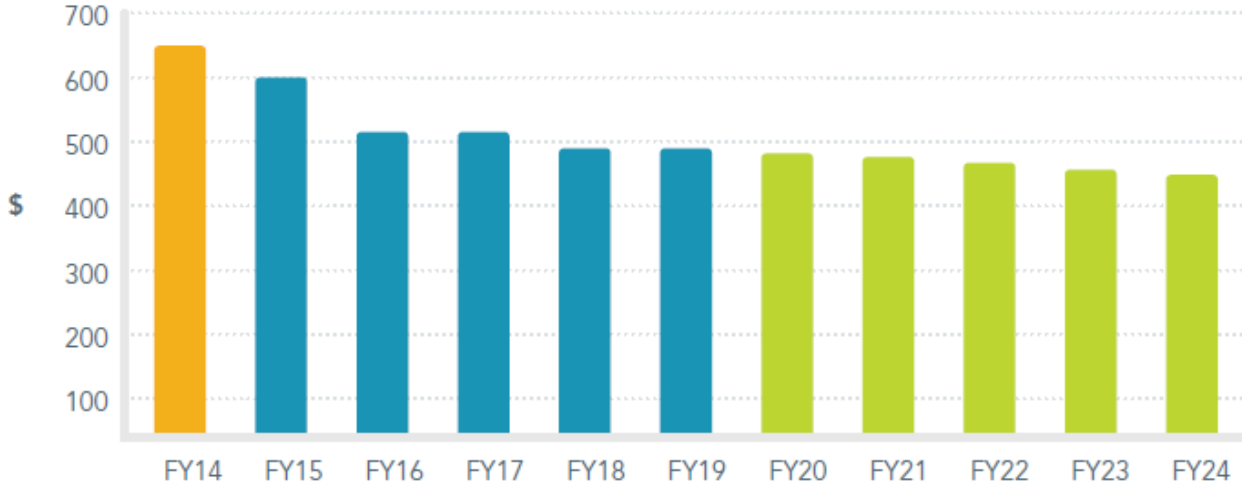
Source: p. 21 Endeavour Energy Regulatory Proposal 1 July 2019 to 30 June 2024

A decade of declining network charges

Our customers will pay steadily declining network charges through to 2024 if the AER approves the remaking of our 2014-19 revenue determination and approves the plans in our 2019-24 revenue proposal.

This means households and businesses in Greater Western Sydney, the Blue Mountains, Southern Highlands, the Illawarra and South Coast will continue to pay less for network services than those in other parts of NSW.

Chart 2: Actual and forecast Endeavour Energy network distribution bill 2014-2024 (2017-18 dollar terms)*



* for an average residential customer consuming 5MWh per annum.

In addition to network charges, the total bill paid by customers also includes:

- wholesale costs for the energy purchased by retailers from generators
- retail costs such for marketing, billing and customer service; and
- environmental costs mandated through instruments such as the Commonwealth Renewable Energy Target and the NSW Climate Change Fund.

Changes in any one of these components will flow through into the total electricity bill paid for by customers.

As we clearly show above, when adjusted for inflation any recent increases in the customer's end electricity bill cannot be attributed to Endeavour Energy.

By comparison, this same average residential customer will pay the same network charges in 2018-19 as they did in 2009-10 if the AER approves the remaking of our 2014-19 revenue determination. This means the increase in the total bill paid in the Endeavour Energy network area is due to an increase in their wholesale energy, retail and environmental costs over this period.

Changes in network charges 2007 to 2012

Between 2007 and 2012, Endeavour Energy's network charges increased due to:

- servicing Australia's third largest economy and some of its fastest growing communities. Our network includes Sydney's North West and South West Priority Growth Areas, which are planned to become home to communities similar in size to Wollongong and Canberra as development and population growth continues in Greater Western Sydney
- rising demand from existing customers at peak times, requiring more capacity to be built, that was only used on the hottest days of the year. This was due to the rapid uptake of affordable domestic air conditioners across our customer base which doubled the peak of electricity demand per household
- the need to replace ageing "baby boomer" network infrastructure built in the 1960s and 1970s at the end of its service life and becoming less reliable and more expensive to maintain
- the need to meet the NSW Government's strict design, reliability and performance standards introduced in 2005 which required higher levels of redundancy to be built into the network, and therefore higher network costs were charged to customers
- the higher cost of sourcing debt as a result of the Global Financial Crisis.

To mitigate the impact of these drivers on the cost of the services provided to our customers, Endeavour Energy commenced an organisation-wide efficiency program in 2012-13 which has reduced annual total expenditure by **51 percent** from \$1,055.2 million (real, 2018-19) to \$515.9 million (real, 2018-19) in 2016-17.

This efficiency program has been focused on making our workforce more competitive, improving the commercial aspects of our asset management decisions, and making our business more efficient despite the added cost pressures from extending the network to meet significant growth in new connections, managing an ageing asset base and meeting increased compliance to vegetation management standards.

3.2 The impact of the deregulation of electricity prices in 2014

This aspect of the Committee's terms of reference relates to the deregulation of retail electricity prices for NSW small customers (who use less than 100 megawatt hours of electricity per year) which, prior to 2014, were determined by the Independent Pricing and Regulatory Tribunal (IPART).

Endeavour Energy supports competition and choice in effective energy markets to keep downward pressure on prices and deliver better services and a wider array of products for customers.

The network component of the retail price continues to be regulated by the AER under the regulatory framework set out by the National Electricity Law and Rules.

As stated previously, the AER reviews the revenue requirements of the network businesses every five years. We are required then to submit annual pricing proposals to the AER which must be consistent with their determination.

This amount is recovered via network tariffs charged to retailers, who in turn recover these charges from customers as part of the network component of a customer's electricity bill.

Network tariff reform

Endeavour Energy supports the transition to cost reflective pricing so customers pay their fair share for their own usage and the costs of providing the service are apportioned equitably across the entire customer base.

In its preliminary report into retail electricity pricing, the Australian Competition & Consumer Commission stated that:

While network costs rose for all customers, the impact was not felt evenly across the customer base. Network tariff structures can mean that some customers are paying more than their fair share of network costs.

The design of network tariffs, particularly for small customers, largely link charges to a customer's overall usage. But it is a customer's peak (rather than overall) usage that drives the majority of network costs. For example, the AEMC has noted that installing an air conditioner (which typically runs during peak periods) adds \$1000 to annual network costs, but the household only pays \$300 of this through higher bills. The remaining cost is met through higher charges on other users. This effect has also been seen with the uptake of solar PV systems which reduce the overall consumption of a solar customer, but with a much smaller impact on their peak consumption.

An AEMC rule change that took effect in 2016 requires networks to move towards cost reflective pricing, including a greater focus on the impact of peak demand.

Electricity retailers have the key role of designing retail offers that incorporate these cost reflective network tariffs. In most NEM regions, progress towards this goal is still in the early stages, and network operators have raised concerns around whether the current policy settings and competitive market conditions are sufficient to 'achieve the transition to cost reflective tariffs with the urgency required'.

(p.114-115, Australian Competition & Consumer Commission *Retail Electricity Pricing Retail Electricity Preliminary Report 22* September 2017)

In transitioning to cost reflective pricing, Endeavour Energy has adopted a set of tariff principles designed in close consultation with consumer groups such as Energy Consumers Australia, Public Interest Advocacy Centre and the NSW Council of Social Service. These principles include:

- **Transparency** – ensure tariff structures are clear and easily understood by customers
- **Predictability** – protect customers from bill shock by providing certainty around pricing
- **Efficiency** – efficient and reflect the true costs of providing the service
- **Equity** – ensure that customers pay their fair share.

Endeavour Energy supports network tariff reform because by sending more accurate pricing signals to customers through tariffs we hope to encourage more informed consumption of electricity. This will allow us to deliver only that growth investment that customers require and are willing to pay for.

3.3 Alleged collusion and price gouging by energy retailers

Endeavour Energy does not operate in retail or wholesale electricity markets and has no comment on the validity of these allegations.

3.4 The effectiveness or impact of any current regulatory standards and guidelines

Endeavour Energy is subject to both NSW and Commonwealth regulatory standards and guidelines.

In NSW, the Minister for Resources and Energy has issued licences for the distribution and transmission of electricity which include conditions covering matters such as safety, consumer protection, network reliability and bushfire prevention.

IPART administers compliance and enforcement with these licences on behalf of the Minister and can impose monetary and non-monetary penalties, or take other actions it considers appropriate, against licensees for contravention of licence conditions.

The networks that have been fully or partially leased to private operators are also subject to critical infrastructure licence conditions and the *NSW Code of Practice for Authorised Network Operators*.

This Code was developed by the Department of Planning & Environment to manage the process through which activities undertaken by, or on behalf of, the leased electricity network operators are assessed in terms of environmental impact.

Endeavour Energy believes the current NSW regulatory standards and guidelines are adequate.

It should be noted, however, that changes in these standards (if sufficiently material) can impact on investment decisions that can ultimately flow through to the network charges in customers' bills.

3.5 Options for future government oversight and responsibility in the re-regulation of electricity prices

Please see our response to section 3.2.

3.6 The adequacy of planning to meet future electricity demand, including utilising high efficiency, low emissions coal technology as well as the use of nuclear, gas, solar and wind energies, and energy storage through batteries, pumped hydro and hydrogen, and improved transmission between regions

Tariff reform and technological advancements such as batteries, solar and smart meters are equipping customers with much greater choice and control over their energy usage.

Increased customer focus and engagement with network businesses is shaping better outcomes for customers and communities, providing new opportunities for them to exercise control over what and when they use energy, and how much they pay.

This rapid pace of change provides both challenges and opportunities for all network businesses.

The role of a network business is changing rapidly from a centralised one-way distributor with passive customers to a model where customers decide energy investments, storage and usage patterns, as well as priorities and expectations.

How customers use, produce and value the services Endeavour Energy provides is being impacted by the uptake of solar photovoltaic (PV) panels.

Battery storage and access to usage data will increase in the future as the cost of these technologies decrease which may have the potential for customers to rely less on grid supply. The recent introduction of metering reforms in NSW and the continued transition toward more cost-reflective tariffs will promote this trend.

As customers begin to demand more choice and control over their energy usage, the network is evolving to become 'smarter' and more integrated to allow multi-directional energy flows which will foster successful energy transfer and trading among energy producers and consumers. This requires greater automation and control system integrity as well as innovative pricing structures.

Endeavour Energy made a significant contribution to the development of the Electricity Networks Transformation Roadmap published by the Energy Networks Australia and CSIRO in 2016.

The Roadmap predicts growth in distributed energy resources will lead to significant changes in Australia's electricity system by 2050 including greater power for customers, who will produce 45% of generation in the National Electricity Market, while retaining the security and reliability of electricity supply essential to support modern lifestyles and employment.

The Roadmap forecasts that across Australia this would save \$16 billion in network infrastructure investment and a reduction in cumulative total expenditure by electricity networks of \$101 billion.

Endeavour Energy supports the recommendations in the Roadmap which proposes a fairer system through active implementation of tariff reform and modernised regulation and competition frameworks.

This is to provide more customer oriented outcomes and will allow customers with distributed energy resources to receive incentives for providing network support services that improve the efficiency of the grid, while also ensuring those without are treated fairly.

Despite widespread consensus on the potential for small scale renewable generation and battery storage to be used effectively to reduce peak demand from the grid, its impact on curtailing network investment to date within Endeavour Energy's network has been limited, and we expect this trend to continue for some time.

This is largely due to peak demand on our network (generally from 4pm-8pm) not aligning with periods of energy production from these units where peak production occurs early afternoon and then rapidly reduces to minimal output by the early evening.

In support of the role Endeavour Energy's network will play in shaping the future electricity landscape, we are currently conducting battery energy storage trials at both the domestic and grid support level to:

- identify customer uptake levels
- quantify network demand reduction
- establish the level of network investment that can be deferred to provide additional capacity to allow development in the first stages of new release areas.

Further details of these trials are available at www.endeavourenergy.com.au.

Through these trials, Endeavour Energy will have a better understanding of how battery storage could be used to complement grid supply during times of peak demand, avoid more costly network upgrades and confirm the viability of new opportunities to use the existing network in new ways.

3.7 The adequacy of programs to assist low income earners, pensioners and senior card holders to afford electricity as well as the impact of additional fees, such as late payment fees, included in energy bills

As a network business, Endeavour Energy believes our focus should be to run our business as efficiently as possible in order to keep downward pressure on our portion of customers' final electricity bill without comprising the safety and reliability of electricity supply.

Endeavour Energy also knows there is more to be done. We remain committed to keeping downward pressure on electricity bills whilst servicing population growth and facilitating new ways for our customers to control the electricity they use and what they pay.

This means improving how we work, long term planning, investing for the future while reducing our overheads and developing new ways for our customers to reduce electricity bills using new technologies like smart meters and battery storage.

Endeavour Energy accepts our future is linked to meeting the needs of our customers and enabling their energy choices, and have therefore committed to placing their needs at the heart of our decision making.