

Draft Proposal

Endeavour Energy 2024-2029
Regulatory Control Period

October 2022





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Welcome to our Draft Proposal

At Endeavour Energy, we have been powering Greater Western Sydney, the Blue Mountains, Southern Highlands and the Illawarra and South Coast for more than 100 years. It's in our name to endeavour and in our nature to care. Supplying electricity that's safe, reliable and affordable is at the core of what we do; but today, what's driving us is so much bigger.

Our mission is to balance our core service commitments of safety, affordability and reliability with a transformation from a traditional 'poles and wires' network to a facilitator of customer technologies. We want to efficiently deliver a clean energy future, including smart meters, batteries, electric vehicles (EVs) and solar that will enable customers to generate, store, share and sell back electricity into the market.

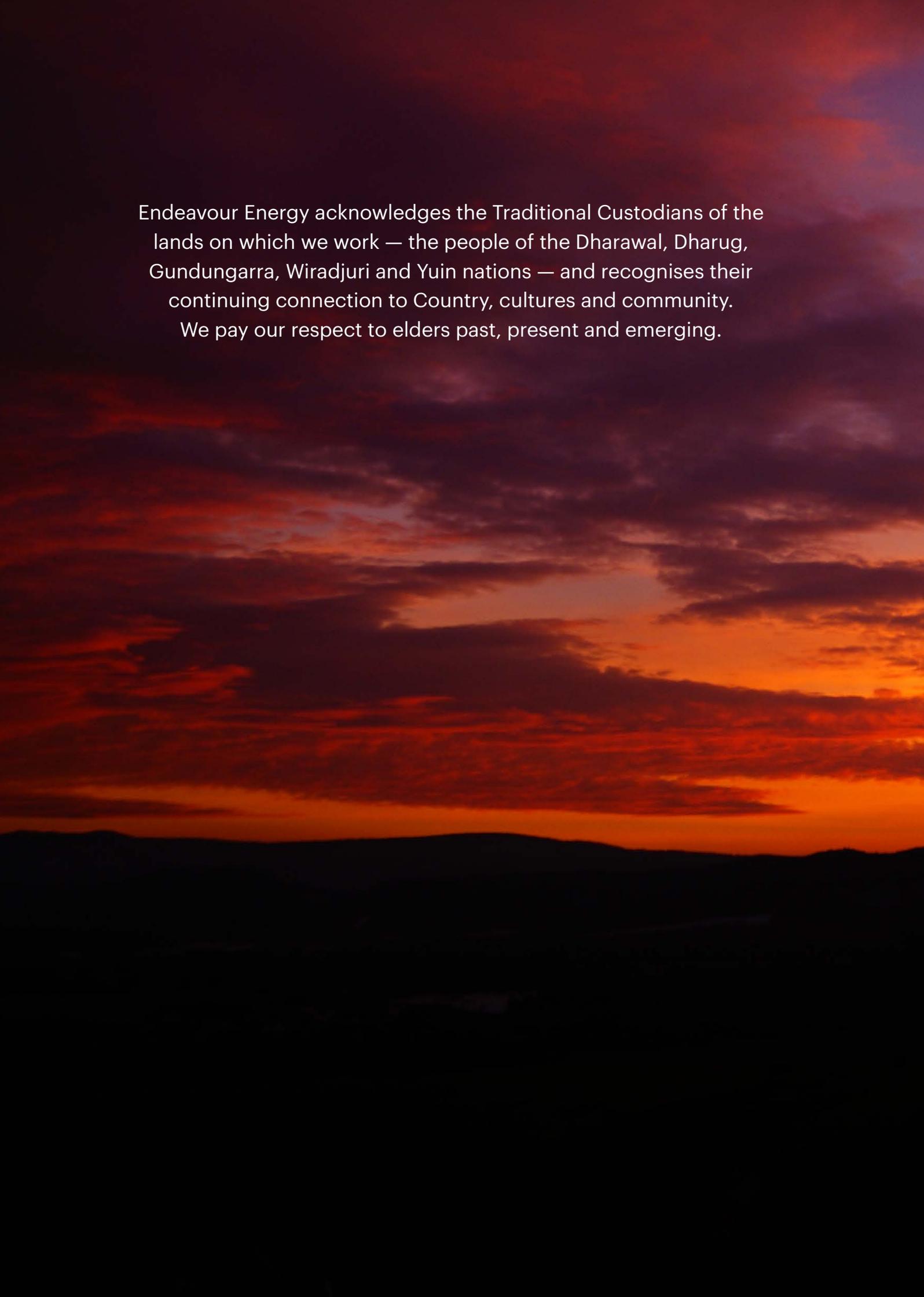
We are also responding to a changing climate and increasing weather extremes to improve community resilience. We are delivering this transformation while enabling extraordinary growth in our regions as Greater Western Sydney transforms into a hub of industry and innovation surrounding the Western Sydney International (Nancy-Bird Walton) Airport.

In April 2022, we published a Preliminary Proposal as a key milestone in our regulatory engagement program. Since its release, we have engaged broadly and deeply with a variety of stakeholders and customers to test whether our Preliminary Proposal met customers' future electricity service expectations. In addition to our engagement activities, we have refined our plans using the latest available information, considering developments in the broader context in which we operate, which include a change in the Australian Government, international factors, economic challenges and several regulatory and policy developments.

The engagement following the publication of our Preliminary Proposal has provided opportunities to take stock and reassess whether positions contained in our Preliminary Proposal remain appropriate or whether changes were required to deliver a customer-focused proposal that balances affordability and value with the long-term interests of customers. Where we believe changes were necessary, this Draft Proposal intends to make the reasons for doing so clear.

We want to get the balance of dependability, short- and long-term affordability and vision right and we need your input to help us plan investments that deliver on our core promises and help us deliver on your vision for the future.





Endeavour Energy acknowledges the Traditional Custodians of the lands on which we work — the people of the Dharawal, Dharug, Gundungarra, Wiradjuri and Yuin nations — and recognises their continuing connection to Country, cultures and community. We pay our respect to elders past, present and emerging.



Featured artwork: 'Powering A Brighter Future Together' by Rhonda Sampson

A welcome from our CEO and Chair

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Australia’s energy sector is amid an unprecedented transformation, with a shift from fossil fuels to renewables and from large-scale generation to distributed generation, increasingly from customers’ rooftop solar panels, home batteries and EVs. This transition is opening opportunities for our customers to participate in the energy market to save money and power their lives in new and innovative ways.

This transition is also taking place during a time of increasing economic uncertainty, increasing cost of living and cost of doing business pressures, as more extreme climate events impact our communities and as Greater Western Sydney and our regions transform into hubs of industry, innovation and ‘liveable’ urban development.

Every five years, Endeavour Energy submits a proposal to the Australian Energy Regulator (AER) that includes our capital and operating plans and the funding needed to deliver a safe, secure and reliable electricity network. The AER reviews our proposal, considers feedback from interested parties and then decides the revenue we can recover from customers.

Our revenue proposal is vital to the affordability, security and long-term interests of our customers. The revenue that is finally determined will be used to build and maintain an electricity network that powers economic growth; creates jobs; keeps communities safe, resilient,

sustainable and productive; and will enable customers’ energy choices and lifestyles beyond the five-year regulatory period.

We have undertaken extensive customer engagement and research to inform this Draft Proposal. This engagement has consistently confirmed that customers have increasing, evolving expectations of their energy needs and its security and sustainability. They want to be confident about the energy system’s performance during this period of transformation. Customers have also urged us to support them through the recent volatility in electricity markets and broader cost of living pressures by delivering an affordable energy transition. In keeping with our responsibility to our customers, we have faithfully heeded these priorities.

Ultimately, our proposal affects the lives of 2.6 million people living and working today in Greater Western Sydney, the Blue Mountains, the Southern Highlands, the Illawarra and the South Coast regions of NSW. By 2029 this will increase to over 2.8 million people.

A summary of key service outcomes and how to engage further in the development of our plans is provided below. We’d like to invite your comments by 30 November 2022 on our Draft Proposal and welcome your continued interest and participation in this process.

We will balance value for money services with plans that address customers’ long-term interests



Meeting core customer expectations for a safe, affordable and reliable electricity supply



Supporting the sustainable growth of our communities



Providing a resilient network for the community against increasing external hazards



Enabling customers’ future energy choices for a sustainable future

Investing in your future

We are investing in your future. While the next five year regulatory period starts in 2024 and finishes in 2029, Endeavour Energy is planning for the critical investments required in the long-term that can support our regions, facilitate the energy transition and deliver our purpose of powering communities for a brighter future. We are doing this while responding to the economic volatility and both cost of living and cost of doing business pressures our customers are currently facing.

Our plans are focused on the following:

Deploying enabling energy infrastructure in Greater Western Sydney and our regions

Endeavour Energy is actively supporting and enabling the unprecedented growth of Greater Western Sydney through the efficient, timely and innovative deployment of critical electricity infrastructure. Greater Western Sydney is undergoing rapid growth and transformation as a hub of industry, innovation and 'liveable' urban development, attracting local and global companies as hundreds of thousands of people are drawn to the enormous potential of the Western Parkland City and the Western Sydney International (Nancy-Bird Walton) Airport that serves it.

Supporting the NetZero economy and rapidly changing customer technology choices

Endeavour Energy is actively supporting the pursuit of a NetZero economy, which will transform the way our customers generate and consume energy. As customers take up technologies such as solar, batteries and EVs, the network will need to evolve through investments that allow for two-way energy flows and active market participation from customers and third parties. Sophisticated digital platforms will be deployed to interact with a more dynamic, integrated network that facilitates the low-carbon energy system.

Adapting to a changing climate and extreme weather events

Endeavour Energy has developed its plans to support partnerships that will improve community resilience and deploy the critical infrastructure that can ensure services continue to operate in the face of a changing and more extreme climate. Climate modelling suggests that extreme weather events will continue to increase in both frequency and intensity over the coming decades despite global efforts to reduce carbon emissions. Our critical investments will reduce the impacts of climate change-related weather events and increasing urban heat on our customers' electricity supply.

Actively driving efficiency and insights in the electricity-digital age

The digitisation of the electricity grid enables insights, efficiencies and new markets to emerge that support customers' choices in new technologies and how they interact with energy. The introduction of new digital technologies and enhanced data capabilities transform the roles, required skills and location of our future workforce. At the same time, we must invest to reduce the impact of increasing cyber attacks as they become more sophisticated and targeted and can cause disruption of the energy supply.

Maintaining the high-quality level of service our customers seek

Endeavour Energy must maintain and upgrade our existing electricity infrastructure, which is core to maintaining the high level of service reliability and emergency response our customers expect of us.

Our priority is to develop a proposal that delivers the outcomes that customers want and value in the most affordable manner. We have undertaken a detailed engagement program with customers and their advocates to co-design key elements of our proposal. In collaboration with our customers and stakeholders along the way, we have strived to improve the efficiency and robustness of our engagement process for Endeavour Energy, our customers, stakeholders and the AER.

We warmly invite you to continue to have your say on how you want us to meet your future electricity needs.



Guy Chalkley
Chief Executive Officer



Hon. Robert Webster
Chair

How to share your feedback

Your guide to our Draft Proposal

This guide has been prepared to help readers understand the purpose of the Draft Proposal and how to provide feedback.

Purpose of this document

Our Draft Proposal has been developed so we can share our view on Australia's changing energy landscape, reflect and share what we have heard from our customers and stakeholders and outline how our proposal reflects these for the period of 2024 to 2029 and beyond.

In doing so, we hope to receive feedback that we can use to further refine our thinking and our approach before we submit our Regulatory Proposal to the AER in January 2023.

Questions to keep in mind as you read the Draft Proposal

To help guide you, we have posed questions throughout the document that we would welcome your feedback on.

In addition, we have three overarching questions that we invite you to consider and share with us:

1. What are your priorities or the priorities of the stakeholders you represent?
2. What can Endeavour Energy do to deliver on these priorities?
3. How should we engage with our customers and stakeholders as we further embed engagement into our day-to-day practice?

How you can respond

There are many ways you can have your say about the Draft Proposal:

1. We will proactively send a survey out to everyone who has signed up to our Your Say page to request their feedback on our plans. If you would like to participate in this survey, please register to stay in touch via yoursay.endeavourenergy.com.au.
2. Alternatively, you can write a response and lodge it via email to yoursay@endeavourenergy.com.au.
3. Or, if you would prefer to provide your comments verbally, please email yoursay@endeavourenergy.com.au to make a time for you to share your feedback.

If you make a submission, please be sure to start by explaining who you

are, who you are representing (if you are writing on behalf of a business, organisation or another group) and where you live. Please also let us know if you would like your feedback to remain confidential.

This information will help us to understand your feedback in the context of the challenges of your community.

To ensure your feedback can be fully considered, submissions must be received by 30 November 2022.

How we will use your feedback

The feedback we receive in response to this Draft Proposal and during the ongoing Refine Phase of our engagement program will continue to shape our plans for the 2024-2029 period.

Once we have received and reviewed all the feedback, we will share a report that summarises what we have heard and how we will be acting on that feedback.

We will then update our positions in response to your feedback and as better information becomes available. This will be reflected in our updated forecasts, which will be included in our Regulatory Proposal submitted to the AER in January 2023.



Customer Panel online deliberative forum, May 2022



RRG meeting, April 2022



Stakeholder Deep Dive, August 2022



Stakeholder Deep Dive, July 2022



Customer Panel online deliberative forum, May 2022

Who we are

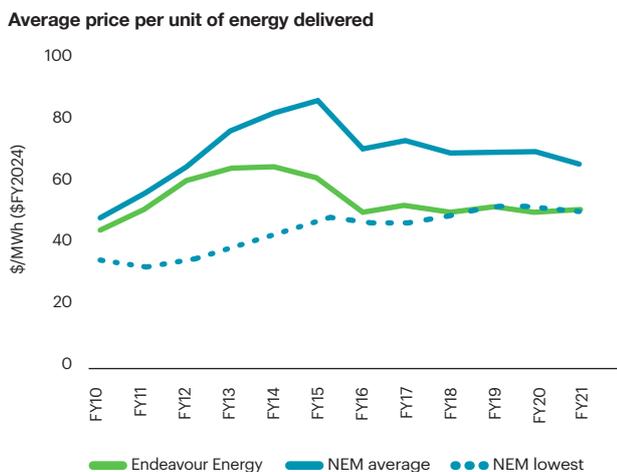
Endeavour Energy manages an electricity distribution network for 1.06 million customers in households and businesses across an area spanning Greater Western Sydney, the Blue Mountains, Southern Highlands, Illawarra and South Coast of NSW.



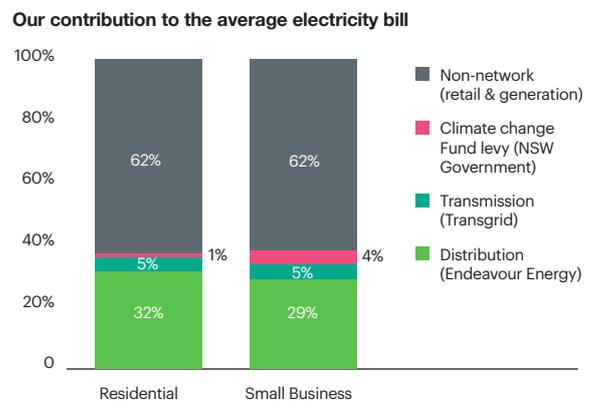
- 207 major substations**
- 20,000+ new customers per year**
- 430,000+ power poles**
- >25,000 km² of powerlines**
- 60,000+ km of powerlines**
- 225,000 streetlights**
- 221,000 customers with renewable energy**
- 2.6m people**
- 1m customers**
- 32,000 life support customers**
- 85% of our area is bushfire prone**

We build and operate a network that transports electricity from the high-voltage transmission system to homes and businesses and increasingly distributes customer-generated renewable energy. We recover costs from customers through network tariffs. Our bills comprise about a third of a typical customer's electricity bill. The other two-thirds consist of electricity generation, transmission, retailer and jurisdictional scheme charges. We have one of the lowest charges per unit of energy delivered in the NEM.

Our average price to serve



Our share of the bill



Changes since our Preliminary Proposal

In April 2022, we published a Preliminary Proposal as a key milestone in our regulatory engagement program. Since its release, we have engaged extensively with a variety of stakeholders and customers to test whether our Preliminary Proposal met customers’ future electricity service expectations. From this engagement, we have updated our plans to deliver customers, expectations and closed the loop on potential changes. Our revenue proposal has increased since our Preliminary Proposal as a result of both controllable and uncontrollable factors.

Changes to our Preliminary Proposal



Uncontrollable factors relate to inputs outside of our direct control. This includes changes in accounting standards, growth forecasts and inflation estimates. The most significant factor driving the increase from our Preliminary Proposal is the rapid and large increase in interest rates, following a downturn in the global economy, over the last few months.

Controllable factors relate to decisions within our control, such as our capital investments and operating costs (including step changes). We have sought to balance the feedback from customers to support the accelerating customer-led energy transition and improve the resilience of our network and communities to the increasing risks of climate change.

We take our responsibility to provide customers with a service that provides value for money seriously. In this Draft Proposal, we commit to maintaining and improving our service quality within a constrained budget through innovation and productivity improvements.

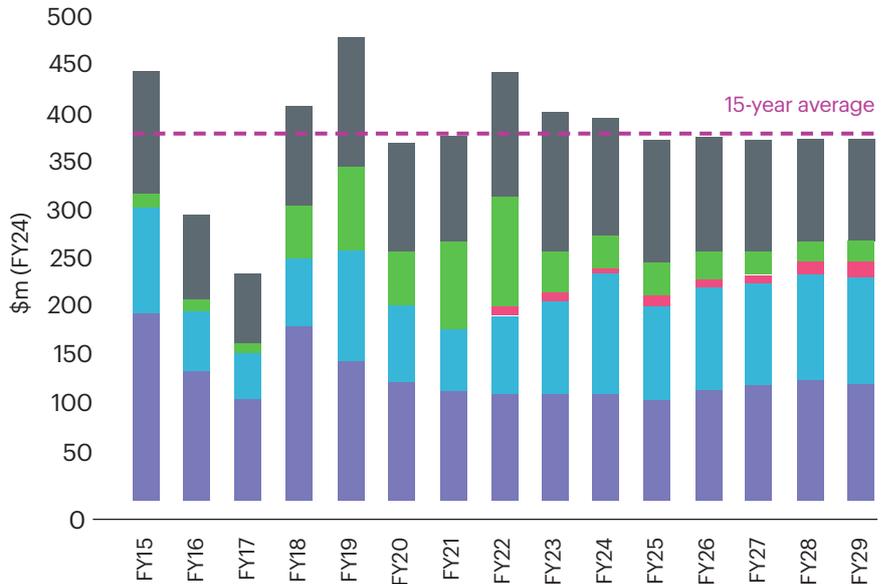


Stakeholder Deep Dive, July 2022

How we have responded to feedback and what we will deliver

Endeavour Energy has responded to customers to deliver the critical investments required in the long-term that can support our regions and the energy transition and deliver our shared vision of powering communities for a brighter future. This includes:

- supporting the NetZero economy and rapidly changing customer technology choices
- adapting to a changing climate and extreme weather events
- deploying the enabling energy infrastructure in Greater Western Sydney and our regions
- maintaining the high-quality level of service our customers seek
- actively driving efficiency and insights in the electricity-digital age.



Our capital investments snapshot (compared to FY2024-24)



The bottom line

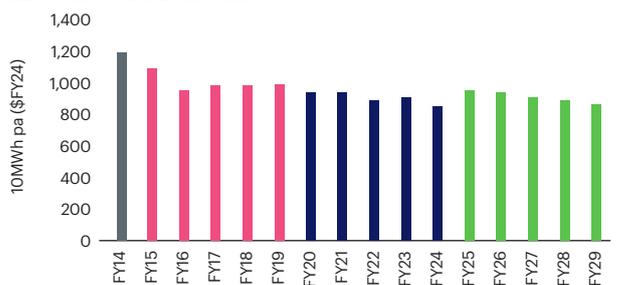
We are working to balance the feedback we received from customers to invest more in some services with feedback from other stakeholders who urged us to retain affordability as the guiding principle of our Regulatory Proposal. We recognise this increasing imperative in the face of external factors outside our control that are leading to increased energy prices. One example is the material impact on the prices our customers pay from any increase in the rate of return (ROR) in current inflationary economic conditions.

As a result, we are proposing minimal but targeted changes to our Preliminary Proposal to keep our bill contribution as low as possible while delivering customer priorities. This will mean an average increase in our annual prices of \$34 for the average residential customer and \$61 for the average small-medium business from the end of this current period (FY2024) to the average over the next period (FY2025-29).

Residential distribution bill



Small business distribution bill



Purpose of this Draft Proposal

We are committed to developing a Regulatory Proposal that reflects the needs and priorities of our customers. To help us achieve this, we have developed a customer engagement plan that builds on our previous experience, best practice learnings from other networks and industries and the AER's expectations as set out in the Better Resets Handbook.

Typically, a Draft Proposal reveals the substance of a developing Regulatory Proposal; however, our Preliminary Proposal, released in April this year, fulfilled this purpose.

The Preliminary Proposal was a key milestone in our regulatory engagement program. As an industry-first, it signalled a shift towards a more customer-focused approach, including earlier, more detailed and more collaborative discussions on key proposal inputs and outputs, enabling customer advocates to influence potential trade-offs. Importantly, it enabled highly informed engagement with customers and stakeholders about the services we could invest in, allowing them to identify those of the greatest value and priority.

This Draft Proposal should be read as an addendum to our Preliminary Proposal. It reflects revised positions that have been carefully developed as a direct result of the significant and informed engagement of customers and stakeholders.

Where amendments have been made from our preliminary positions and indeed where our preliminary positions have been retained in the Draft Proposal, these are explained in the context of both the preferences expressed by customers throughout our extensive 'Prioritise Phase' of engagement, the challenging economic environment and the transition of the energy sector.

Therefore, the Draft Proposal should and we believe it does, set forth a more finessed and customer-focused vision for investment in our future electricity services.

As noted in our Preliminary Proposal, the Regulatory Reference Group (RRG) remains a key feature of our engagement. The RRG includes a panel of expert, independent customer advocates who represent diverse customer voices. The objectives of the RRG has been to co-design a proposal that meets the long-term interests of customers.

This lengthy co-design process has reflected our broader commitment to genuine customer engagement. That commitment does not cease with the publication of this Draft Proposal.

We will continue to engage with our customers and stakeholders in response to this Draft Proposal and throughout the next stages of the determination process, the AER's Draft Decision and our Revised Proposal. Feedback received on this Draft Proposal should help identify where consensus has been reached and guide any further discussions and detailed AER review as required. More importantly, we have committed to embedding these best practice engagement approaches as a feature of the way we do everyday business.

In the table on the following page, we provide an overview of each section of this Draft Proposal, why it may be of interest to you and questions you may wish to respond to. To ensure your feedback can be fully considered, submissions to this Draft Proposal must be received by 30 November 2022.



Section	What is the purpose of this section?	Questions for feedback
Draft Proposal: In short	This section summarises the purpose of this document and our Draft Proposal compared to our Preliminary Proposal.	
Our changing energy landscape	This section provides context on the external forces impacting Endeavour Energy and its customers since the publishing of the Preliminary Proposal in April 2022. These are events outside of the control of Endeavour Energy that we will need to manage and respond to over the coming years.	<ol style="list-style-type: none"> 1. What do you consider to be the key changes that have occurred since April 2022? 2. How do these changes impact you or the customers you represent? 3. What changes (if any) should Endeavour Energy make to its Draft Proposal in response to these changes?
Customer insights and engagement	This section outlines our engagement focus and approach for developing a proposal that is reflective of customer feedback. We provide a summary of the insights we have gained from our customer research.	<ol style="list-style-type: none"> 1. What are your reflections on the engagement we have undertaken since our April 2022 Preliminary Proposal? 2. What are the key messages we must balance and respond to? 3. What changes (if any) should Endeavour Energy make to its Draft Proposal in response to the feedback it has received? 4. What topics and/or stakeholders should be the focus of ongoing engagement?
Proposed 2024-2029 forecasts and positions	This section provides our detailed Draft Proposal building blocks and outputs, as well as the reasoning for changes that have been made in our draft forecasts and positions.	<p>For each of the inputs covered in this section, we would like to understand the answers to the following questions:</p> <ol style="list-style-type: none"> 1. Have we understood and responded appropriately to the feedback we have received? 2. Does this Draft Proposal deliver outcomes that meet the expectations and needs of you and/or the customers you represent? 3. What aspects of our position should be the focus of any further review and/or refinement?

At a glance

At the time of our Preliminary Proposal, our accompanying Business Narrative set out four key themes to guide investment activities in response to external influences and in line with the expectations and requirements of customers:

- meeting core customer expectations for a safe, affordable and reliable electricity supply
- supporting the sustainable growth of our communities
- providing a resilient network for the community against increasing external hazards
- enabling customers' future energy choices for a sustainable future.

We have sought to balance these investment needs with the long-term interests of customers while providing a true value for money service.

We have strived to also consider and respond to the feedback we have heard from our customers and stakeholders. Our priority has been to consider and balance the feedback we have received faithfully and transparently. We have engaged broadly and deeply on matters across the IAP2 Public Participation Spectrum in accordance with our co-designed engagement plan.

In doing so, we have obtained a diverse set of views that reflect the priorities and concerns of our customers and stakeholders. We have been deliberate in our approach to obtain numerous perspectives over several points in time and to weigh each piece of evidence carefully. We acknowledge that each piece of feedback represents the view of that customer and/or stakeholder group at a point in time that reflects the broader economic and societal environment in which it was obtained.

Despite this, we understand that feedback driven by deeply held values is more consistent over time. For instance, the fundamental preferences of our Customer Panel did not change significantly throughout an intensive five-month engagement period, despite customers facing increasing affordability pressures and resilience challenges brought on by major weather events.

The quantitative research we conducted in August 2022 also highlighted increasing concerns with cost of living pressures and energy affordability.

However, there remains clear and broad support for a transition to more renewable, sustainable sources of energy, empowering customers to make increasing decisions about when and how they use energy; support for action to improve resilience in the face of major weather events also remains clear. We found the results of our quantitative survey to be consistent with independent research conducted by Energy Consumers Australia (ECA) and SEC Newgate's Mood of the Nation research.

Further detail on our engagement activities and findings is provided in this proposal and a detailed examination of our engagement and its outcomes is available in the attached Engagement Summary Report. On the following page, we provide a summary of the key findings of our engagement activities and how we intend to respond to this feedback.



Stakeholder Deep Dive, July 2022

Priority area	What we heard	How we will respond
<p>Affordability and value for money</p>	<p>Customers want a safe and reliable supply of electricity at an affordable price. They were also interested in understanding what they could do to manage and reduce their bills.</p> <p>Affordability became an increasingly important issue for customers over the course of our engagement activities as the economic environment changed, with customers wary of increasing cost of living and cost of doing business pressures, and stakeholders expressing particular concerns about the cumulative impact of energy costs outside of Endeavour Energy's control, including inflationary pressures on the AER's Rate of Return (ROR) framework, wholesale market volatility and costs associated with the NSW Renewable Energy Zones (REZs).</p> <p>Despite this focus on affordability, customer preferences still suggested support for a small increase in costs that targeted the outcomes they valued most, with a view that these would improve services and reduce costs in the longer term. Stakeholders were more reticent, urging Endeavour Energy to find ways to limit spending to meet customers' expectations.</p>	<p>We are working to balance the feedback we received from customers to invest more in some services with feedback from other stakeholders (specifically the RRG, some Deep Dive participants and some high energy users) who urged us to retain affordability as the guiding principle of our Regulatory Proposal.</p> <p>Achieving balance and addressing different perceptions of fairness has been an overarching goal of our engagement program, and we recognise this increasing imperative in the face of external factors outside our control that are leading to increased energy prices. One example is the material impact on the prices our customers pay of any increase in the AER's RoR from the current economic conditions.</p> <p>As a result, we propose minimal but targeted changes to our previously published Preliminary Proposal to keep our contribution to customer bills as low as possible while delivering customer priorities. This will mean a typical increase in our annual prices of \$34 for residential customers and \$61 for Small to Medium Enterprises (SME) customers from the end of this current period (FY24) to the average over the next period (FY25-29), inclusive of the changes proposed.</p>
<p>Reliability</p>	<p>Customers and stakeholders broadly told us they are comfortable with the current levels of reliability we provide. In principle, most would prefer the same level of reliability that they experience now at a similar cost.</p> <p>However, many customers also indicated a preference to invest in long-term improvements in service reliability, and many customers were mindful that others in the worst-served areas at the edge of the grid sought improved reliability. But when customers considered competing priorities, improvements to reliability rated lower than investment in resilience or future energy choices.</p> <p>Stakeholders preferred that Endeavour Energy maintain or seek to improve reliability through operating efficiencies rather than increased investment.</p>	<p>In keeping with our customers' and stakeholders' overall preferences, we are not proposing any increase to our Preliminary Proposal to improve reliability performance. We will seek efficiency and technological improvements within our preliminary forecast to manage the increasingly challenging task of maintaining reliability. This includes targeted investments, for instance in microgrids and Stand-alone Power Systems (SAPS), to support customers in the worst served areas of our network.</p> <p>We will continue our efficiency program which has established us as the most efficient electricity network in NSW and the sixth most efficient in the National Electricity Market (NEM).</p>

Priority area	What we heard	How we will respond
<p>Resilience</p>	<p>Customers and stakeholders are keenly aware of the growing risk that climate change induced weather events, such as extreme heat, bushfires and floods, pose to their electricity supply and to community wellbeing.</p> <p>Our engagement program revealed a strong sense of community-mindedness among our customers and a consistent desire to minimise the impacts of such events across our supply area. Indeed, final customer preferences from the Customer Panel suggested that taking a more proactive approach to improving network resilience in the face of increasing major weather events should be a key priority of our developing Regulatory Proposal. Stakeholder preferences on resilience were in close alignment with customer views.</p> <p>Both customers and stakeholders favoured Endeavour Energy taking a more proactive approach to maintaining network services in the face of major weather events (recognising that some resilience initiatives will always be responsive in nature) and working more closely with Government, other utilities and communities to improve community resilience overall.</p>	<p>Included in the estimated average annual increase of \$34 per residential customer and \$61 per SME customer outlined above, we propose an increase from our Preliminary Proposal capital expenditure (Capex) of \$28 million to be spent over the regulatory period in further targeted initiatives that improve network and community resilience in areas identified as having the most elevated risk of fires, floods and/or storms.</p> <p>In line with customer feedback, this investment will prioritise improved resilience through a combination of network hardening and providing backup power to critical infrastructure and community hubs.</p> <p>We will also continue to engage with Government, think tanks, local councils and community groups on ways to improve community and network resilience, noting that partnerships typically enable innovation and improved customer and community outcomes.</p>
<p>Supporting customer choice and innovation</p>	<p>Customers and stakeholders were keen to be involved in the transition to a low-carbon economy and want Endeavour Energy to take steps to prepare for an accelerated transition, with customers considering further significant take-up of solar panels, Electric Vehicles (EVs) and batteries.</p> <p>Customers aspired to the energy transition delivering a win-win outcome: a cleaner environment while also achieving personal savings through smarter, more efficient technologies and greater choice and control of their energy usage. Renters and those living in home units were eager to be involved and concerned that they may not have the options available to others.</p> <p>Therefore, there was an expectation that Endeavour Energy increase its focus on technological innovation and implement smarter ways of serving customers and communities.</p> <p>Stakeholders were mindful of meeting customer expectations to generate and share their energy with minimal limitations on the uptake of Distributed Energy Resources (DER) to support a low-carbon future and customer energy savings. They were also concerned about the impact the transition to large-scale renewable generation across NSW would have on electricity bills and the need to support the transition to DER in a fair and equitable manner.</p>	<p>We maintain our DER expenditure forecast from our Preliminary Proposal based on a Value of DER (VaDER) that is consistent with the AER's guidance and supports a level of investment that meets our customers' expectations and supports the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP).</p> <p>In response to customer priorities, we propose to increase our focus on innovation by establishing an Innovation Allowance of \$25 million (\$20 million Capex and \$5 million Opex).</p> <p>This fund will be excluded from the Capital Efficiency Sharing Scheme (CESS) and operate in a similar manner to the Demand Management Innovation Allowance (DMIA) but with oversight from a newly constituted customer reference group.</p>

Priority area	What we heard	How we will respond
<p>Supporting growth</p>	<p>Customers acknowledged that growth is inevitable and must be serviced in a timely manner. This means building infrastructure at the same time as other utilities at a steady cost.</p> <p>Although most customers ultimately preferred the existing ‘causer pays’ approach, there were mixed views on how growth should be funded. ‘Beneficiary pays’ was generally considered a fairer approach that removes cross-subsidies between new and existing customers resulting in all customers benefitting from the growth in the network. However, there was concern that developers would not be obliged to pass on the savings to newly connecting customers, which could achieve greater equity if passed on.</p> <p>A clear majority of stakeholders preferred that Endeavour Energy maintain the existing ‘causer pays’ approach, considering this as being in the best interests of customers.</p>	<p>We are not proposing to change our approach to supporting network growth from our Preliminary Proposal, as our ‘just in advance’ approach was widely accepted by customers and stakeholders. We propose to maintain the current contributions policy included in our Preliminary Proposal on the balance of customer and stakeholder preferences.</p> <p>Since our Preliminary Proposal was published, we are forecasting additional development activity in our network area over the FY25-29 period. However, in the interests of maintaining affordability, we will judiciously manage this increased demand.</p> <p>Our Connections capex is calculated on the basis of forecast customer growth. We have updated this forecast capex for the latest available forecast growth. We have also offset this increase with a reduction to our capitalised overheads forecast.</p>
<p>Tariffs</p>	<p>Customers were supportive of cost-reflective tariffs in principle and keen to have more control over their bills and opportunities to save money. However, there were concerns about customers’ ability to respond to tariffs and most felt that a transition period and appropriate education would be important. Views were mixed on whether cost-reflective tariffs should be mandated or elective, with the majority of the Customer Panel preferring an opt-in approach.</p> <p>While customers appreciated the challenge that solar exports present to network stability and customer equity, they did not want solar customers to be limited in the amount of excess solar energy they could export back to the grid, both because they believed individual customers should benefit from the solar technology they invested in and because renewable energy has an environmental (and potential cost) benefit for all. There was a clear preference for an opt-in approach to solar export tariffs to allow solar customers to adjust to them and a growing preference to defer a decision on this issue until at least 2030.</p> <p>Stakeholders were also supportive of cost-reflective tariffs, expanding these to solar exports (with charge and reward windows) and other new technologies like EVs, grid-scale and residential batteries, dynamic controlled load and embedded networks. They were also supportive of stronger measures to accelerate the take-up of cost-reflective tariffs through mandates.</p>	<p>We will respond to the customer and stakeholder feedback and look to simplify and advance cost-reflective tariff reform for all customers with smart metering. We will seek to further understand consumers’ concerns about their ability to respond to cost-reflective tariffs and opportunities to improve education as we refine our Proposal for submission in January 2023.</p> <p>We will simplify our tariff strategy by replacing our Seasonal Time of Use (STOU) Demand tariff as the default tariff offering with our STOU Energy tariff. We will advance cost-reflective tariff reform by assigning all customers with smart metering to a cost-reflective tariff. To manage the customer impact of this transition, we propose a two-year transition period. This both manages customer impacts and will provide customers time to better understand the impacts of their electricity usage on their network bill.</p> <p>We will introduce an Export and Reward tariff. We propose to offer our ‘Prosumer’ tariff on an optional basis. Any customer can opt-in to the tariff from 1 July 2024; however, from 1 July 2025, we will place all new and upgrading customers on the tariff as the default. Customers assigned to this tariff will retain the option to opt-out of this tariff offering.</p> <p>We will also look to encourage ongoing efficient use of new technologies with a prosumer reward and tariff structure for customers who adopt new technologies, including batteries and vehicle-to-grid, on an opt-in basis. New tariff structures to efficiently and fairly enable grid and community batteries, embedded networks and scheduled load structures will also be implemented.</p>

Priority area	What we heard	How we will respond
<p>Keeping customers informed</p>	<p>Keeping customers informed (via multiple channels) of planned and unplanned outages to minimise disruption was identified as a top five priority of customers in our exploratory research. Residential and business customers participating in our quantitative survey both identified communications on planned outages as a key future service priority, and customers in both our early exploratory research and recent quantitative survey want improved access to data, in general, to manage their electricity usage and bills more actively.</p> <p>Options for new measures to keep customers informed were explicitly explored with our Customer Panel, with around 90% supporting additional metrics focused on outages communication and overall customer experience.</p> <p>Our stakeholders stressed the importance of embedding our improved engagement approach into our business-as-usual activities to improve customer communications and deliver improved customer service outcomes. There is an expectation that Endeavour Energy provides timely and ongoing updates to customers about the electricity industry (especially the NSW Electricity Infrastructure Roadmap costs and wholesale market price increases) so customers remain fully informed as Endeavour Energy continually seeks to understand customer preferences in an evolving environment.</p>	<p>In response to the feedback received, we have developed a Customer Service Incentive Scheme (CSIS) in addition to the current customer service incentive that measures telephone calls answered within 30 seconds.</p> <p>We are proposing a series of more contemporary customer service measures focused on improving our communication and management of planned outages and incentivising improved customer satisfaction as measured by regular surveys, targeting customer experience in planned outages, unplanned outages and customer contact centre enquiries, while having the flexibility to target developing areas of customer priority.</p> <p>Our ICT investment and corporate communications plans look to increasingly improve access to information for customers through our website and via social media channels, enabling customers to make more empowered decisions about their energy usage and choices.</p> <p>We have also committed to embedding our improved engagement approach, and to undertake an additional phase of regulatory engagement to confirm the feedback we have received in light of cost-of-living and cost of doing business pressures and significant changes occurring in the energy industry.</p>
<p>Smart cities and communities (streetlighting/ councils)</p>	<p>Throughout our engagement, local councils have sought more collaboration with Endeavour Energy on managing severe weather, particularly extreme heat, and taking steps to improve community resilience and accelerate the transition to renewable energy.</p> <p>Councils remain committed to and expect our support of their rapid transition to more energy-efficient public lighting technology and creating value for their communities through associated ‘smart’ services.</p>	<p>We have updated our Public Lighting Modelling approach to simplify it so that new technologies can be transparently priced and more quickly introduced over the course of a regulatory period. We have also improved the accuracy of our prices and increased our LED maintenance cycle. Collectively, these changes generally reduce our LED charges relative to old luminaire technologies, further enhancing the cost-saving and decarbonisation benefits councils can achieve in transitioning to LED lighting.</p> <p>We will also continue to collaborate with all councils on how to best deliver on their sustainability objectives and support their community resilience plans.</p>

Overall, the core expectation customers have of Endeavour Energy remains to provide a safe and reliable service at an affordable price. However, our engagement has highlighted a sense of community among our customers and widely held values relating to sustainability, supporting decarbonisation and customer choice and additionally adapting to climate change to improve network and community resilience. Customers were mindful of increasing pressures on energy prices and wanted, to see Endeavour Energy take value for money steps in the short-term to deliver better price and service outcomes in the future.

We believe our updated draft forecasts and positions appropriately balance these expectations, which are summarised below in comparison to our current period and our Preliminary Proposal.

Key outcomes	FY2024	FY2029 Draft	Driver of change from Preliminary Proposal (uncontrollable or controllable)
Average residential network bill distribution use of system (DUOS) (\$pa)	\$476	\$486	This outcome relates to our distribution portion of the electricity bill (just under a third of the total electricity bill). This has been and could continue to be impacted by changes in market conditions that affect the weighted average cost of capital (WACC). For more information, please refer to page 49 regarding providing value for money services and refer to page 72 for the return on capital.
Average small and medium business network bill (DUOS) (\$pa)	\$843	\$860	
Regulated asset base (RAB) (\$m)	\$7,820	\$7,671	This reduction is driven by lower capital expenditure and higher depreciation and a higher customer base.
RAB/customer (\$)	\$7,074	\$6,266	
Opex/customer (\$)	\$307	\$243	This reduction is driven by productivity improvements from our transformation investments (digital and ICT).
Customer numbers	1,102,137	1,218,261	These forecasts represent our best estimates of the substantive growth across our network area. For comparison purposes, note that the demand forecast is exclusive of data centre growth, which could add in excess of 750MW of demand over the period.
Energy supplied/delivered (MWh)	16,795	17,679	
Maximum demand (MVA)	4,553	5,014	



Western Sydney local council workshop, June 2022

Revenue requirements (\$m; real FY2024)	FY2020-24 (allowance)	FY2025-29 Draft Proposal	Driver of change from Preliminary Proposal (uncontrollable or controllable)
Revenue (smoothed)	4,400	4,831	The revenue outcome is the sum of the building blocks below and the increase is driven by the higher WACC. Refer to page 49 for more details.
Net capital expenditure (excluding equity raising costs)	1,975	1,850	This reduction is driven by our commitment to providing a value for money service with long-term investment themes. Refer to page 51 for more details.
Operating expenditure (excluding debt raising costs)	1,664	1,415	This reduction is driven by our increasing efficiency and productivity improvements from our transformation investments (ICT and digital). Refer to page 68 for more details.
Weighted Average Cost of Capital - WACC (%)	5.32%	5.62%	This placeholder estimate is based on the AER's Draft 2022 Rate of Return Instrument (RORI) and driven by prevailing market conditions. Refer to page 73 for more details.
Return on capital	1,966	2,127	This increase is driven by the higher inflation estimate and WACC estimate above. Refer to page 73 for more details.
Regulatory depreciation	667	1,039	This increase is driven by our reallocation of capital in the 2019-24 period to our transformation initiatives (digital and ICT), noting that these investments are depreciated over a shorter span. Refer to page 73 for more details.
Revenue adjustments	0	154	The increase is driven by incentive scheme payments for our efficiency improvements. Refer to page 74 for more details.
Corporate tax allowance	141	71	This reduction is driven by a change in the tax treatment of capital contributions. Refer to page 75 for more details.

Key positions	Draft Proposal update
Service classification	We accept the outcomes of the AER's framework and approach (F&A) process which was finalised in July 2022. The F&A confirmed the current forms of control would be maintained and all available incentive schemes would apply. We note that changes to the service classification were not introduced for system support services. This may require change as the ESB's Post-2025 reforms continue to progress and more details, become available.
Incentive schemes	We support incentive regulation and consider it has delivered significant benefits to customers. In addition to the existing incentive schemes, we propose to introduce a CSIS which we have developed based on engagement with customers and the RRG. We note the AER is consulting on changes to the Capital Efficiency Sharing Scheme (CESS) and considering export service incentives.
Pass-throughs	Our draft position is to maintain the existing nominated pass-through events for the current period. We are still considering whether changes are required to the natural disaster event to better capture successive and related events. We are also considering whether the terrorism event sufficiently captures other acts of aggression, such as war and cyber attacks.
Contingent projects	We have not identified any eligible contingent projects.
Tariffs	We have developed our position in response to the outcomes of our engagement activities. Key details of our proposal include: <ul style="list-style-type: none"> refining cost-reflective tariff structures with the addition of a Solar Soak window in the middle of the day to incentivise customers to consume energy during periods of high solar PV output introducing export charges and rewards and adapting our tariffs for grid-connected batteries and embedded networks adopting an 'opt-out' assignment policy (to other cost-reflective options only) for all customers by enabling smart metering with a two-year transition period.

Providing a value for money service

We build and operate a network that transports electricity from the high-voltage transmission system to homes and businesses and increasingly distributes customer-generated renewable energy. We recover costs from customers through network tariffs. Our bills comprise about a third of a typical customer's electricity bill. The other two-thirds consist of electricity generation, transmission, retailer and jurisdictional scheme charges. The maximum bill for an average default customer (prior to any discounts offered by retailers) in 2023 will be made up of the elements below.

Each part of the bill	Wholesale (generation)	Transmission (Transgrid)	Distribution (Endeavour)	Retail	Green schemes	Total
Residential without electric hot water (4,900 kWh pa)	\$670 (36%)	\$74 (4%)	\$556 (30%)	\$216 - \$400 (22%)	\$136 (7%)	= \$1,836 (100%)
Residential with electric hot water (7,400 kWh pa)	\$988 (41%)	\$98 (4%)	\$648 (27%)	\$216 - \$456 (19%)	\$194 (8%)	= \$2,383 (100%)
Small business without electric hot water (10,000 kWh pa)	\$1,367 (36%)	\$151 (4%)	\$977 (26%)	\$296 - \$924 (24%)	\$364 (10%)	= \$3,782 (100%)

Green schemes include the national Renewable Energy Target and NSW Climate change Fund
Source: 2022-23 default market offer (the cap on bills); Endeavour Energy analysis

Customers have recently experienced a significant increase in their electricity bills as a result of volatility in other components of their bills. This volatility, outside distribution costs, is likely to continue as NSW customers fund the transition to large-scale renewable generation over the next several years. This upward pressure from generation, retail and green schemes is likely to be exacerbated in the short-term by the global economic downturn and increasing interest rate environment.

Our distribution component of the bill has been the most stable and consistent component over the last decade. However, even our contribution will face upward pressure from rising interest rates that are used to set our return. These factors beyond our control, as well as increases in other parts of the supply chain, do not absolve us of our responsibility to provide an affordable service. In fact, we draw attention to these factors to instead highlight the increased importance of our proposal.

It is our responsibility at all times, but particularly during challenging times, to provide customers with a service that delivers value for money. For Endeavour Energy, value for money relates to how we manage the factors within our control to deliver a cost-service quality mix that is efficient and meets our customers' expectations.

Achieving an efficient balance between cost and service quality requires risk to be managed by the party best equipped to do so. For us, that means proportionately targeting investments to the outcomes that customers truly value, as well as improving our service quality within a constrained budget through innovation ('finding a better way') and productivity improvements ('doing more with less'). Throughout this proposal, we highlight the ways we are seeking to respond to our changing environment and stakeholder feedback through constraint and innovation. In doing so, we believe we have limited our pricing movement to the best of our ability in the current conditions.

Long-term interests of customers

We believe our plans will support the long-term interests of customers, reflect the diverse and detailed feedback we have received from customers and stakeholders and align with the AER's expectations of what constitutes a quality proposal as outlined in the AER's Better Resets Handbook.

On the latter, we have been continuously engaging with the AER and submitting information as part of the Early

Signal Pathway under the Better Resets Handbook. At several stages, the AER has provided feedback on our proposal, where improvements could be made and where additional information has been required. We have sought to respond to this feedback throughout this determination process and in developing this Draft Proposal. Below we set out how we consider we have satisfied the requirements of the handbook.

- Key:
- Aligned or enough information available to suggest 'on track'
 - To be determined/unknown
 - Not aligned or not on track

Component	AER expectation (in brief)	Endeavour Energy's position (in brief)
Overall assessment	<ul style="list-style-type: none"> Options for fast-tracked regulatory proposals (or key elements) through greater and earlier collaboration and transparency by networks and commitment of AER resourcing 	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">●</div> <ul style="list-style-type: none"> We have conducted detailed pre-lodgement engagement, including through the development of a Business Narrative, Preliminary Proposal, stakeholder Deep Dives, customer deliberative forums (in English and other languages) and a quantitative survey of customers. A total of 1,581 customers and stakeholders have directly participated in our engagement program. </div>
Customer engagement	<ul style="list-style-type: none"> Consumers partner with distribution network service providers (DNSP) in forming proposals rather than just providing feedback There is a breadth and depth to the engagement that is outcomes focused, accessible, transparent and multifaceted, with a clearly evidenced impact on the proposal 	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">●</div> <ul style="list-style-type: none"> The engagement plan and topics were co-designed using best practice international engagement principles and led by the Board and executive engagement. Peak customer committee membership was expanded and the RRG was formed to co-design the formation of the proposal. An extensive engagement program has been conducted with both customers and informed stakeholders. We have openly and sincerely tested key aspects of our proposal and adjusted our proposal accordingly. </div>
Capital expenditure	<ul style="list-style-type: none"> Distribution network service providers (DNSP) should demonstrate that the forecast total capex is not materially above the current period's actual spend Recurrent categories of expenditure to align with top-down models and historical trends (e.g. repex) Material, increasing or new categories of spending to be supported by a cost-benefit analysis and all spending by good asset and risk management practices. 	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">●</div> <ul style="list-style-type: none"> The headline figure within the current period actuals with a re-prioritisation of investment within categories. A new customer value framework and asset management practices have been implemented and a detailed cost-benefit analysis sits behind the plans. Forecasts were made for existing categories in line with top-down models (where available). Forecasts for new categories of expenditure are relatively modest and in accordance with AER guidance and key input methodologies. Overall capex has been constrained with further productivity commitments in capitalised overheads and foregone cost escalation. </div>

Component	AER expectation (in brief)	Endeavour Energy's position (in brief)
Operating expenditure	<ul style="list-style-type: none"> Efficiency scope at 0.75 operating environment factor [OEF] and productivity of at least 0.5% p.a. OEF and base year adjustment need to be discussed with AER prior to submission Step changes should be limited to legislative changes and capex/opex trade-offs 	 <ul style="list-style-type: none"> Endeavour Energy is positioned beyond the efficient frontier and will apply the base-step-trend method. Customers and stakeholders have been consulted regarding step changes and accounting changes. A constrained approach has been taken in accordance with stakeholder feedback to accept a degree of risk and further productivity commitment.
Regulatory depreciation	<ul style="list-style-type: none"> Utilises AER post-tax revenue model, roll-forward model (RFM) and depreciation tracking Proposal for accelerated depreciation; any changes to asset classes or asset lives should be discussed with customers 	 <ul style="list-style-type: none"> Endeavour Energy has utilised AER models, including adopting a year-by-year tracking method. There is no proposal for accelerated depreciation. Changes have only been proposed to introduce capitalised lease asset classes following a change in accounting standards.
Tariff Structures	<ul style="list-style-type: none"> Progress transition to cost-reflective tariffs (import and export) and demonstrate incorporation of tariff strategy within the overall business plan. Proposal linked to stakeholder engagement is broadly supported and adverse customer impacts managed. 	 <ul style="list-style-type: none"> Tariff proposal informed by extensive engagement and tariff trials. However, our proposal may not enjoy broad support as there are divergent views between customers, retailers and stakeholders on the appropriate transition path to cost-reflective tariffs. We have taken the view that it is in the long-term interests of customers to strengthen our tariff assignment policy and propose a transition period to manage adverse customer impacts. We will also seek to further understand consumers' concerns relating to cost-reflective tariffs as we refine our January 2023 proposal to the AER.



: 2. Our changing energy landscape



Shifting from our Preliminary Proposal

In our Preliminary Proposal, published in April 2022, we provided a detailed overview of our operating environment and the challenges both we, as network operators and our customers face. We have a straightforward and longstanding objective of delivering a safe and reliable electricity supply at an affordable price.

At that time, we identified six emerging trends shaping our current and future operational landscape. We have since added a seventh emerging trend, 'economic volatility and cost of living pressures', as having a direct bearing on our plans and we have revised our overarching objective to 'balance value for money services with plans that address customers' long-term interests'.

The seven external trends are summarised here and are followed by a more detailed examination of the recent developments that have impacted the development of our Draft Proposal:

- Customer centrality:** More empowered customers play a much more central role in the operation of the network as networks evolve to be platforms of energy services. Underpinned by new technologies, customer expectations and service needs will evolve. Customers will expect to help shape the direction of the network through deep engagement with regulatory proposals and beyond.
- Trust, reputation and purpose:** Empowered communities and individuals have more choices and louder voices and increasingly expect the organisations they interact with to align with their personal values and brand. Purposeful decision-making, with a genuine emphasis on environmental and social governance outcomes, will continue to be essential to retain a social licence, attract investment and establish and maintain a high-performance culture.
- Greater Western Sydney regional growth:** The NSW Government is driving the substantial and rapid growth of Greater Western Sydney at a rate nearly 40% higher than the rest of Metropolitan Sydney. By 2036, half of Sydney's population will reside within the city's west, supporting a new international airport, new industry and manufacturing and a new science park. This plan is akin to building a new city from scratch.

- Economic volatility and cost of living pressures:** International and domestic developments have contributed to rapidly rising inflationary pressures, including in energy prices, with rising concerns about a possible slowdown in the Australian economy. Cost of living pressures are increasingly the focus now for all customers, small and large. Transitioning the grid in the most efficient way to ensure long-term value for customers as they become increasingly proactive in their energy choices requires a balance of short-and long-term interests.
- Climate change and extreme weather events:** Climate modelling suggests that extreme weather events will continue to increase in both frequency and intensity over the coming decades. Climate change-related events damage, destroy and/or compromise the performance of infrastructure and increase risks to the reliable supply of electricity.
- A changing grid in a low-carbon economy:** The pursuit of a net zero economy will transform the way we generate and consume energy. As customers take up technologies such as solar, batteries and EVs, the network will need to evolve to allow for two-way flows and active participation from customers and third parties. Over time, more sophisticated digital platforms will seek to interact with a more dynamic, integrated network that orchestrates the low-carbon energy system.
- Efficient and effective service in the digital age:** Introduction of digital technologies and enhanced data capabilities create significant operational efficiencies while transforming the risk, roles, required skills and location of the future workforce. At the same time, cyber attacks have become more frequent and sophisticated, targeted at the disruption of energy supply.

Based on these trends and in consultation with the RRG, we developed four key investment themes to guide our 2024-2029 proposal. These are shown below:

We will balance value for money services with plans that address customers' long-term interests



Meeting core customer expectations for a safe, affordable and reliable electricity supply



Supporting the sustainable growth of our communities



Providing a resilient network for the community against increasing external hazards



Enabling customers' future energy choices for a sustainable future

Recent developments

Since the release of our Preliminary Proposal in April of this year, there have been several significant developments in the energy industry and broader society.

These developments also occurred throughout the intensive stage of our engagement program and therefore may have contributed, in part, to the engagement outcomes and are likely to impact customer sentiment over a longer period of time. We have been mindful of this when weighing and assessing the feedback we have received and the need to strike a balance that delivers a long-term benefit for our customers.

International factors

Since the release of our Preliminary Proposal in April, the global COVID-19 pandemic has continued to impact NSW, Australia and the world at an alarming rate and society has continued to adjust to this unfortunate reality in how they live and work. While many industries and businesses have been negatively impacted by the pandemic, as an essential service provider, Endeavour Energy has seen an increase in dependence on its service.

Notwithstanding changes in public health orders relating to lockdowns and isolation rules, people continue to work from home and the reliance on reliable and quality electricity supply remains high. In addition, federal and state governments have implemented a number of economic stimulus measures to support ongoing activity in the building and infrastructure sector.

Endeavour Energy and its staff, continue to meet the challenge of operating and maintaining the network throughout the pandemic. This involves managing staff unavailability, providing a safe work environment, prioritising critical work and adjusting to global and domestic supply chain shortages for materials.

The ongoing Russian–Ukrainian War has further contributed to increasing prices and delays and shortages in key materials affecting both our customers and our own activities. This conflict has driven and exacerbated a downturn in economic activity. Together, these impacts have increased the complexity of operating the network to service growth and maintain a safe and reliable service in an affordable way.

In the early part of the current regulatory period, these challenges, along with the need to manage frequent natural disaster events, led to an underspend of our capital allowance. However, as we and our customers have become more accustomed to these issues, we have adapted and improved our capacity to deliver our services.

As a result, in FY2022, Endeavour Energy was able to deliver a significant increase in budgeted spending to address early period deferrals and continue to service the ongoing accelerating growth across our network.

National energy policy

In May 2022, the Australian Labor Party achieved a majority government following the federal election. This change in government marks a significant shift in energy policy that will impact the pace of decarbonisation and transition to distributed and large-scale renewable generation.

The suite of announced reforms includes the following:

- **Emission reduction targets:** In support of the bipartisan net zero by 2050 target, Labor has introduced the Climate Change Bill 2022 (Cth) and Climate Change (Consequential Amendments) Bill (2022) (Cth) to codify this commitment and also set a target reduction of 43% by 2030 and net zero in the Australian Public Service by 2030.
- **Safeguard Mechanism:** The mechanism, established in 2007, sought to regulate the emissions of over 200 large greenhouse gas emitting facilities. Labor has indicated that it will ask the Department of Industry, Science and Resources and the Clean Energy Regulator to determine revised baselines that reduce gradually over time.
- **Rewiring the Nation:** Labor has proposed establishing a new Rewiring the Nation to centrally coordinate the investment of \$20 billion for the upgrade of the electricity grid, particularly the transmission networks, to support and accelerate the transition to renewable generation.
- **National Reconstruction Fund:** Relatedly, Labor announced up to \$3 billion from the National Reconstruction Fund to support renewables manufacturing, low-emissions technology and the co-investment of up to \$100 million for 85 solar banks and 400 community batteries across Australia.
- **EVs and transport:** Labor has indicated that it will develop a National Electric Vehicle Strategy. The strategy will encourage the transition to EVs, including electrifying 75% of the Commonwealth's fleet by 2025.

On 12 August 2022, the Energy Ministers' Meeting (which consists of state and federal energy ministers) met and endorsed fast-tracking the expansion of the National Electricity Objective (NEO) to include an emissions objective to support Australia's emissions reduction goals.



This reform is significant and means that the AER and networks must consider the environment when determining and incentivising efficient levels of service quality and costs.

The regulatory bodies of the NEM also continue to implement numerous reforms that impact our day-to-day operations and investment drivers.

The Energy Security Board (ESB), in collaboration with the market bodies, continues to work on implementing its Post-2025 electricity market design reforms. In recent months this has included the following:

- **Implementing its Data Strategy:** In July, consultation began on a suite of initial reforms designed to permit greater access to and use of data held by AEMO in a secure way.
- **Transmission access reforms:** In support of the rollout of REZs as part of the ISP, the ESB is consulting on whole-of-system transmission access solutions that optimise the investment in and operation of renewable generation.
- **Integration of DER:** The ESB continues to work on standards, trials and mechanisms to support the integration of DER in the NEM. As part of this work, the ESB commenced consultation in August on the technical and policy settings necessary to support the effective integration of smart charging EVs into the NEM.

The AEMO publishes an ISP every two years that sets out an optimal development path that considers multiple scenarios to identify the likely investments required to meet the future needs of the NEM. This includes in-transmission projects, non-network options and distribution assets, generation, storage projects and demand-side developments.

The ISP is a critical roadmap that supports Australia's complex and rapid energy transformation. It forms a key component of our forecasts and plans, as well as guiding a series of market reforms and the timing and placement of major generation and transmission investments.

The 2022 ISP, released in June, highlights the ongoing and accelerating shifts in technologies, government policies, participant behaviours and business models. AEMO is now forecasting enough potential variable renewable energy resources in the NEM to supply 100% of grid demand by 2025 and 40% more variable renewable energy deployed across Australia by FY2024 than was forecast in the 2020 ISP.

The AER has progressed with a number of decisions and reforms since the development of our Preliminary Proposal. These reforms set expectations, provide guidance and directly impact how we develop and justify our regulatory proposal. Key work in recent months includes the following:

- **F&A:** The AER has set out a number of preliminary matters in the F&A that will inform our proposal. Importantly, this includes revising our service classification (or the supporting rationale) to address the role of distribution networks in providing export services, standalone power systems and community batteries. The AER is awaiting further work from the ESB reforms before determining the treatment of the potentially enhanced role of distribution networks in system support services.
- **Resilience guidance note:** In response to increasing customer interest in network resilience, the AER has published a guidance note setting out expectations for how networks engage on the issue of resilience and develop expenditure proposals in response.
- **DER expenditure guidance note:** Similar to the above, the AER has provided guidance as to how networks should develop a VaDER and use this in assessing and proposing expenditures targeted at DER hosting service levels.
- **Customer export curtailment value CECV methodology:** The AER has published its final CECV methodology. The CECV is an input for our DER expenditure proposal that mostly relates to the wholesale market benefits associated with DER exports.

- **Incentives review:** The AER continues to consult on existing incentive schemes to review their performance and assess whether changes are required. The AER is closely considering making changes to the CESS to account for material departures from the AER's capital allowance in order to maintain incentives for high-quality and accurate capital expenditure proposals by networks.
- **Export hosting incentives review:** The AER is consulting on whether new incentive arrangements are required to encourage networks to provide efficient levels of export hosting capacity.
- **Connections export limits review:** The AER is reviewing the Connections Charge Guideline to clarify the circumstances under which a network can apply a static export limit to DER customers.
- **OEF/benchmarking review:** The AER is reviewing its benchmarking approach, specifically the capitalisation OEF that applies for benchmarking purposes. This forms part of a series of OEFs applied by the AER to ensure the benchmarking data is comparable between networks and has implications for base year efficiency testing.

These AER developments in and of themselves do not direct us to invest more or less compared to our Preliminary Proposal. Instead, they set out the requirements our business cases and supporting documentation must satisfy to demonstrate an appropriate exercise of judgement and for a Regulatory Proposal to be assessed as prudent and efficient.

It is an important lens, one of many, through which the feedback we receive from customers must be interpreted. For instance, we cannot spend an unconstrained amount on improving network resilience and DER hosting in response to customer concerns. We must heed this direction in priority from customers and determine the efficient response that can be justified by reference to recognised inputs and precedents provided by the AER and/or industry best practice.

Finally, the Australian Energy Market Commission continues to progress with market reviews and rule changes that can impact our obligations and operating environment. Of particular note is their ongoing review of the Power of Choice metering competition reforms. This review could have material consequences for our ability to access smart meter data and the cost of doing so.

Our meter pricing (for our basic meter population), tariff assignment policy and DER expenditure program are underpinned by assumptions around the take-up of smart metering and the cost of acquiring meter data. We will continue to monitor this review and update our proposal accordingly.

NSW energy policy

The NSW Government have also been actively reviewing and amending our regulatory framework to facilitate the decarbonisation of the NSW economy. The most prominent policy is the NSW Electricity Infrastructure Roadmap, which seeks to coordinate \$32 billion of investment in REZs across NSW to replace coal-fired power stations over the next decade.

The Central-West Orana REZ was the first REZ to be declared in Australia, with EnergyCo currently carrying out a competitive tender for a network operator. The cost of this and all subsequent REZs will be recovered from NSW electricity customers via our network tariffs as a jurisdictional scheme.

The NSW Government expects the roadmap to deliver benefits relative to a late and/or uncoordinated transition away from coal-fired generation. The cost remains uncertain, but it is likely to materially increase electricity bills in NSW. We have been mindful of highlighting this uncertainty in our engagement activities and have consulted extensively with the NSW Government on reforms to implement the roadmap. Our position remains that the roadmap costs and benefits should be transparently communicated to NSW electricity customers.

In addition to the infrastructure roadmap, the NSW Government has been consulting on the following additional reforms:

- **NSW EV strategy:** In June 2022, the NSW Government announced initiatives to promote the uptake of EVs in NSW by 52% by the 2030-2031 period. Key actions include rebates for new purchases, phasing out stamp duty on EV purchases, offering fleet incentives and investing in EV fast-charging infrastructure.
- **NSW DER strategy:** the NSW Office of Energy and Climate Change continues to consult on reforms to support a net zero carbon emissions future in NSW where DER is efficient, affordable and available to all NSW customers and that supports a stable, secure and reliable energy system.
- **Promoting innovation for NSW energy customers:** The Office of Energy and Climate Change is also consulting on a broad suite of reforms to support the transition of the NSW energy industry. This includes considering options to accelerate the smart meter rollout, uptake of DER, EVs and community batteries and customers' access to information.

These reforms are ongoing but are likely to impact our plans for the 2024-2029 regulatory period. Similar to the national reforms, there is a clear and strong policy direction in NSW in support of accelerating the decarbonisation of the energy industry and empowering customer choice.

Energy crisis

The need for these national and state reforms was highlighted in recent months by the ‘energy crisis’ that occurred between 10 June 2022 and 24 June 2022. On 15 June 2022, AEMO announced the suspension of the wholesale electricity spot market, which lasted until 24 June 2022. This followed an extreme surge in wholesale prices due to:

- high coal and gas prices driven by the Russian–Ukrainian War
- almost a quarter of NEM-wide coal power stations being unavailable due to scheduled maintenance and the unexpected exit of 3,000 MW from unplanned outages
- high demand due to the coldest winter start in over a century.

To ensure there would be enough supply to meet demand, AEMO directed 5 GW of generation through direct interventions on 14 June 2022 before then suspending the wholesale market and setting a price cap at \$300 per MWh the next day.

In addition to the factors above, the energy crisis has highlighted the need for a clear and consistent energy policy in Australia to facilitate an efficient transition to renewable energy sources. AEMO has released a report on the incident with several recommendations.¹

At the same time as the risk of widespread outages in NSW, increasing electricity prices in NSW from 1 July 2022 were also national news.² Driven by network and wholesale market factors, the AER announced increases in its default market offer across the NEM. For NSW customers, prices were forecast to increase by 9% to 18% (between \$210 and \$369 annually).

Our peak period of engagement occurred during this unprecedented crisis; this included holding a customer forum on 15 June 2022, the very night the market was suspended. At this time, our customers were acutely aware of increasing electricity prices and the risk of widespread outages. As noted by the Independent Members Panel of our RRG, this awareness is now translating into the actual experience of these changes over time as energy price increases appear on customer bills. We discuss our engagement approach and findings in relation to this issue in more detail in the following chapter.

Economic downturn

Since the release of our Preliminary Proposal in April, there has been a significant and rapid downturn in the global economy. This can be observed in the inflation projections in the RBA’s quarterly Statement on Monetary Policy:³

- In November 2021, the inflation outlook was 2.25% by the end of 2022 and 2.5% by the end of 2023.
- In February 2022, the inflation outlook was forecast to peak at around 3.25% during 2022 before returning to 2.75%.
- In May 2022, headline inflation was forecast to peak at around 6% by the second half of 2022 before returning to the 2% to 3% target range in 2024.
- In August 2022, inflation was the highest it had been since the early 1990s and was expected to reach 7.75% by the end of 2022 before returning to the target range in 2024.

This trend has been driven by strong demand, supported by the monetary and fiscal stimulus as part of pandemic economic recovery measures, coming up against rising energy, food and commodity prices as a result of the Russian–Ukrainian War and ongoing pandemic-driven supply shortages.⁴

Wage growth has not kept pace with the higher cost of living and rising interest rates. The RRG’s report to our Preliminary Proposal provides a useful and detailed overview of several indicators of the changing pressures our customers face and the energy market more specifically.

We are mindful that our customers are increasingly vulnerable to electricity price movements and require a service from Endeavour Energy that genuinely provides value for money.

¹ https://aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/market_event_reports/2022/nem-market-suspension-and-operational-challenges-in-june-2022.pdf

² 7News, ABC, 9News

³ <https://www.rba.gov.au/publications/smp/>

⁴ RRG report pages 41-45



Stakeholder Deep Dive,
August 2022

Draft 2022 Rate of Return instrument

As noted in our Preliminary Proposal, the largest driver of our revenue requirement is the cost of previous investments. This includes the depreciation of our existing long-life assets and a financial return on these investments. The ROR, set as a WACC, is determined by the AER's binding RORI which will be finalised in December 2022 (it is reviewed every four years). Small changes in the WACC can have a material impact on our revenue requirement. Therefore, the RORI is closely scrutinised and deeply consulted on by the AER and stakeholders to ensure it sets a return that best promotes the achievement of the NEO.

On 16 June 2022, the AER released its Draft 2022 RORI. The draft maintains most aspects of the AER's 2018 RORI, with the notable exception of the term of the risk-free rate used in calculating the return on equity. This has been reduced from 10 years to match the term of the regulatory period (typically five years), which requires an update to the market risk premium.

Collectively, these changes result in marginal changes from the 2018 RORI. However, our concern is that the reduction in equity term is not adequately justified, out of step with similar national and international regulators and exposes customers and investors to increased volatility in the long term. It should be noted this assessment only represents our view and we would encourage stakeholders to engage in the 2022 RORI review [process](#) to understand alternative views and/or provide their own feedback to the AER.

Of greater consequence from a customer perspective is the change in economic conditions discussed above. Regardless of what term of equity is used, rising interest rates are significantly increasing the cost of debt and the return required by equity investors.

For instance, the yield on five-year Australian Government Securities was 1.40% at the start of 2022 – around the time we started preparing our Preliminary Proposal. As of late September, the five-year Australian Government Securities yields had increased to over 3.50%.

These market conditions result in a higher WACC, which in turn increases our revenue requirement. These factors are beyond our control and the change in WACC is the largest driver of change from our Preliminary Proposal, accounting for 95% of the increase in revenue in this proposal.

This is an important context for assessing the feedback we received from stakeholders and customers. Similar to the NSW Electricity Infrastructure Roadmap and wholesale market costs, any desire for increased expenditure to improve service levels must be weighed against the upward pressure on electricity prices from the WACC and other sources.

Given the importance and volatility of this input, we provide a range of the impact further changes in the WACC may have on our forecast revenue requirements on [page 73](#).



Weather events

The increasing frequency and severity of climate change-induced weather events is becoming increasingly difficult for Endeavour Energy to manage and of concern to our customers.

Since the development of our Preliminary Proposal, there have been three state of emergency declarations in NSW for floods that destroyed 600 homes and 300 businesses across our network area. The Windsor Bridge, which connects communities in the Hawkesbury, once considered to be flood resistant, became submerged multiple times. The year 2022 is slated to be the wettest year on record for Sydney.

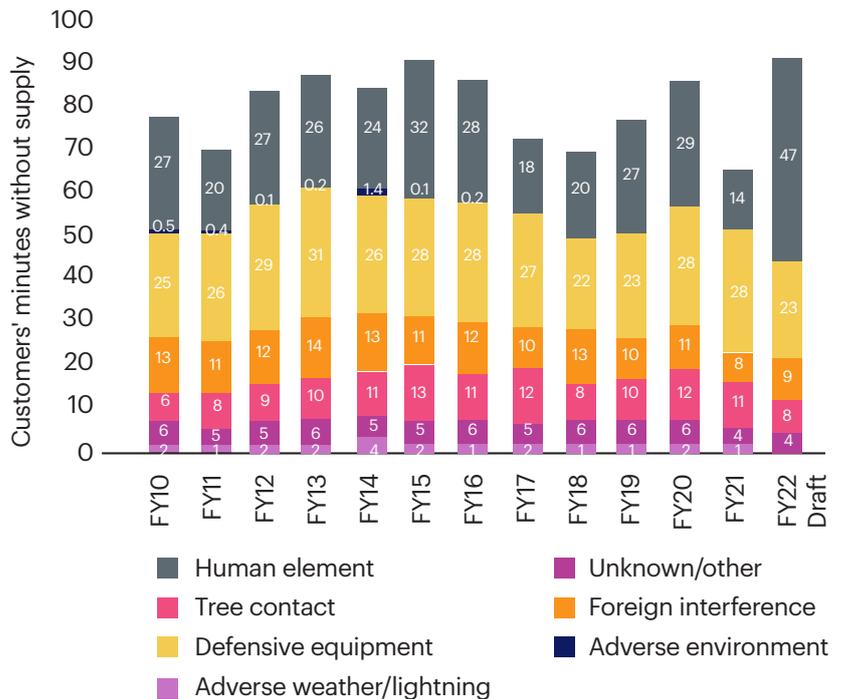
As a result, our FY2022 reliability performance is the worst it has been in over a decade at over 92 minutes per customer on average (normalised) compared to 66 minutes in FY2021. This is despite an improving trend in the factors within our control, such as managing defective equipment, due to an unprecedented increase in adverse weather driven outages.

This also continues the trend of a widening gap between normalised and 'raw' reliability performance. For reporting and incentive scheme purposes, the results are 'normalised' to remove the impact of outlier events. While these are extraordinary and uncontrollable events, they are becoming more common and the 'raw' results more closely reflect the felt experiences of our customers.

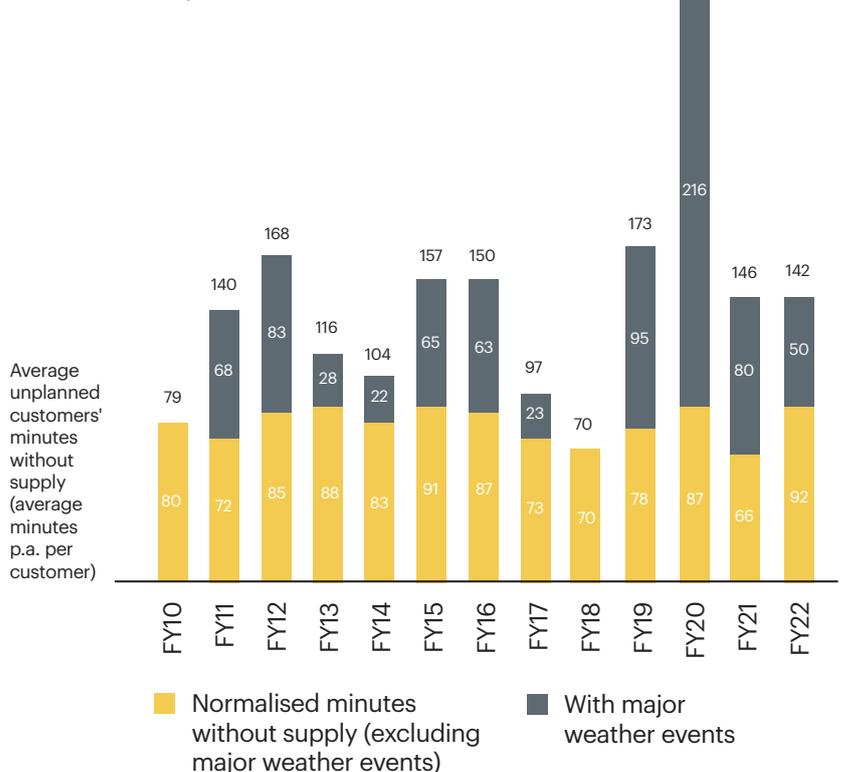
The federal Labor Government has also committed to conducting a climate change and security risk assessment of federal assets and the economy more generally, while the AER has published a guidance note setting out expectations for engaging on and justifying resilience-related expenditure.

These developments underscore the ongoing and growing importance of managing climate change-induced risks and meeting customer expectations for network and community resilience.

Causes of unplanned interruptions of customers' electricity supplies (excluding major weather events)



Causes of unplanned interruptions of customers' electricity supplies with and without major weather events



Impact on our Draft Proposal

How we respond to our external environment must be in a manner that is beneficial to the long-term interests of customers. Engagement with today's customers remains the key source of direction and insight.

Based on the outcomes of our engagement to date, it appears that the changing operating environment does not warrant changes to the four key investment themes identified in our Preliminary Proposal, although we have adjusted our overarching objective to include the concept of value for money as well as balance and affordability. While our evolving operating environment largely confirms the appropriateness of our initial

positions, customer engagement in the context of a challenging economic period suggests there is scope to make modest adjustments to how we addressed these themes in our Preliminary Proposal to best deliver a customer-centric proposal that incorporates balance and fairness.

The Independent Members Panel of RRG has provided useful recommendations on how Endeavour Energy prioritises the feedback it has received in an evolving environment. The recommendations from the Independent Members Panel set out below have been faithfully adopted by Endeavour Energy.

(a) A new version of the Business Narrative

The key messages in consumer engagement supporting the Preliminary Proposal – increased resilience and greater DER enablement – need to be retested in the context of the changing external environment in the economy generally as well as the energy sector in particular.

Following RRG comments, the version used in the Preliminary Proposal included additional words around affordability. Developments since then suggest that a revised Business Narrative should be developed and discussed with the RRG. This revised narrative should consider how the impact of rising energy prices and wider economic cost pressures shape consumer views of the revenue proposal in terms of whether:

- affordability should be an additional external driver and discussed along with 'value for money'
- its impact on customers' insights should be a key part of future engagement
- the impact of the engagement outcomes on investment themes should be explored in detail.

(b) Regular engagement to continually evaluate the impact of external factors on consumers' energy needs

The engagement leading to the Preliminary Proposal was undertaken prior to the recent significant NEM and economy-wide cost pressures discussed above had appeared and without any context on the potential costs from NSW jurisdictional schemes.

Recent engagements – the deliberative forums and Wave 2 – have started to highlight these electricity and wider cost pressures but not to the extent we would have expected. While the large price rises have received a lot of press, it may not be until the increased bills begin appearing that consumers recognise their impact.

The existing Engagement Plan currently has no external engagement after the publication of the Draft Plan, with the focus only on internal 'refining' of the Draft Plan for submission to the AER in January 2023. We recommend that engagement across all customer groups continue after the publication of the Draft Plan and then well into 2023. This is required to give the Independent Members Panel RRG confidence that Endeavour Energy will meet the AER consumer engagement requirements under the Better Resets Handbook.

We will continue to work with the Independent Members Panel of the RRG to action these recommendations to the best of our ability, noting that we await further clarity from the NSW Government regarding the potential bill impacts of the NSW Electricity Infrastructure Roadmap.

We agree that the lived experiences of our customers will continue to evolve and our engagement plan should be a 'living document' that regularly tests the views of customers. All signs point towards the growing importance of providing a value for money service alongside decarbonisation and managing resilience. We need to test which values are deeply held and consistent through time and balance these against customer preferences that are more susceptible to cost of living pressures.

Therefore, we will continue to engage with customers after the publication of this Draft Proposal. However, due to the limited time available before the formal lodgement of our Regulatory Proposal, the findings from these activities may instead inform our ongoing engagement with the RRG and AER in preparation for the AER's Draft Decision and our Revised Proposal.

At this stage, we have made the following changes in response to our changing operating environment in this Draft Proposal:

- **Updating the Business Narrative:** We provide an addendum of our Business Narrative to this Draft Proposal, which provides a detailed overview of the contextual issues, as they currently stand, that shape our developing plans.
- **Increased focus on value for money:** Our customers and stakeholders provided Endeavour Energy with a clear direction to make investments that target key areas to improve our service quality and affordability in the long term. While we seek to faithfully respond to this feedback, we recognise that the changing operating environment has resulted in energy prices that are facing upward pressure from several sources. As a result, we have constrained our opex step changes and capitalised overheads and have not adjusted our capex forecast for labour and materials price growth. We will need to innovate and improve our efficiency to deliver the full suite of service outcomes our customers and stakeholders expect of us.
- **Increased focus on innovation and resilience:** Our capex forecast has been increased by 1% overall, with targeted adjustments for additional investment in resilience and innovation. The forecast remains below the current allowance and forecast spending.
- **Commitment to ongoing engagement:** We will continue to engage to further test our Draft Proposal and Regulatory Proposal to ensure the positions we have taken and trade-offs we have made reflect the ongoing interests of customers. To that end, we have amended our Engagement Plan in line with the advice of the RRG Independent Members Panel.



As noted above, we will continue to engage with customers and stakeholders on this issue. In response to this Draft Proposal, we are interested in understanding your views on the following:

1. What do you consider to be the key changes that have occurred since April 2022?
2. How do these changes impact you or the customers you represent?
3. What changes (if any) should Endeavour Energy make to its proposal in response to these changes?

Our commitment to engagement and approach

An engagement report prepared collaboratively with our engagement partner, SEC Newgate Australia, provides a detailed summary of our co-designed engagement process and its impact on the outcomes contained in this Draft Proposal. We also provided an overview of our engagement objectives and approach.

To summarise, we are committed to embedding quality customer and stakeholder engagement across our business so that it informs our actions and underpins our decisions, always placing our customers at the heart of what we do.

Our engagement goal for the 2024-2029 Revenue Determination was co-created and refined with the Independent Members Panel of our RRG. It is shown below:

To undertake engagement that delivers our purpose of powering communities for a brighter future by developing a proposal that balances the priorities, preferences, diversity and current and future needs of our customers with sustainable returns to shareholders and can be considered prudent and efficient by the AER.

This means providing fair access to the modern grid and ensuring customers pay no more than is necessary for a safe, reliable and secure electricity supply and quality service.

Our engagement plan has been co-designed with our stakeholder representatives and guided by our Corporate Strategy, Stakeholder Engagement Framework, Energy Charter and the International Association for Public Participation (IAP2) Core Values for public participation.

A key feature of our engagement approach has been the establishment of the RRG. This includes an independent panel of expert stakeholder representatives working in a collaborative and advisory capacity to perform the following roles:

1. representing the long-term interests of Endeavour Energy customers
2. co-designing the engagement program
3. participating as key stakeholders in the Revenue Proposal engagement
4. challenging Endeavour Energy throughout the development of its 2024-2029 Revenue Proposal both on its proposal and the engagement program.

Our approach has also been informed by industry best practices and guidance from the AER's Better Resets Handbook regarding what constitutes good and effective engagement.

This has resulted in an approach that has utilised a wide variety of engagement methods and channels to ensure the overall program achieves both deep and broad engagement with a diverse cross-section of customers and stakeholders. This is summarised below.

Deep engagement methods 	Broad engagement methods 	Targeted engagement methods 
<ul style="list-style-type: none"> • Customer Panel • RRG engagement, including a series of additional small group workshops ('mini Deep Dives') with subject matter experts on key topics chosen by the RRG • Peak Customer and Stakeholder Committee (PCSC) engagement • Stakeholder Deep Dives • Future grid workshops 	<ul style="list-style-type: none"> • Residential and SME customer quantitative study • RepTrak surveys with end customers and stakeholders • Exploratory focus groups with end residential and SME customers • State of the Network forum with a broad range of stakeholders • Joint stakeholder workshops with other DNSPs • A 'Have Your Say' section on the Endeavour Energy website • LinkedIn and Facebook posts 	<ul style="list-style-type: none"> • Culturally and linguistically diverse (CALD) in-language engagement • High-energy user workshop • 'Dinners with Endeavour' in-language engagement • Local council workshops • Meetings with commercial and industrial energy users

Summary of engagement tools and approach

The engagement program initially comprised four key phases, each with distinct deliverables. In response to recent recommendations of the RRG Independent Members Panel, a fifth phase, the 'Confirm Phase', has been added to our engagement plan after the submission of our Regulatory Proposal to the AER and the 'Refine Phase' has been augmented to sense-check potentially changing customer preferences. The program is summarised here.

Preparation

Oct 2020 – Mar 2021

A period of forward-planning to prepare Endeavour Energy for the launch of the regulatory cycle

Benchmarking previous engagement with best practices

Engagement partner appointed

PCSC membership enhanced

Phase 1 Discover

Apr 2021 – Sept 2021

A research period to better understand customer and stakeholder needs and preferences to help shape our engagement approach

Establishment of RRG, FGRG and ReRG and determining the TOR

Board/Executive/customer co-design workshop

RRG engagement planning

Joint DNSP engagement (emerging services)

Future grid workshop

PCSC

Co-designed exploratory research straw man

Board check-in

Exploratory research (residential)

Exploratory research with SME (Dinners with Endeavour)

Exploratory research (CALD)

Ongoing engagement with AER

 Engagement Plan

 Exploratory Customer Research Report

Phase 2 Explore

Oct 2021 – Apr 2022

A period of deeper exploration of key issues to help inform the development of our Preliminary Proposal

RRG and AER Investment Value Framework

BAU State of the Network Forum (Illawarra and South Coast)

BAU State of the Network Forum (Greater Western Sydney)

High-energy user workshop

Future grid workshops

Retailer Reference Group

PCSC x 2

Board check-in

Joint DNSP engagement (tariffs)

Ongoing RRG mini Deep Dives

Commence engagement of AER's Consumer Challenge Panel

Ongoing engagement with AER

One-on-one briefings with stakeholders

RepTrak benchmarking study

 Preliminary Proposal

 Business Narrative

Phase 3 Prioritise

May 2022 – Oct 2022

Broad and deep engagement on our Preliminary Proposal, identifying aspects of greatest importance to customers

Local council workshop (Illawarra and South Coast)

Local Council Workshop (Greater Western Sydney)

Customer Panel Wave 1

Customer Panel Wave 2

Deep Dive 1

Deep Dive 2

One-on-one briefings with stakeholders

Quantitative survey

Retailer Reference Group webinars x 3

PCSC x 3

Ongoing RRG mini Deep Dives

In-language direct engagement with CALD communities

Customer Panel Wave 3

Ongoing engagement with AER

 Draft Proposal

 Engagement Summary Report

Phase 4 Refine

Nov 2022 – Jan 2023

Developing and refining our Final Proposal using insights from the previous phase

Stakeholder check-ins

Individual retailer engagements

Local council workshop (streetlighting tariffs check-in)

RRG bimonthly meetings

RepTrak benchmarking study

 Final Proposal

 Final Proposal Customer Overview

Phase 5 Confirm

Feb 2023 – Jul 2023

Confirming our customers' priorities in the context of a changing economic environment

Customer Panel check-in

Stakeholder check-in

RRG bimonthly meetings

AER public hearing

Our Engagement Summary Report provides an comprehensive overview of the design and execution of our engagement plan, which was designed to be iterative and characterised by constant and incremental changes to our positions based on numerous 'pillars of evidence'.

However, this Draft Proposal focuses on the findings of Phase 3: 'Prioritise', which commenced following the release of our Preliminary Proposal in April and which sought to reveal what customers valued most, acknowledging that constraints on investment were necessary to balance our customers' vision with affordability that delivers value.

Phase 3: Prioritise engagement results

Phase 3 of our engagement plan focused on understanding the detailed preferences of customers and stakeholders with respect to key trade-offs relating to those aspects of our Preliminary Proposal that customers could genuinely influence.

There are several attachments accompanying this report that provide details on each component of the Prioritise engagement phase. Below, we provide a brief summary of three key initiatives from this phase.

Pillar of evidence: **1. Customer Panel**

The Customer Panel has been a central feature of our engagement approach. Its purpose has been to deeply engage with a broad and representative cross-section of residential and small business customers through an extended deliberative process conducted online during the pandemic to inform the organisation’s 2024-2029 Regulatory Proposal.

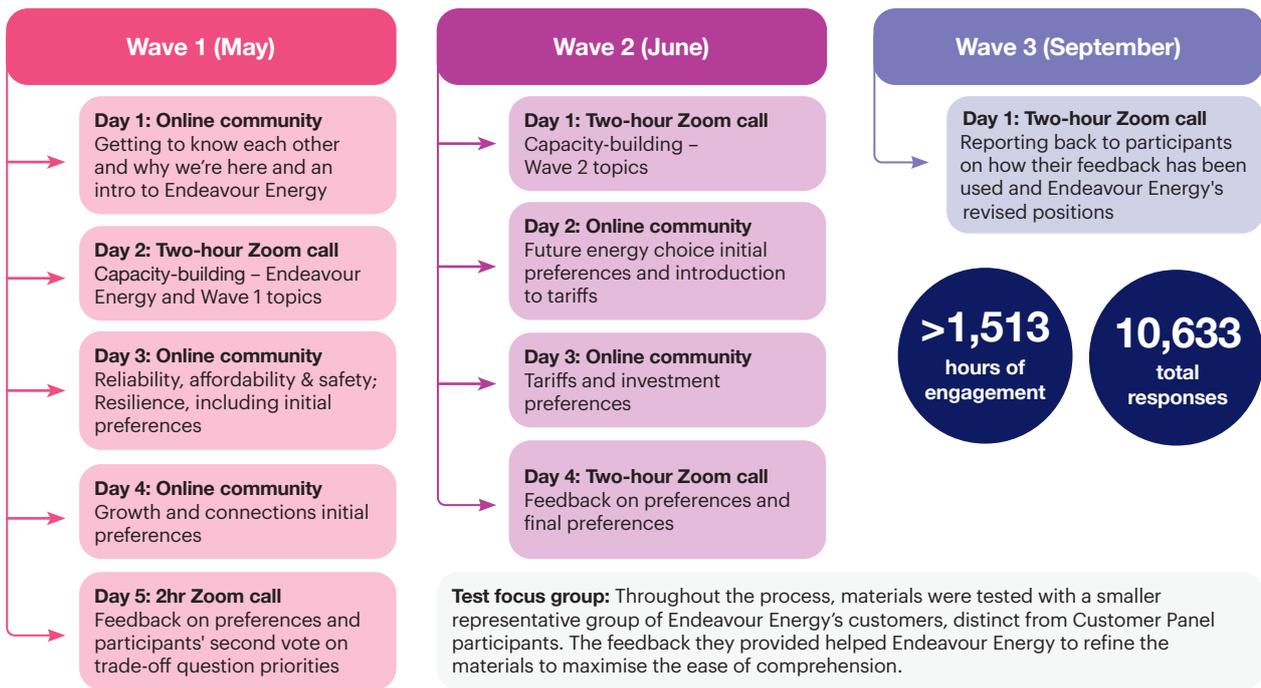
The panel was made up of 89 participants who were provided extensive background information and capacity-building activities that they worked through in online communities to deliberate on the following key questions:

1. How should Endeavour Energy best meet customer expectations for a safe, reliable and affordable electricity supply?
2. Should Endeavour Energy take a more proactive or responsive approach to maintain network services in the face of increasing major weather events (storms, bushfires, floods, etc.)?
3. How should Endeavour Energy time the delivery of the electricity infrastructure required for the economic development of Greater Western Sydney and other areas?
4. Should new customers be required to pay 'upfront' for the infrastructure required to service new development, or should the costs for this infrastructure be recovered over time from all customers through existing charges?
5. How do we modernise the network to meet emerging and future customer service expectations as technology and markets evolve?
6. Should the tariffs reflect the different demands customers place on the network?
7. Should solar export tariffs be introduced by Endeavour Energy to reflect the different demands customers place on the network?
8. Does Endeavour Energy’s proposal reflect customers’ priorities, preferred outcomes and long-term interests by providing a reliable, affordable and safe distribution network?

These questions were tested both individually and combined with each other, both with and without analysis of indicative bill and service outcomes, over multiple waves. Customers participating in the Customer Panel were asked four times over five months to nominate their preferences in response to each of the key questions individually. They were repeatedly afforded the opportunity to deliberate on their preferences with other customers that were participating in the panel and to ask Endeavour Energy management for further information as they considered their choices.

They were also asked several times over five months to rank their in-principle priorities across the key questions (without costs being considered) and to do so twice again, taking into account the combined cost of their preferences across the key issues, at which time they were able to adjust their preferences on seeing the combined indicative costs.

This process is depicted on the following page.



 Pillar of evidence:
2. Stakeholder Deep Dives

The Customer Panel's preferences at the end of Wave 2 of the deliberative forums were then shared with a broader group of stakeholders who participated in a series of Deep Dives in July and August. The objective of the Deep Dives was to obtain informed input from active energy stakeholders and to ask stakeholders to consider the preferences made by our customers when expressing their views on priorities for investing in our future energy service.

Participants in the Deep Dives included well-informed customer advocates who represent a diverse set of views across 13 different customer and stakeholder segments. This allowed for a sophisticated discussion and robust challenge of Endeavour Energy's positions and how the competing preferences of customers should be balanced.



Stakeholder Deep Dive, July 2022



Pillar of evidence: 3. Quantitative survey

The Customer Panel involved an extended deliberative process with customers and significant capacity-building. While this allowed for more detailed discussion, it can mean the panel participants become so well-educated on the issues that they are no longer representative of the general customer base by the end of the process.

On that basis, we also conducted further research through a quantitative survey of customers to test key findings from the Customer Panel with a statistically robust representative sample of our customer base and to provide another point-in-time snapshot of customer preferences to understand the effects of ongoing changes in the broader environment, particularly cost of living pressures.

The quantitative survey was conducted in September 2022 with a sample of 1,266 customers across a diverse set of residential and small to medium business customers. Its objective was to:

- deliver ‘breadth’ of residential and SME customer opinion through a statistically representative measure of opinions, attitudes and preferences on key issues where Endeavour Energy felt it would be useful to get an additional ‘pillar of evidence’ to inform its regulatory proposal
- understand how opinions, attitudes and preferences differ among different types of customers (e.g, residential v. business, by areas of the catchment, age group, household size, energy usage and owners v. renters).

Summary of findings

Our Engagement Summary Report provides a detailed overview of our engagement findings.

Impact on our Draft Proposal

As aforementioned, our engagement program has been iterative, with small and incremental changes to our positioning throughout the engagement process. Each engagement activity has provided a ‘pillar of evidence’ for Endeavour Energy to consider and act on accordingly.

We recognise that each ‘pillar of evidence’ (and indeed all engagement design) has its own limitations and therefore no one piece of feedback was intended to compel us to make changes to our Preliminary Proposal. Instead, we have carefully reviewed and considered multiple sources of feedback to determine whether clear and consistent directions or customer mandates existed that we should address in order to deliver a genuinely customer-centric proposal.

The Independent Members Panel of the RRG has been particularly valuable in providing expertise and insights that not only shape our engagement activities but also how we interpret and consider the results.

What is clear from our engagement program is the emergence of two key challenges to manage:

1. how to actively support customers to take control of their energy usage through an equitable transition to renewable and decentralised energy while managing the increasing risks of climate change to the reliable supply of electricity and community resilience

2. providing value for money services, in the context of increasing energy prices and cost of living and cost of doing business pressures, that meet customers’ service expectations through a constrained expenditure allowance that promotes efficiency and innovation.

Our engagement findings, broadly speaking, **suggest that our Preliminary Proposal struck an appropriate balance between these competing priorities.** However, the direction from customers became stronger and the environmental challenges greater over the course of Phase 3 of our engagement program and we saw consistent preferences from customers and stakeholders to invest more than was proposed by our Preliminary Proposal in improving network resilience and in enabling customers’ future energy choices.

These were the consistent themes across our pillars of evidence, particularly the Customer Panel outcomes and the Stakeholder Deep Dives, where these questions were considered deeply.

Customers and stakeholders were in almost perfect alignment in the degree of their preference for Endeavour Energy to take a more proactive response to network resilience.



With regards to enabling future energy choices, both customers and stakeholders expressed strong preferences for Endeavour Energy to prepare for either a 'rapid' or an 'accelerated' energy transition, as opposed to the 'gradual' transition planning that formed the basis of our Preliminary Proposal.

In both of these key areas of influence (resilience and future energy choices), there was a consistent sentiment from customers and stakeholders that investment in the next regulatory period would set customers up for longer-term benefits both in the provision of service and in the management of their future energy costs.

There were no other key areas of influence where strong alignment existed between customers and stakeholders that Endeavour Energy should do more than what was proposed in our Preliminary Proposal.

Nevertheless, these preferences were expressed within an environment of genuine concern about the rising cost of energy and the broader cost of living. Further, the conditions of the economy continue to change, with customers likely to face greater financial pressures into next year.

Our interpretation of the customer priorities has been to propose additional, modest and highly targeted investments in the key areas of influence that customers and stakeholders have strongly and consistently supported. In doing so, we have sought to respond adequately to customer preferences to deliver the services they most value while balancing this imperative (to deliver a customer-centric proposal that genuinely responds to the outcomes of customer engagement) with a focus on value for money investment and affordability.

We believe this proposed outcome remains faithful to the original engagement goal that we agreed to with the Independent Members Panel of the RRG at the start of our engagement journey.

Given this, we propose making the following targeted and proportionate changes in response to our Phase 3 engagement:

- **We will** continue to constrain our capex forecast to below identified NPV positive projects to manage RAB growth and commit to productivity improvements in order to deliver our service outcome commitments. We have not revised this position despite a decline in FY2022 reliability performance and customer preferences to improve long-term service outcomes through a short-term uplift in expenditure.
- **We have** further increased our capex efficiency commitment by adopting a capitalised overheads forecast below both our internal forecast and the AER's standardised capex model derivation. We will also forgo any real cost escalation (for labour and materials) for our capex program.
- **We have** made targeted and modest increases to our resilience-related expenditure and propose an Innovation Fund for resilience, technology and DER related trials.
- **We have** used the AER's CECV methodology to develop our DER-related expenditure program. This is despite our preference to average the AER's expert estimate and take a more proactive approach to DER enablement in accordance with customer feedback. We have also taken a conservative position on other components of VaDER, including not including environmental benefits, as part of our broader commitment to constraining capex.
- **We have** constrained our operating expenditure (opex) step change proposal to an amount significantly below the range estimated internally and from expert advice.
- **We have** adopted a tariff assignment policy for our tariff structures and export tariffs based on the feedback weighted against customers and stakeholders. We are also proposing to introduce export charges and rewards.
- **We have** revised our Business Narrative to recognise cost of living and cost of doing business pressures as a new external factor and updated our objective to provide a value for money service to customers that addresses their long-term interests
- **We have** updated our engagement plan to add a fifth phase in order to 'confirm' our findings to date in an evolving environment.

Evaluation and key learnings

Our assessment

Endeavour Energy's evaluation approach sought to genuinely and consistently measure whether our engagement reflected the intent of four key references:

- our engagement goal
- the AER's Better Resets Handbook
- Endeavour Energy's Stakeholder Engagement Framework
- the IAP2 Core Values.

Our engagement to achieve this has been evaluated across three streams that combine opinion-based survey metrics and data that details the scope of the engagement plan. The three streams were:

1. evaluation surveys for each engagement event
2. more detailed quarterly evaluation surveys of the overall engagement approach, completed by the RRG
3. collecting of data in relation to the scale of engagement.

The feedback has been consistently positive, with 95% of attendees rating the quality of our engagement event(s) as 'good' or 'excellent'. The Customer Engagement Summary Report attached to this proposal provides the more detailed evaluation findings.

Our broader reflections are that our Preliminary Proposal was initially driven by a desire to manage bill impacts and maintain existing service levels. Therefore, we were surprised by the strong sense of community in our customer research. In combination with deeply held views on decarbonisation and climate change, this drove a surprising desire for action on enabling customer choices, technological innovation and improving resilience.

We consider this to be an interesting development and perhaps counter to the direction networks have previously received from customer engagement over

the last decade. If this feedback is common across other networks and persists, the energy industry more broadly may need to reflect on whether the existing regulatory framework is keeping pace with the expectations and needs of customers.

While a high-quality engagement program was co-designed (and implemented), there is always room for improvement. We were surprised by the rapid and significant change in our operating environment throughout Phase 3. We tried to adapt to these changes as they arose; for instance, we amended a Wave 2 Customer Panel agenda on the night of the AEMO market suspension to instead spend considerable time explaining this event to customers.

A faster and more obvious response to our changing environment is one area in which we think we could have done better. This will be the focus of the additional phase of engagement we will design and implement following the release of this Draft Proposal.

Another area for reflection is how we manage engagement fatigue among stakeholders, particularly those working across more than one regulatory reset at the same time. This requires continuous improvement in deciding which topics we take to which stakeholders and to what level of depth. As we deal with a diverse set of highly technical issues, it is critical that we disseminate these issues in the right level of detail to the right audience. Upon reflection, some Deep Dive topics, such as the AER's CECV methodology, may have been better suited for detailed engagement exclusively with the RRG.

We will continue to reflect on our engagement approach and consult on opportunities for improvement. Overall, we believe our engagement program has been of high quality and reflects the honest and hardworking relationship between our staff and RRG. In the Customer Engagement Summary Report attached to this proposal to this proposal, we provide a summary of how we consider our engagement approach satisfies the requirements of the AER's Better Resets Handbook.



Western Sydney local council workshop, June 2022

Regulatory Reference Group assessment

A primary role of the RRG has been co-designing our engagement approach in an advisory capacity based on their extensive experience and knowledge of the energy industry. In its August report covering our Preliminary Proposal and the majority of our Phase 3 engagement, the RRG made a number of observations and recommendations with respect to our engagement approach.

The RRG note that several aspects of our engagement program have been of high quality.

Consequently, we believe that Endeavour Energy has done high-quality and comprehensive work so far on engagement in the 'Discover' and 'Prioritise' phases of the program. The engagement and co-design plans initially devised in May 2021 have been followed with a high degree of consistency and capability. Our benchmarks for this assessment are clarity of the issues being consulted on, fairness and objectivity in the questioning and breadth of engagement considering Endeavour Energy's wide demographic makeup.

We recognise the extensive, carefully planned and executed and inclusive way Endeavour Energy has engaged with a wide range of consumer groups, including households, businesses, local councils, developers and their representatives. We have observed the significant resources Endeavour Energy has put into the engagement and believe there has been a genuine commitment to 'listening'.

There is evidence of strong consumer and wider stakeholder relationships indicated by the enthusiasm of the Customer Panel throughout the engagement process, as demonstrated by very few members discontinuing their involvement, the willingness to provide supportive messages and the number and diversity of participants in the wider deliberative forums.

With the assistance of SEC Newgate Australia, Endeavour Energy has undertaken an engagement program that, in our view, has been extensive and multifaceted.

From an independent RRG perspective, we acknowledge that Endeavour Energy has given us ample opportunity to work with them in the design and execution of the engagement, asked for and considered our advice and challenges and sought to respectfully engage with consumers with a high degree of detail.

The RRG have also identified several recommendations for how Endeavour Energy can improve its engagement and respond to emerging challenges for the energy industry:

- **Presenting a clear distillation of the engagement data – ‘what we heard’:** The RRG consider this is of critical importance and could have been better articulated in the Preliminary Proposal.
- **Clearly linking ‘what was heard’ to ‘how we respond’:** The RRG expect this Draft Proposal to clearly link engagement to how it was interpreted and reflected. They note the importance of this exercise highlighting the challenging economic environment and highlighting how the immediate influences were considered in interpreting the results.
- **Adapt engagement to the evolving nature of ‘lived experience’:** The RRG consider our engagement was initially slow to pivot to the economic challenges that emerged during our engagement. Further engagement would be useful in ensuring we can be

confident that the proposal continues to meet the expectations of customers as their views may evolve.

- **Reframing the concept of affordability through the lens of value for money:** the RRG note the factors beyond our control that will increase electricity prices. Endeavour Energy should be transparent about these impacts and ensure customer preferences are confirmed in the full knowledge and experience of these challenges.
- **Delivering on a challenging target for the Draft Plan:** Endeavour Energy has set a commendable but challenging target to maintain in the changing context. The RRG recommend we update our business narrative and conduct regular engagement to continually evaluate the impact of external factors on customer’s energy needs.

The RRG Independent Members Panel’s latest assessment of our engagement (leading up to this Draft Proposal) against the AER’s Better Resets Handbook requirements is as follows:

Expectations	RRG Comments
<p>Nature of engagement</p> <ul style="list-style-type: none"> • Sincerity • Consumers as partners • Equipping consumers • Accountability 	<p>There was genuine, observable interest in engagement from the whole business, including from the Board and CEO. Endeavour Energy are open to challenge and new ideas. Engagement has been accessible, clear and transparent, with multi-channels of engagement occurring. Significant effort has been made to prepare materials and processes for each engagement activity.</p> <p>The RRG has strengthened as a group and acts with independence. It has been given considerable amounts of information and timely responses from Endeavour Energy when more is requested. Endeavour Energy is enabling consumers to have the level of detail they need to be able to influence direction and magnitude of decision making. Endeavour Energy has provided detailed and accurate reporting of all engagement, including reports from contracted engagement specialists.</p>
<p>Breadth and depth of engagement</p> <ul style="list-style-type: none"> • Accessible clear and transparent • Consultation on desired outputs then inputs • Multiple channels • Consumers influence on the proposal 	<p>Different engagement methods have been applied. Timeframes for some more complex topics are difficult to assess given the context of rapid change (e.g. the NSW Electricity Infrastructure Roadmap).</p> <p>A ‘collaborate’ level of engagement has occurred and is ongoing. Endeavour Energy has focused broad engagement to the key areas that consumers can influence and this is ongoing.</p> <p>Endeavour Energy is delivering a well considered and well implemented engagement program, including a good discussion on compromises. Bringing it to a focus in the Draft Proposal will be significant.</p> <p>The initial co-designing and subsequent review of engagement design between the Independent Members Panel and Endeavour Energy and agreement about the levels of engagement meets the “upper end of the IAP2 spectrum” criteria.</p>
<p>Clearly evidenced impact</p> <ul style="list-style-type: none"> • Proposal linked to consumer preferences • Independent consumer support for the proposal 	<p>Endeavour Energy has produced a powerful engagement summary. The Draft Proposal takes into account consumer preferences. The diverse views of customers and how they were balanced, are tangible outcomes of the Wave 3 Deliberative Forums.</p> <p>The RRG has released an “Independent Members Panel Report” covering the Preliminary Proposal. A third-party review is envisaged to accompany the regulatory proposal on submission and the Independent Members support the third party review.</p>



As noted above, we will continue to engage with customers and stakeholders on this issue. In responding to this Draft Proposal we are interested in understanding your views on:

1. What are your reflections on the engagement we have undertaken since our April 2022 Preliminary Proposal?
2. What are the key messages we must balance and respond to?
3. What changes (if any) should Endeavour Energy make to its Proposal in response to the feedback it has received?
4. What topics and/or stakeholders should be the focus of ongoing engagement?



RRG meeting, April 2022

4. Proposed 2024-2029 forecasts and positions

Key proposal inputs and outcomes



In Chapter 4 we will outline our draft forecast building block inputs, positions and the resulting outcomes for review and discussion. We wish to note this Draft Proposal reflects our latest forecasts and intended response to the feedback we have received from customers and stakeholders. We note that, under the timetable established with the AER, there will only be limited time for refinements in response to feedback on this Draft Proposal between now and the formal lodgement of our Proposal with the AER in January 2023.

Ongoing engagement, including with the AER post-January 2023, will be required for feedback that could necessitate any further substantive changes. We intend to transparently set out any matters that have not been resolved at the time of our January 2023 proposal to the AER for further review.

Our forecast revenue for 2024-2029

The AER uses a “building blocks” approach to set our revenue. This involves calculating a total revenue requirement by adding up different kinds of costs, which include:

- capex and asset costs
 - through a return of investment (depreciation), the initial value of assets is returned to debt and shareholders over the economic life of the asset
 - the return on investment includes the costs associated with financing investments, such as interest costs and payments to shareholders
- opex; that is the day-to-day costs of operating and maintaining our assets and operating the business
- incentives; that is, in the absence of competition, incentive schemes are used to drive improvements in efficiency, innovation and service quality, which can result in revenue rewards or penalties being applied
- tax; that is, an allowance is provided for benchmark tax costs.

As can be observed across the building blocks, there are varying degrees to which we can influence and manage these inputs in accordance with the expectations of customers.

There are some building blocks that are within our control – such as opex, capex and our future incentive scheme performance. While there are other building blocks, or inputs to them, which are largely outside of our control – such as our historical incentive scheme performance and the return on and of historical capex.

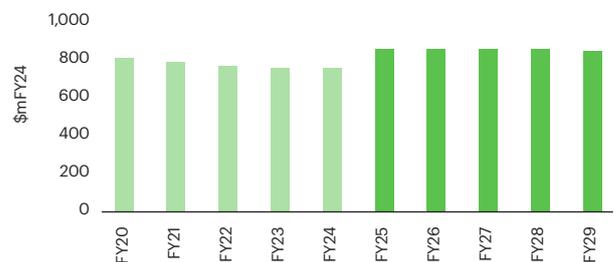
As a capital-intensive business, these uncontrollable costs are the primary driver of our revenue. This means a large portion of our forecast revenue relates to the recovery of previously installed assets that are currently providing a service to customers.

We note the return on a component of our revenue allowance is set by the binding (under the NEL) RORI which in turn is impacted by prevailing market conditions.

Since the release of our Preliminary Proposal in April this year, there has been a material and significant global economic downturn. Our Draft Proposal is now being prepared at a time of increasing interest rates, inflation and cost of living and cost of doing business pressures.

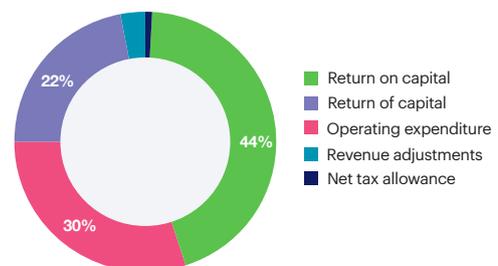
As a result, there has been an increase in the revenue requirement for the 2024-2029 period since the Preliminary Proposal. Total revenue is forecast to be \$4.8 billion (\$FY2024) over the 2024-2029 period. This is 6% higher than our expected revenue in the current 2019-2024 period of \$4.5 billion (\$FY2024).

Endeavour Energy revenue (actual and forecast)



A breakdown of this revenue between the building blocks shows returns on previous investments as the primary driver of revenue, as noted above.

Forecast revenue breakdown



This represents an increase to our Preliminary Proposal. As detailed earlier, it is movements in uncontrollable factors that drive the vast majority of this change.

Providing value for money

As discussed earlier in this proposal, we highlight these uncontrollable factors not to absolve us of our responsibility to provide an affordable service but to highlight the increased importance of our proposal.

We take our responsibility to provide customers with a service that provides value for money seriously. In this Draft Proposal, we commit to maintaining and/or improving our service quality within a constrained budget through innovation and productivity improvements. In particular, we seek to deliver on this commitment by:

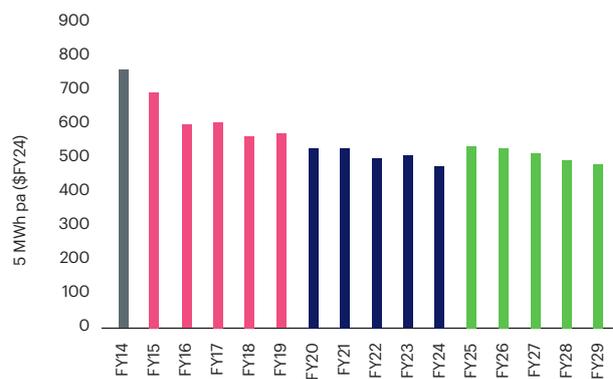
- keeping capex and opex below current period actuals and allowance respectively
- further constraining opex by absorbing, as further productivity improvements, several identified highly likely increases in operating expenditure that are being driven by factors beyond Endeavour Energy’s control
- further constraining capex through the use of a customer value framework and portfolio optimisation
 - **replacement expenditure** - constraining the replacement of assets well below the approximately \$1.1 billion portfolio of potential NPV positive investments to \$603 million (including resilience) through top-down challenges such as the application of the AER’s repex model
 - **growth (augex)** - applying a more refined probabilistic approach to the identification of new augmentation investment to service our growing customer base, resulting in a reduced proposed augex of \$413 million as opposed to \$550 million
 - **connections** - keeping our contribution proportion at a low amount relative to other networks of \$119 million to new connections infrastructure in new developments that amounts to over \$1 billion of gifted assets in developing lands
 - **DER** - enabling our customers to export energy from their investments in DER at \$45 million at a reasonable (not absolute) level of service quality; we will offer enhanced services above our basic export level of 5kWh (single phase connection) through innovative offerings such as dynamic operating envelopes and pricing
- ensuring further capex productivity by forgoing labour and material escalation and constraining capitalised overheads
- committing to a measured and modest uplift in resilience and innovation allowances aimed at developing solutions for tomorrow’s energy challenges

In the following sections, we provide more details on each building block input.

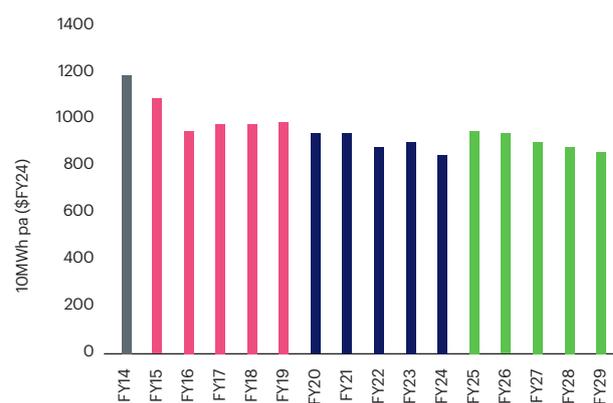
We believe our Draft Proposal represents value for money as a result of these commitments and decisions. Despite the significant upward pressure from uncontrollable factors, our Draft Proposal will deliver positively against a number of key indicators:

- RAB per customer declining from \$7,074 per customer in FY2024 to \$6,266 per customer by FY2029
- Opex per customer declining from \$307 per customer in FY2024 to \$243 per customer by FY2029
- Totex per customer declining from \$654 per customer in FY2024 to \$520 per customer by FY2029

Average residential distribution bill



Average small business distribution bill



Capital expenditure

Capex is the investment required to maintain the safety, security and reliability of supply and to connect new customers to the network. Our capex involves:

- complying with safety, connection, asset management and reliability obligations
- replacing ageing assets in a timely and efficient manner
- connecting new customers to the network and providing additional capacity to new and existing customers to meet their needs
- establishing, securing, maintaining and upgrading the ICT and support systems, buildings, property and vehicles our staff require to carry out their functions and activities

Our capex allowance for the current period is \$2,003 million⁵ (\$FY2024) and we expect to spend \$1,993 million (\$FY2024). We note that while we forecast to spend the allowance in the current period, this involves a re-prioritisation within this allowance for our ICT transformation program. This transformation program, along with the impacts of COVID-19 and several extreme weather events, has resulted in reduced expenditure in system categories to date. Therefore we are forecasting increasing levels of system expenditure over the remainder of the 2019-2024 period and into 2024-2029.

Our forecast capex spend for the 2024-2029 period is \$1,882 million (\$FY2024). This is a 6% reduction or \$111 million (\$FY2024) on our current period forecast.

Our current period performance has been driven by:

- achieving sustainable capital delivery productivity improvements and materials and contract cost reductions
- improved asset planning, risk prioritisation and investment governance practices, which are detailed further below
- an increased use of innovative and non-network solutions to defer and/or reduce traditional network investments, including ongoing investigations to partner with third party suppliers to provide battery energy storage solutions, providing network support services to defer network augmentation
- prioritising investment in transforming our ICT systems to improve our organisational efficiency and create a culture of excellence and innovation
- catering for unprecedented growth across our network area, highlighted by the establishment of the Western Sydney International (Nancy-Bird Walton) Airport and the emergence of data centres
- supporting the ongoing transition of customers to decentralised and decarbonised renewable generation
- managing the impacts of several natural disasters, such as the 2019-2020 bushfires, 2020 and 2022 floods and the COVID-19 pandemic on our development levels and BAU activities. This, in addition to our early period focus on ICT transformation, has resulted in a deferral of some system capex within and potentially between periods

⁵Gross Capex less capital contributions and inclusive of equity raising costs.



We have achieved these reductions and managed this uncertainty while improving the reliability of our network, maintaining our fifth placed capital efficiency ranking and servicing one of the fastest-growing areas in Australia over the last decade.

Our forecast capex seeks to maintain our current level of performance and risk appetite. Noting the AER’s incentive schemes incentivise networks to reduce costs, innovate and improve reliability over the course of a regulatory period.

Risk is a key determinant of capex requirements and central to our investment justification and prioritisation framework. During the 2019-2024 determination process, we received feedback from the AER, its technical experts and stakeholders that improvements could be made to how we identify, consider and deliver capex.

Based on this feedback, we have made several changes to our investment planning and governance frameworks. This has involved:

- establishing a new customer value framework with a focus on quantified risk measures that is used as the basis of customer benefit and cost (NPV) assessments
- implementing a new investment decision support tool (Copperleaf)

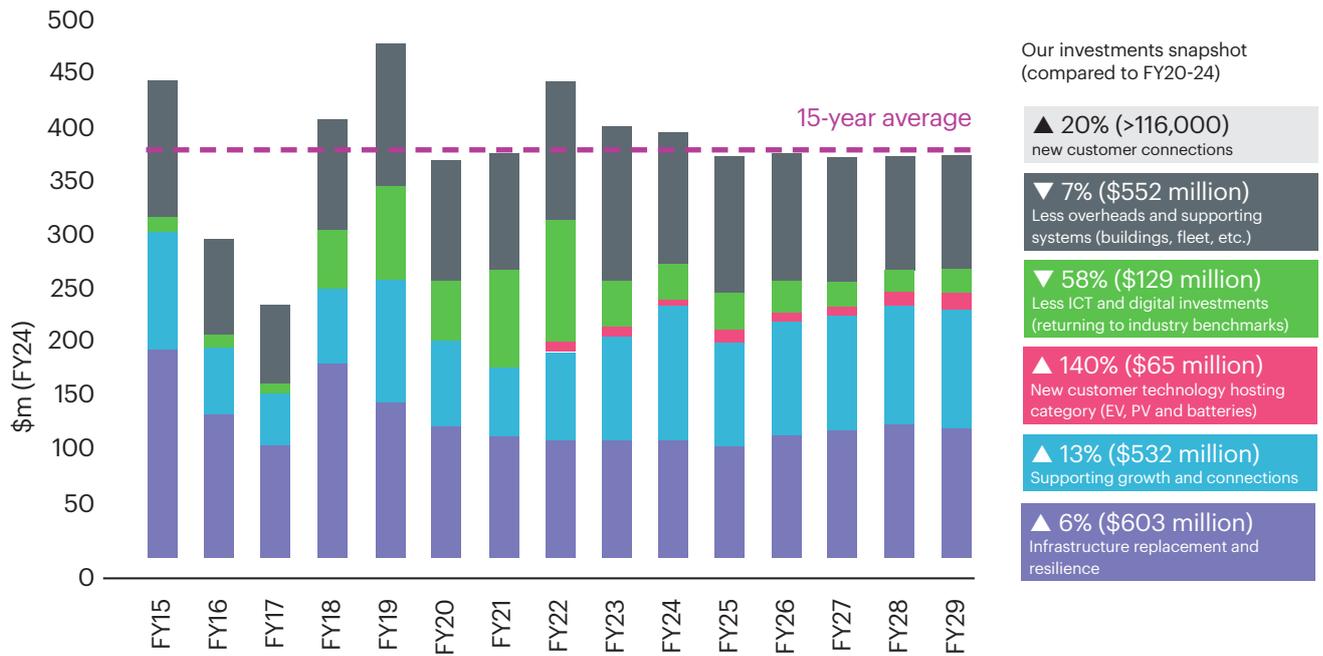
- enhancing our investment justification process through tighter integration between economic cost-benefit analysis and technical options assessment
- refreshing and simplifying our asset management documentation to reflect these process and system improvements; expanding the oversight of our Investment Management Committee

Our forecast capex consists of the following activities:



Net capex by driver (\$FY2024)	FY25	FY26	FY27	FY28	FY29	FY25-29	FY20-24	% change
Augmentation expenditure	110	74	90	76	63	413	340	21%
Replacement expenditure (including resilience)	121	121	121	121	121	603	568	6%
Connections	26	25	23	22	23	119	130	-8%
DER and innovation	13	13	13	13	13	65	27	136%
Capitalised overheads	93	92	91	90	88	452	485	-7%
System capex	361	323	337	321	307	1,652	1,550	6%
Information and communications technology	33	28	24	22	22	129	307	-58%
Motor vehicles	8	12	10	2	5	37	44	-16%
Buildings, property, fittings, plants, etc.	23	10	10	10	11	65	99	-34%
Non-system capex	64	50	44	35	38	231	449	-49%
Gross capex (ex. capital contributions)	425	373	381	355	345	1,882	1,999	-6%

Values may not add to 100% due to rounding.
FY2020-FY22 actuals, FY2023-FY24 forecast.



We provide an overview of the key investment areas in the sections below.

Replacement expenditure (repex)

We are proposing \$575 million of repex (excluding incremental resilience) for the 2024-2029 period. This represents a \$7 million (or 1%) increase compared to the current period forecast.

What is it?

Our forecast repex is primarily driven by meeting customer expectations for a safe, affordable and reliable electricity network service. It involves replacing existing assets when (or where appropriate before) they fail based on the risk-based quantified impact on our customers of asset failure.

Our repex is also driven by the investment themes of supporting resilience and enabling customers' energy choices. This will be achieved by ensuring we do not simply conduct like-for-like replacements but instead test for innovative and alternative solutions that account for customer take-up of DER and can provide improved safety and resilience outcomes. Note that these factors are accommodated within an overall repex forecast that accords with the AER's repex model.

How do we forecast it?

Given that repex is a largely recurrent category of capex, the AER relies on a top-down model (the 'repex model') to assist with determining an appropriate forecast. We have adopted this approach to inform our overall repex forecast while determining a program and project level expenditure using our asset management methodology.

Our detailed forecast considers a range of factors such as asset condition, reliability, safety and failure risk, cost of intervention timing differences and benefits to customers.

Our value framework justified that our repex forecast contains NPV-positive projects totalling in excess of \$1.1 billion. Based on the AER's repex model and in line with current spending levels, we have constrained our forecast for the 2024-2029 period.

How have we responded to feedback?

This position is unchanged from our Preliminary Proposal in April. Note that we have updated the repex model for FY2022 actuals and adjusted our approach to modelled vs. unmodelled repex categories following feedback from the AER as part of the Better Resets Handbook engagement.

The feedback we have received from customers suggests they expect Endeavour Energy to provide a safe, reliable and affordable service as par for the course. Further, our customers and stakeholders are broadly satisfied with the current level of reliability we provide, noting that this is based on an average and that there are some customers in less reliable areas of the network who would like to see improving levels of reliability.

This feedback was obtained in the context of cost of living pressures and the ongoing realisation of climate change risks on network performance. In meeting these challenges, the feedback diverged slightly between stakeholders and customers:

- our Customer Panel were supportive of Endeavour Energy increasing expenditure in the short term to deliver long-term reductions in price and to manage the risk of deteriorating reliability performance.
- our stakeholders were more concerned with managing cost of living pressures and considered service quality challenges (noting our network is relatively younger than others in the NEM) to be better met through innovation and productivity improvements in our asset management practices than increased expenditure.

On balance, we consider targeted and modest uplifts in resilience and innovation spending warranted. But for repex, we agree with stakeholders that an increase would not maximise the value of our investments within the efficient and prudent allowance set by the AER's repex model.

What will we deliver to customers?

Key repex investments include:

- **high-voltage distribution switchgear replacement (MD4)** \$39 million planned program across five years to address an increasing customer reliability, collateral damage and public safety risk across parts of the network
- **pole replacements** \$78 million reactive program over five years to reinforce or replace poles that no longer have a suitable safety factor
- **major substation circuit breaker and switchgear replacements** \$25 million targeting predominately oil-filled circuit breakers within zone substations to manage the reliability, obsolescence and safety risk posed by these units
- **power transformer replacements** \$20 million to replace targeted high-risk transformers based on individual asset health and risk data
- **oil cable replacement** \$39 million to replace, prior to failure, the oil-filled cables that support the Parramatta CBD



Resilience

We are proposing \$28M of incremental resilience capex for the 2024-29 period (i.e., in addition to BAU resilience within existing categories of expenditure).

What is it?

Resilience has been an emerging theme in the NEM with the increasing frequency and severity of natural disasters. Resilience refers to the ability to anticipate, withstand, quickly recover and learn from major disruptive events.

A reliable electricity network is not necessarily resilient. This means our BAU repex may improve reliability but not resilience. This can be observed through the widening gap between our 'raw' and weather-normalised reliability performance.

How do we forecast it?

Resilience and reliability are not discrete concepts but are related, interdependent and overlapping. This means we have always invested in 'resilience' as part of our BAU repex, augex and opex through a mix of proactive (e.g., network hardening) and responsive (e.g., outage response and insurance) measures.

However, our value framework and/or input assumptions may not have been adequately capturing or valuing the risks or impacts of climate change and in particular, how these risks increase with time.

On the latter, we note that the AER has previously considered introducing a value similar to the Value of Customer Reliability for Widespread and Long-Duration Outages. However, this is a complex exercise that the AER was unable to reach a preferred position on.

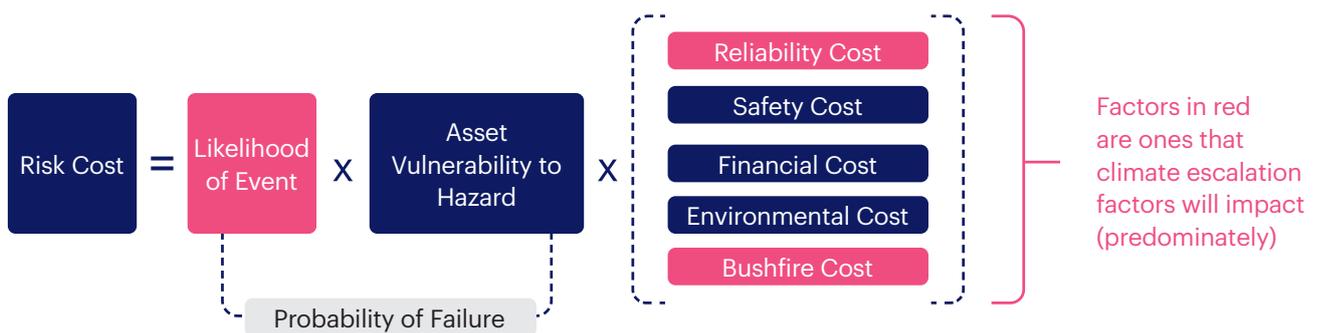
While we have not developed our own WALDO, we did engage Deloitte to provide a more accurate assessment of the risks of climate change at a localised level.

Climate modelling was conducted using multiple climate models under moderate and high emissions scenarios⁶. This was done out to 2090 in order to overcome natural variability over time and to understand the possible hazards our assets will be exposed to over their lifetime. Note that this does not mean that investments will be made now to address all risks over that lifespan. Rather, we emphasise this in how we need to learn and continually adapt our network and communities over the coming decades.

The results of this exercise can be summarised as follows

- **Bushfire risk-** the number of average bushfire weather days to increase between 34% to 69% by 2050 and 63% to 155% by 2090.
- **Extreme heat risk-** the number of extreme heat days increases anywhere in the network between 72% to 222% by 2050 and 122% to 629% by 2090.
- **Large-scale flood risk-** 1-in-20-year extreme rain events to increase between -3% to 13% by 2050 and 2% to 22% by 2090.
- **Wind impacts-** high wind frequency is set to decrease from 38 to 44 days per year to 18 to 29 days. However, high wind intensity is set to increase by -3 to 8.5 km/h by 2090.

Our forecasting inputs have been adjusted to incorporate these modelling results within our value framework, as depicted below. From this, we can then develop and value investments to address and manage climate change risks.



⁶ A low-emissions scenario (aligned to global warming of 1°C) was not modelled, as the advice was this scenario is no longer achievable.

How have we responded to feedback?

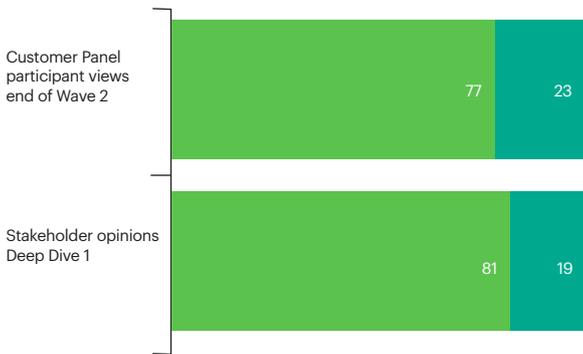
Our customers have acutely felt the impacts of climate change in recent years:

- During the 2019-20 bushfires, 45% of our network area was burnt, with 840 homes and businesses destroyed or damaged.
- During the floods of 2021 and 2022, 600 homes and 300 businesses were destroyed or damaged in our franchise area over a number of previously rare flood events.

Unsurprisingly, customer and stakeholder preferences were both clearly in favour of Endeavour Energy taking a more proactive approach to resilience, particularly for its most vulnerable and/or worst-served customers.

Action on resilience was seen as a top priority by our

Preferences for Endeavour Energy to adopt a more proactive or responsive approach (%)



A more proactive approach to maintaining network services in the face of major weather events and at increasing cost to customers.

A proactive and responsive approach that has some declining levels of network service during major weather events but at no additional cost to customers

Customer Panel, both with and without cost constraints. There was a strong desire for Endeavour Energy to improve its resilience, noting this may not necessarily avoid or reduce outages.

However, our stakeholders were mindful of the role recent experiences with floods and bushfires may have had on the views of customers, as well as stressing the importance of considering resilience more broadly than network hardening and in the context of increasing cost of living pressures.

Our RRG, in particular, considered resilience to include both community and network actions and trade-offs between proactive and responsive measures.

In response to the feedback from customers and stakeholders, we are proposing to:

- increase capex by \$28M for targeted investments in network hardening to address the most significant climate change risks in the short term
- investigate initiatives to improve community resilience as part of our proposed Innovation Fund (of \$25M), as detailed in the next section.
- constrain our opex step changes by
 - managing the likely increasing trend in emergency response opex within the AER's trend factors
 - constraining our insurance step change below the expert range estimate in recognition of improved insurance management practices and, to a lesser extent, our investment in network resilience.

What will we deliver to customers? Our resilience action plan is as follows.





Bushfires



Impact of climate hazards

The impact of fires can be devastating to communities and the electricity grid. Endeavour Energy is committed to reducing the risk posed by bushfires.

Investing in covered conductors

We have identified 212 km of covered conductors as cost-justified in areas of high bushfire risk. Installation of the conductors will reduce the risk of fires starting from vegetation outside the trimming envelope impacting our network.

Proactive replacement of poles

Initial analysis has identified potentially 100 out of our 113,000 poles in bushfire-prone land that may be justified for proactive replacement with a non-combustible alternative (concrete/steel). Detailed designs will be completed for these poles to determine feasibility and cost.

Review into our Bushfire Response Plan

Following recent bushfire events within Australia, Endeavour Energy will partner with other DNSPs, to identify learnings from major events.



Floods



Impact of climate hazards

Rising water levels result in reduced clearances between waterways and the electrical network, reduce our ability to adequately isolate the network and increase the risk of additional damage due to the energisation of flood-damaged equipment.

Raising conductors

A total of 25 feeders impacted by the 2021 and 2022 floods are to have detailed designs completed to find the optimum investment levels.

Installation of remote operable switches

Multiple locations for remote switches within the Richmond and Camden areas will be explored for feasibility and have detailed designs completed. This will allow improved operability of the network and reduce the dangers of staff traversing flood waters.

Review of our Flood Response Plan

Following recent flooding events in 2021 and 2022, major learnings will be explored to reduce operational expenditure and improve response times.



Extreme heat



Impact of climate hazards

Hot weather leads to overloaded feeders causing outages during critical times for customers. Long periods of hot weather reduce Endeavour Energy's ability to switch the network and result in poor reliability.

Partnerships with Greater Western Sydney councils

Endeavour Energy will explore partnering with WSROC to develop initiatives to help reduce the heating predicted for the Greater Western Sydney region.

Future operability assessment

A desktop review of future system operability due to concurrent overloading of feeders will be undertaken for Greater Western Sydney, factoring in modelled future heat events.



Future investments



Resilience Innovation Fund

A fund will be used to investigate initiatives to improve the community and electrical network resilience as this area of community expectation continues to develop.



Extreme wind events



Impact of climate hazards

Wind gusts above 60 km/h result in unexpected network outages and potential fire hazards, particularly from vegetation blown into the electricity network.

Low-cost-solutions for Illawarra and the South Coast

In addition to the covered conductors in the Blue Mountains areas, high-voltage spreaders will be investigated for their benefit in reducing conductor clashing and vegetation impacts in the Illawarra and South Coast regions.



Community resilience



Scope of approach

The resilience of the community is heavily influenced by the resilience of the electrical network. As such, we are exploring the best ways to facilitate improved community resilience.

Community hubs

A total of 34 initial sites will be explored with councils to determine functionality, suitability and energy requirements to provide safe and secure hubs in the community in the event of major weather events.

Augmentation expenditure (augex)

We are proposing \$413M of augex for the 2024-29 period. This represents a \$73M (or 21%) increase compared to the current period forecast.

What is it?

Our forecast augex is primarily driven by supporting the sustainable growth of our communities. It involves expanding the network to new areas to cater for customer growth and increasing the capacity of the existing network to cater for demand growth from existing customers.

As aforementioned, we have experienced significant growth over the last decade and expect this to continue. However, much of the anticipated growth for this period has been delayed to later in the period. At the same time, investments not catered for in our current period allowance, such as the 132 kV supply for the Western Sydney Aerotropolis, have been brought forward.

This means it is likely that augex will increase over the remainder of this period and into the next period due to these deferrals. Given some of these deferrals are driven by forces outside of our control, we propose to adjust our capex for the current period by \$58M for CESS purposes to ensure customers only pay for this investment once.

How do we forecast it?

Unlike repex, this is a largely non-recurrent category of capex that is driven by broader economic growth and development within our network area.

Therefore, augex is therefore developed on a bottom-up basis that involves a probabilistic assessment of spatial new connection activity, as well as the demand and customer growth assumptions, to determine how much additional network capacity is required and when.

Our customer, energy and demand forecasts also take into account the expected take-up of new technologies like EVs, solar PVs and batteries, as well as the impacts of cost-reflective network tariffs.

Similar to repex, our augex investment is also driven by network resilience and enabling customers' future energy choices; the latter forms an integral part of determining the timing and size of network investments. We routinely test our investments to defer or reduce them by utilising

demand management alternatives. Our proposal involves the deferral of \$137M of capex through expected demand management initiatives and more refined probabilistic risk management.

In addition, we consider it important that where augex is necessary, our solutions will be fit-for-purpose in the future. This means adopting innovative network designs and technology that support the ongoing resilience and ability of customers to adopt DER and other new technologies.

Based on these factors, we are forecasting that augex of \$413M will likely occur during the 2024-29 period.

How have we responded to feedback?

Our augex has increased by \$10M (2%) since the Preliminary Proposal on account of the latest available information with respect to customer numbers, load applications, development activity and demand growth.

As part of our engagement, we tested when we should cater for forecast growth. Our Customer Panel (and informed stakeholders participating in Deep Dives) were aligned with Endeavour Energy's preliminary position to support growth in a timely manner, essentially at the time of other infrastructure providers, rather than being leading or lagging.

However, compared to other priorities, such as resilience and the transition towards decentralised and renewable energy, this was of lower importance to the Customer Panel, particularly when the cost became a consideration.

It is for this reason we have constrained our augex proposal to \$413M for the period despite our bottom-up forecast totalling \$550M. It should be noted that this represents a larger constraint compared to the bottom-up forecast that underpinned our Preliminary Proposal.

In setting a constrained augex proposal, we are committing to managing the uncertainty associated with forecasting growth. This reduces our revenue requirement and the risk customers may be exposed to under the CESS.

However, it may be worth considering (at the time of the 2029-34 determination) how augex is treated for CESS purposes if there is the bottom-up forecast, which we consider to be efficient.

What will we deliver to customers?

Western Sydney Aerotropolis

The Western Sydney Aerotropolis is an 11,200-hectare area surrounding the Western Sydney International (Nancy-Bird Walton) Airport located within Western Parkland City. The Aerotropolis will become a hub of industry and innovation, attracting local and global companies drawn to the enormous potential of Western Parkland City and the airport that serves it. The NSW Government has also recently announced over \$1 billion in funding to start building Bradfield City Centre at the core. This is the next step in delivering Australia's newest, most advanced, green and connected city. Our enabling works and partnerships support the growth of the Aerotropolis.

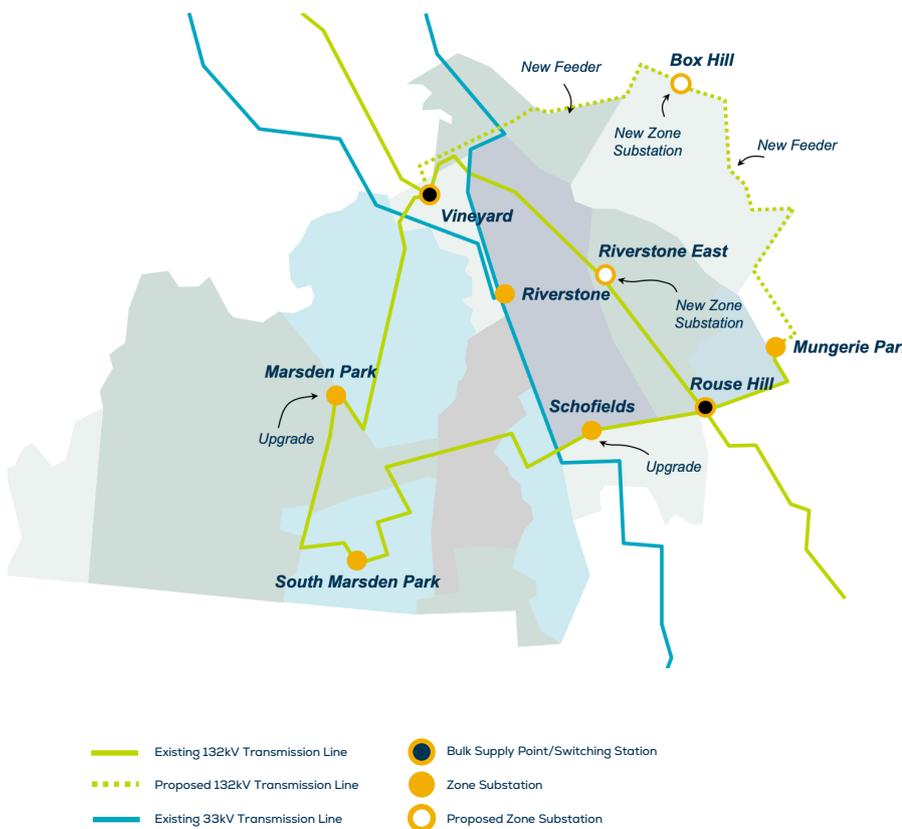


Key Endeavour Energy projects unlocking the Aerotropolis economic potential include the following

- Aerotropolis 132 kV backbone feeder-** a project from the current regulatory period with an investment of \$98m will be completed (\$2M in the FY2025-29 period). This is critical infrastructure required to service the growth.
- Bradfield North Zone Substation-** a carryover project from the current regulatory period with an investment of \$59m for the Bradfield North zone Substation development (\$17M in the FY2025-29 period). This is critical infrastructure required to service the growth.
- New Badgerys Creek (Bradfield City) Zone Substation-** a carryover project from the current regulatory period with an investment of \$33M for the new Badgerys Creek Zone Substation (\$19M in the FY2025-29 period). This is critical infrastructure required to service the growth.

North West Sydney

North West Sydney is becoming an increasingly popular place to live. The North West Growth area was released by the NSW Government in 2017 following A Plan for Growing Sydney in 2014. Within the North West Priority Growth Area, new communities will progressively develop with access to schools, parks, community facilities, jobs, roads and public transport. Within this period, 33,000 homes will be provided and the growth area will be home to around 92,400 people. The North West Priority Growth Area is close to transport nodes, including the M7 Motorway with connections to the M4 Motorway and the new international airport. It is well located to capitalise on recent infrastructures such as the Sydney Metro Northwest to Tallawong Station and a public transport corridor extension towards Marsden Park. A total of 13 regions have already been rezoned, including Box Hill, Riverstone, Schofields and Tallawong Station. Three further regions are undergoing planning and one zone remains for release (Shanes Park).



Key Endeavour Energy projects supporting the critical growth of North West Sydney include:

- Riverstone East Zone Substation-** investment of \$24M to establish a new zone substation. This is critical infrastructure required to service the growth.
- Box Hill Zone Substation Stage 2-** a potential investment of \$40M to expand the Box Hill Zone Substation to meet the increased demand. This project is currently forecast to begin in FY2030 and is not in the forecast proposal; however, it could come earlier if triggered by increasing demand.
- Augment Westmead Zone Substation-** investment of \$14.8M to expand the Westmead Zone Substation to meet the increased demand.

South West and Greater Macarthur

Greater Macarthur is a growth area incorporating Glenfield to Macarthur urban renewal precincts and the land release precincts to the south of Campbelltown, including Gilead, North Appin and Appin. In 2040, the Greater Macarthur Growth Area will be a highly connected and accessible urban region that recognises Country. It will support and be serviced by a thriving and diverse Campbelltown and Macarthur. People living here will be close to green corridors that contain parks, green cover and open space. Being active will be a way of life. The natural environment will flourish with koalas and other species in safe and growing populations through biodiversity protection and enhancement. High-quality jobs, services and education will be available close to home.

Key Endeavour Energy projects supporting the sustainable growth of the South West and Greater Macarthur include:

- **Maryland Zone Substation-** investment of \$11M to establish a new zone substation to meet the increased demand.
- **Establish West Appin Zone Substation-** investment of \$10M to establish a new zone substation. This is critical infrastructure required to service the growth.
- **Establish Mount Gilead Zone Substation-** investment of \$16M to establish a new zone substation to meet the increased demand.
- **Establish permanent Menangle Park Zone Substation-** investment of \$23M to establish a new zone substation. This is critical infrastructure required to service the growth.



Connections

We are proposing \$119M of connections capex for the 2024-29 period. This represents a \$11M (or 8%) decrease compared to the current period forecast.

What is it?

Relatedly to augex, we also incur costs to support the connection of new customers. Augex involves expanding the upstream network at higher voltages (e.g., the construction of new zone substations) while connections expenditure relates to the expansion and augmentation of the distribution network (e.g., new distribution substations and lines and cables connecting to the customer).

The majority (around 87%) of these costs are funded by the connecting customer and delivered competitively in NSW. The remaining costs relate to network extensions and augmentations that provide a shared benefit to customers beyond the specific area being developed. Therefore, we fund this proportion of costs.

How do we forecast it?

Like augex, our connections forecast is driven by our customer growth assumptions. As these costs relate to the provision of many thousands of individual connection projects, we use a model to forecast these costs based on forecast customer growth by connection type and historical unit costs.

Based on our latest forecasts, our connections capex has increased by \$6M (5%) from our Preliminary Proposal.

How have we responded to feedback?

As part of our engagement, we tested who should pay for growth-related capex: the new customer (i.e., causer) or shared with the existing customer base (i.e., based on long-term beneficiary). Note that a change in policy has the potential to significantly increase both connections capex and augex.

Our current approach is closer to causer pays, while the National Electricity Rules reflect a beneficiary pays approach based on an economic test. This difference in NSW is driven by the application of the Electricity Supply Act 1995 (NSW) and the contestability framework.

Therefore, we considered it prudent to make this difference clear to customers and test whether this was acceptable to them. Note that this was an issue explored in detail during our 2019-24 determination.

The feedback was mixed on causer pays versus beneficiary pays:

- Our Customer Panel provided a mixed response to this question, with some favouring the beneficiary pays approach while others favoured retaining the causer pays approach. The mixed feedback reflects that this is a complex issue and is largely based on individual perceptions of what is fair.
- Stakeholders were more uniformly in favour of maintaining the existing causer pays approach as they considered it was fairer, more efficient and avoided the risk of the savings of the beneficiary pays approach not being passed through to the connecting customers.

On the basis of this feedback, we propose to maintain our existing causer pays policy.

Distributed Energy Resources: integration and enablement

We are proposing \$45M of DER-related capex for the 2024-29 period, noting this is a relatively new category of expenditure. We are also proposing an Innovation Fund of \$25M (\$20M capex and \$5M opex) for technology-related innovation investment.

What is it?

The transformation of the energy sector is accelerating. Our customers and our network are at the very centre of the change. Whether it be the huge popularity of rooftop solar, the increasing ubiquity of behind-the-meter/community energy storage, the rise of EVs and the rising ambitions of our community to achieve net zero, there is a once-in-a-lifetime transformation underway.

Therefore, it is important that we invest in ensuring customers have the ability to make energy choices and share in the costs and benefits of doing so in a fair and equitable manner. If we fail to respond to changing customer behaviour, the take-up of new technologies could be constrained and/or adversely impact the reliability and stability of the network.

Therefore, DER management and enablement is a relatively new category of expenditure that is primarily driven by enabling customers' future energy choices.

How do we forecast it?

We need to understand and accept the uncertainty involved in forecasting and plan for the future grid to adapt as the future unfolds. Our approach has been to adopt and translate the AEMO ISP scenarios as credible external reference points to plan and compare different outcomes.

We have taken our forecast for the step change AEMO ISP scenario as a central case but will continue to consider other scenarios and pursue adaptive planning as we monitor and evaluate uptake. Step change involves high levels of decentralisation and ambitious steps in decarbonisation. This was a favoured approach from both our customer groups and the broader stakeholder groups involved in the AEMO's 2022 ISP.

We then assess DER hosting capacity using this forecast. To do so, we have developed a deterministic low-voltage (LV) simulation tool in partnership with researchers at the University of Wollongong Australian Power Quality and Reliability Centre (APQRC). This simulation tool:

- builds customer load profiles from an available sample of smart meters, solar profiles based on historical irradiance data and assumed battery and EV charging profiles from AEMO and CSIRO
- builds LV models for each of Endeavour Energy's residential LV circuits based on the Advanced Distribution Management System LV network electrical model data
- adjusts customer profiles based on our DER forecast and forecast scenario
- runs average daily as well as full-year time series power flow simulations between now and 2040, calculating inverter curtailment energy as well as baseline and forecast power flows and voltage levels
- simulates the benefits of operational interventions such as distribution transformer optimisation and dynamic voltage management as well as identifies which LV circuits remain constrained after applying operational optimisation and where a network investment intervention is economically justified.

We are using this tool to quantify and value service outcomes (DER curtailment) using the AER's VaDER methodology, of which a key input is the CECV.

We have adopted the AER's CECV without amendment based on feedback from stakeholders.

Under the VaDER framework, we have also included the following benefits:

- **improved reliability** quantified using value of customer reliability where the integration of DER creates overloads to network assets.
- **network long-run marginal cost (LRMC)** quantified using Endeavours Energy's approved LV LRMC rate.

We are also exploring other components, including:

- **environmental benefits** based on the assumed forecasted cost of carbon emissions.
- **avoided generation investment** based on the reduced need for wholesale generation demand because of increasing DER.

These additional components will strengthen the overall DER integration business case. We will engage further on these matters in 2023 in preparing our revised proposal DER forecast.

How have we responded to feedback?

We sought customers' views on what they expected to be able to do with their energy supply in the context of decarbonisation and the decentralisation of the NEM. We also tested their expectations around DER service levels and how the costs of facilitating DER should be shared between customers.

We tested this feedback with stakeholders and sought views on more technical aspects of our DER proposal, particularly with respect to our VaDER assumptions and export tariff settings.

Our Customer Panel were strongly in favour of Endeavour Energy modernising the network in preparation for either a rapid or accelerated energy transition to accommodate future customer expectations as technology and markets evolve.

The majority of our Customer Panel, in principle, considered that anyone who wants to install solar should be able to connect and export to the grid at any time. Similar views were held about EVs accessing the grid.

The results were driven by a desire for customers to be able to manage their electricity bills more actively through increased independence, flexibility and control. They see the transition as inevitable and consider future personal savings and environmental benefits can be accessed sooner if Endeavour Energy takes a more proactive approach to DER hosting and innovation to support technological change.

Our stakeholders held similar, if more ambitious, views, also preferring that Endeavour Energy prepare for a rapid or accelerated energy transition (with a higher proportion of stakeholders aiming for a rapid transition than our Customer Panel).

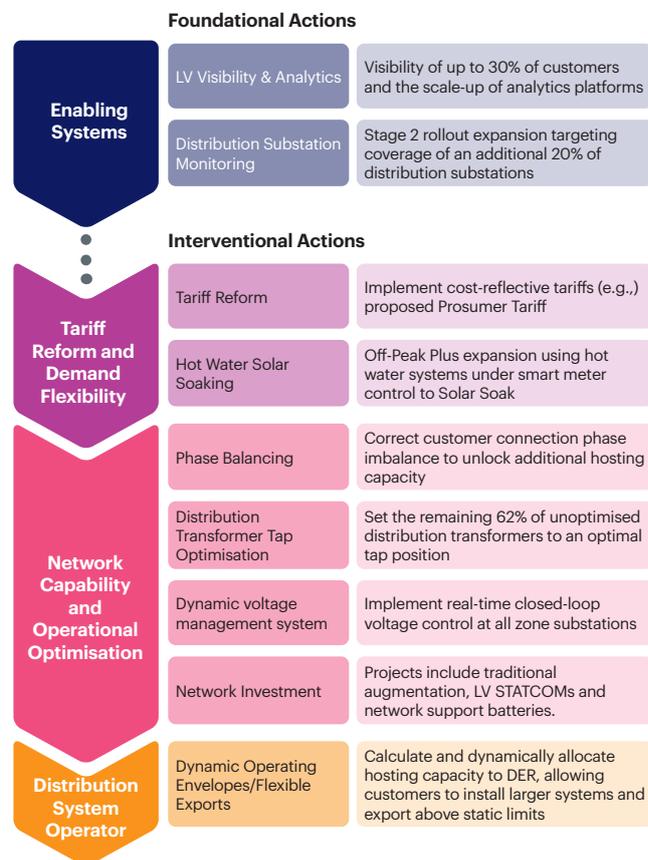
Our RRG:

- expect technical matters will be addressed by the AER but, in principle, consider that the AER’s CECV methodology should be used
- raised broader industry questions as to how environmental impacts should be valued, given a clear interest from customers in decarbonisation and the Energy Minister’s priority action to amend the NEO to include an emissions target
- saw merit in Endeavour Energy developing an Innovation Fund, similar to those employed by other networks, to action the direction from customers.

In response to this feedback, we have maintained our proposed DER expenditure of \$45M from the Preliminary Proposal based on AEMO’s 2022 ISP and the AER’s final CECV. To support the accelerating uptake of DER across our network we are proposing an Innovation Fund of \$25M (split \$20M and \$5M between capex and opex, respectively) to support and integrate technological change.

What will we deliver to customers?

Our **DER integration strategy** will prioritise customer and operational solutions prior to considering traditional augmentation, underpinned by investments in the foundational systems required to enable this. The plan below sets out our key areas of focus and investment.



These investments will benefit customers in several ways:

- hosting more DER, which will put downward pressure on wholesale prices for all customers and reduce customer carbon footprints
- making it easier for customers to participate in voluntary demand response programs and/or earn incentives through tariffs
- improving our visibility of existing and emerging constraints so they can be resolved and so the network can be managed more dynamically to maximise value for customers
- improving our ability to work with customers, aggregators and virtual power plants to coordinate and optimise flexible loads
- improving the ability of non-DER customers to access and benefit from excess solar
- increased resilience for customers in areas whereby local generation and DER resources can be utilised to reduce the frequency and duration of outages.



Our **Innovation Fund** will allow us to find a better way of doing things through an expanded ability to trial new technologies. Today, innovation funding for networks is derived from the DMIA however, the scope of the DMIA is small and rooted in the conventional paradigm of demand management.

As a key participant in the energy transition, we have both an aspiration and a need to be more innovative in order to keep pace.

We propose the fund operate in a manner similar to the DMIA in order to promote transparency and accountability. Specifically, we propose:

- six-monthly reporting to our PCSC subcommittee on Innovation Fund projects
- annual public disclosure of Innovation Fund projects with a focus on sharing key learnings and insights
- a use it or lose it mechanism whereby any underspending, for the opex portion of the fund is returned to customers via a revenue adjustment in the subsequent regulatory period; any overspend will not be adjusted for and instead be borne by Endeavour Energy
- excluded from the CESS so that no windfall gains or losses are incurred for under or overspends of the capex portion of the fund.

The Innovation Fund will allow us to:

- accelerate our participation in emerging technology in an agile manner
- incubate fast-growing use cases (that may currently be further away from our core operations), issues and opportunities beyond demand management, such as the benefit that EVs may have in soaking up excess solar and providing network support under emergencies
- maintain the radar for emerging and unforeseen technology and business model innovations
- bring forward successful trials for productisation earlier that could become material drivers of consumer benefits.

Our proposed approach is to use this fund to develop the distribution system operator role, facilitate the transition to EVs, support sustainability solutions and establish community resilience hubs and microgrids across our network area.

Information and Communications Technology (ICT)

We are proposing \$129M of ICT capex for the 2024-29 period. This represents a \$178M (or 58%) decrease compared to the current period forecast. Of this forecast, 58% is recurrent and the remaining 42% is non-recurrent.

What is it?

Our forecast ICT is driven by the majority of our investment drivers. Our investments look to deliver by:

- replacing and upgrading existing systems in order to maintain currency and support our network operations
- introducing better systems, technology and data capture to improve the efficiency of our operations and quality of our decision-making to improve our affordability
- ensuring there are stronger and more sophisticated cybersecurity protections to maintain the resilience and security of our operations
- providing smarter systems and data on the use of DER across our network to better orchestrate and enable customers' energy choices.

ICT is a key enabler for improving the way in which we do business to ensure that we strike the right balance between investing in the network and maintaining affordability.

After several years of under-investment below industry benchmarks, we undertook a substantive ICT transformation program over the current period. Our focus for the next period will be maintaining these new systems and making targeted improvements where justified.

How do we forecast it?

Our plans have been prepared in accordance with the AER's guidance on ICT investments. This guideline distinguishes between recurrent ICT projects and non-recurrent with different requirements for each.

Given the significant ICT investment in the current period, our ICT forecast capex is substantively lower than current period actuals. Our recurrent ICT is expected to return to a sustainable BAU level that is below industry benchmarks.

Our non-recurrent projects are supported by business cases justifying the investment by reference to economic cost-benefit analysis and post-implementation reviews of previous investments to demonstrate delivery efficiency and good governance. This is in line with the requirements of the AER's guidance.

How have we responded to feedback?

As a more technical area of expenditure with clear AER expectations, our engagement on ICT was mostly with our RRG.

Our RRG was keen to understand the benefits of our 2019-24 ICT transformation and to ensure that customers received the benefits of this capability uplift. The expectation is that there would be ongoing productivity benefits in excess of the AER's benchmark 0.5% that applies to opex and equivalent savings embedded in the forecast capex.

For the forecast ICT, the RRG expected that we clearly demonstrate compliance with the AER's ICT guidance note and that our non-recurrent ICT was associated with the customer-focused key performance indicators.

On the issue of efficiency, we conducted a post-implementation review of our current period of ICT transformation. This post-implementation review and the supporting analysis demonstrated that the expected benefits are almost entirely achieved by our FY2023 base year. This has driven our ongoing improvement in our benchmarking performance and our material outperformance of the AER's substitute opex benchmark.

This means that customers will benefit from these ICT related productivities in perpetuity. Therefore, we remain of the view that the AER's 0.5% productivity benchmark is appropriate. Note that we have decided to constrain our capitalised overheads and forgo any real escalation of our capex program to ensure efficiencies are embedded across our expenditure proposal.

What will we deliver to customers?

Our forecast ICT initiatives will build on the foundation set in the current period and support our key investment drivers. We aim to:

- meet changing customer expectations for a safe, affordable and reliable electricity supply by simplifying capabilities and building on current foundations to unlock value (\$18M)
- enable and facilitate customers' future energy choices and known preferences through the provision of smart, seamless digital service platforms, secure connectivity to behind-the-meter devices and support for a real-time flow of data (\$24M)
- provide a resilient network by supporting the delivery of network services through enhanced platforms and services for increased protection against cybersecurity threats and comply with regulatory obligations such as the *Security of Critical Infrastructure Act 2018 (Cth) (SOCI Act)* and enhance data and analytics to make better-informed enterprise decisions and information sharing requirements (\$72M).
- Support the sustainable growth of our communities by enabling and supporting the provision and operation of systems and non-network assets in greenfield areas such as Western Sydney International Airport through better data and insights, enhanced operational capabilities and automation (\$15M).

Our non-recurrent expenditure is supported by business cases prepared in accordance with the AER's expectations set out in its ICT expenditure guideline.





Other non-system capex and overheads

Other non-system capex categories relate to motor vehicles, buildings and property, plant and furniture, fittings, plant and equipment. These investments are required to support our field and office staff in performing their jobs and, therefore, form part of the costs of building, maintaining and operating our distribution network.

In the current period, we have sold our Huntingwood head office site and commenced a lease⁷ in the Parramatta CBD for our new head office. In line with new ways of working, we have reduced our head office size and will augment several field service centres in order to provide staff with flexible working arrangements.

Generally, non-system capex is forecast based on specific business cases and historic trends. Our forecast non-system capex is in line with historic trends and allowances and below expected spending for the current period:

- We are proposing \$37M of fleet capex for the 2024-29 period. This represents a 16% decrease compared to the current period forecast. This reduction has been achieved despite the addition of \$19M for capitalised leases related to fleet commencing from FY2025.
- We are proposing \$65M of buildings & property furniture, fittings, plant and equipment capex. This represents a 34% decrease compared to the current period forecast.

We have engaged in these areas of capex to a lesser degree as per our co-designed engagement approach. However, we have received feedback, directly and indirectly, related to our sustainability strategy.

There has been an interest in understanding how Endeavour Energy will not just support the decarbonisation of customers but how it will also decarbonise its own operations.

It is worth noting that we take our sustainability and employee wellbeing commitments seriously. We have installed renewable generation at our office locations. We have also recently entered into the first sustainability key performance indicators loan in the NEM that involves a series of environment and health and wellbeing initiatives.

We could look to bolster our decarbonisation efforts further by accelerating our transition to an EV fleet. However, we have taken the view that in line with our commitment to providing value for money services, we should only make this transition where it is cost-neutral to do so.

For capitalised overheads, the AER provides a benchmark forecasting methodology as part of its standardised capex model. This model derives an overheads forecast based on an assumed movement in overheads relative to movements in system capex.

Since our Preliminary Proposal in April, our internal capitalised overheads forecast has also increased to \$467M for the 2024-29 period. This is on account of lower-than-forecast unregulated growth and increasing opex efficiency.

However, we propose to maintain our Preliminary Proposal forecast of \$453M of capitalised overheads. This reflects feedback we have received from our RRG to commit to capex productivity improvements.

⁷The lease amount is added to the RAB as a final-year adjustment in the RFM. For the current period, leases will continue to be treated as opex in line with our allowance for incentive scheme purposes. The same principle applies to SaaS costs, which are currently capitalised but will be expensed commencing from the next period.

Operating expenditure

In the current 2019-24 period, our opex is expected to be \$368M (\$FY2024) below the allowance set by the AER. This lower expenditure is the starting point for developing our plans for 2024-29.

Opex is the cost required to operate and maintain our distribution network. Our opex includes the following key activities:

- inspecting, maintaining and repairing network assets
- maintaining vegetation around our assets to reduce safety hazards and interruptions to supply
- fault and emergency repairs and supply restoration caused by events such as storms and equipment failures
- customer service and corporate support activities like procurement, financial reporting, Human resources and legal required to meet our obligations.

In 2024-29 we forecast that required opex will be \$1,415M (\$FY2024). This forecast amount is 15% or \$249M (\$FY2024) below our opex allowance in the current period.

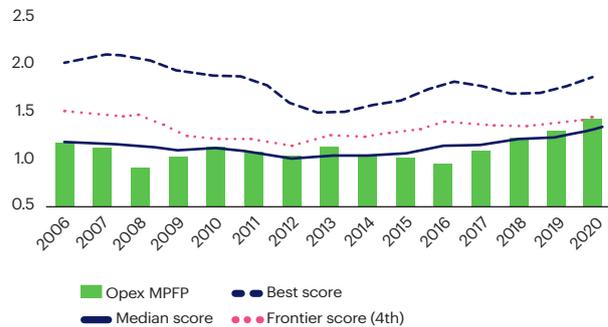
Our average opex per customer over 2024-29 is forecast to be \$241 (\$FY2024). This represents a \$62 reduction compared to our average for the 2019-24 period.

The considerable reductions we have made in opex over the last several years, escalating since our partial privatisation in July 2017, are driven by sustainable efficiencies we have achieved or expect to achieve.

In particular, during the 2019-24 period, we embarked on a significant and necessary transformation of our ICT enterprise systems and processes. This is the primary source of our more recent efficiency gains.

Achieving productivity gains is one of the most direct ways in which we can manage our contribution to customers' electricity bills and provide value for money. We are proud of the improvements we have made in operating efficiency that have resulted in us ranking among the most efficient networks in Australia per the AER's opex multilateral partial factor productivity (MPFP) benchmark.

Endeavour Energy opex MPFP (output/input)



Under the AER's base-step-trend method, customers receive the benefits of these reductions. This approach involves the following:

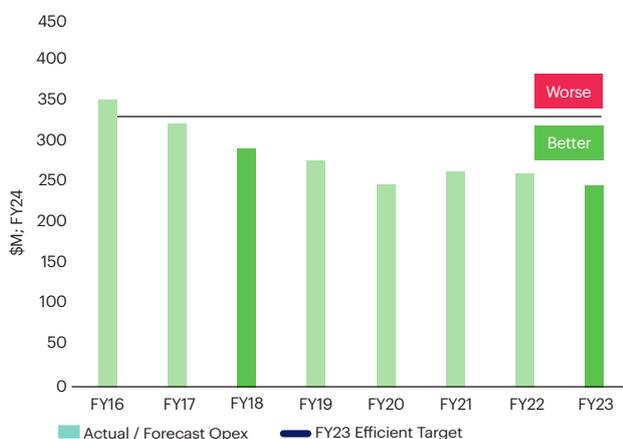
- **Base-** as opex is largely recurrent, the most recent year of actual opex (year four of a period by the time of the AER's final decision) is used as the forecasting starting point for future opex. This base year is subject to an AER test of efficiency and may be amended for one-off costs, changes in capitalisation or accounting standards and other known changes.
- **Step-** where there are known changes in forecast opex for specific activities, these are accounted for via step changes. These typically relate to new obligations, trade-offs between capex and opex and specific increases or decreases in a cost category. The AER has clear criteria that is applied to assess these.
- **Trend-** in addition to specific changes, the opex forecast is adjusted for broader impacts. This includes forecast wage growth, output growth (i.e., maintaining an expanding network) and productivity improvements.

This forecasting approach passes the benefits of Endeavour Energy's opex reductions over the current period through to customers. This is because the lower 'revealed' opex is used to set our future allowances.

Base year opex

Based on the AER's econometric benchmarking models, we forecast our FY2023 opex to be below (i.e., better) than the AER's substitute estimate of the efficient opex⁸ level for Endeavour Energy.

Efficient opex target



As a result, our revealed costs should be used to set our opex forecast and the Efficiency Benefit Sharing Scheme (EBSS) should continue to apply.

We have made some adjustments to our base year opex to account for changes in accounting standards.

- **Lease accounting-** we have adjusted our base year by \$4.9M to remove forecast lease expenses.
- **Software as a service (SaaS) accounting-** we have adjusted our base year by \$0.8M to add forecast SaaS costs.

It should be noted that for the current period, we have and will continue to report these costs in a manner consistent with how our allowance was set. These adjustments are only made for forecasting purposes. This means we do not incur any windfall gains or losses from the EBSS or CESS for changes in reporting (rather than changes in efficiency).

Step changes

Step changes relate to material costs that will be incurred that are not accounted for in the base year. However, simply demonstrating a new cost will be incurred is not sufficient. The AER has clear criteria that a step change should:

- not double count-costs included in other elements of the total opex forecast; for instance, the output growth component accounts for increased volume or scale and the productivity factor is also likely to reflect incremental changes in obligations historically (i.e. average changes)
- be material and either unavoidable (e.g., a new regulatory obligation) or a prudent and efficient capex/opex substitution opportunity (e.g., a demand management solution)
- be supported by clear economic analysis and a quantified assessment of alternative options.

At the time of our Preliminary Proposal, we identified several potential step changes for further investigation and review:

- increasing insurance premiums
- SOCI (Act)
- SaaS accounting treatment change
- DER enablement and network visibility (meter data)
- demand management contracts
- amended NSW Guaranteed Service Level (GSL) scheme.

At the time, placeholder estimates were used, totalling \$57M. Since our Preliminary Proposal, we have developed more robust forecasts and consulted with our RRG on the eligibility of these (and other step changes). Some key developments include:

- **SaaS-** we have clarified with the AER the appropriate treatment of accounting standard changes for reporting and forecasting purposes; we will instead address this change (along with leases) via base year adjustments
- **capex/opex trade-offs-** in addition to demand management, we also identified efficient capex substitution opex options in our DER business case; of these, we considered our Solar Soak/off-peak conversion program to be an eligible step change.

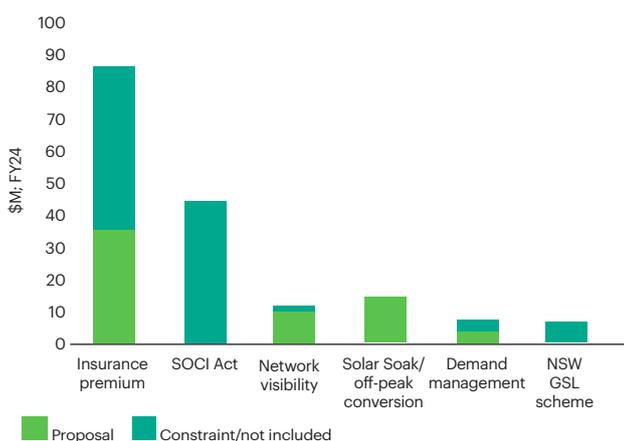
In addition to these changes, the forecasting process produced estimates well in excess of our preliminary estimates. Insurance alone was forecast to be, at a minimum, roughly 80% of our total step change estimate.

⁸ The substitute estimate is set at a target score of 0.75 using the AER's preferred economic model, the Stochastic Frontier Analysis Cobb Douglas (SFA CD), or an average of this and other econometric modelling results.

Overall, our range of potential step changes was \$107M to \$215M. We considered the pricing impacts of passing through these changes would be material and not supported by our customers. Therefore, we consulted with our RRG on adopting a 'constrained view', similar to our capex proposal, to limit our step changes to our preliminary estimates as far as reasonably practicable.

Following this process, we now propose step changes totalling \$65M for the 2024-2029 period. Our overview of each step change is provided below.

Opex step changes



Insurance

We currently hold a limit of \$860M in insurance cover for general and bushfire liability. Note that this does not include emerging risks such as environmental, cyber, employment practices and statutory liabilities.

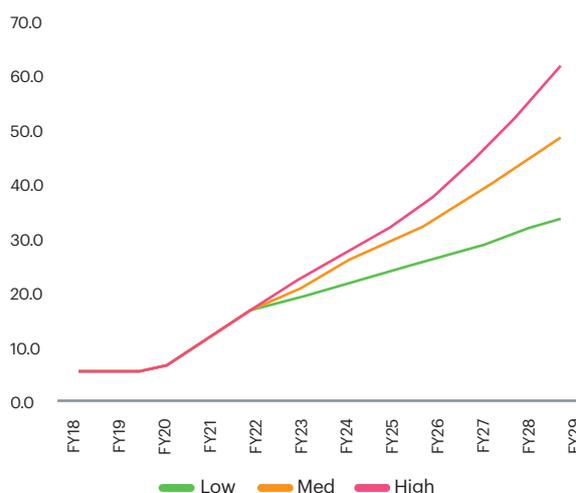
Our risk management policy accords with Australian and International standards and is supported by several procedures, policies, risk management plans and models.

Since just 2019, our insurance premiums have increased by almost 350% to \$12M in 2021. This has been driven by climate change and the recent large-scale bushfires in Australia and the United States. The insurance market has significantly reduced its capacity to cover these events on commercially reasonable terms.

Further, the NSW networks no longer participate in a joint group liability insurance scheme following the 2017 partial privatisation process.

As a result, material and unavoidable cost increases are anticipated. Based on no major changes to our risk profile, limit of liability (\$860M) or deductible structure (\$10M per event), our insurance broker estimates material increases in premiums.

Insurance premium FY2018-29 - actual and forecast (\$m)



This forecast presents a step change range of \$46M to \$118M for increasing insurance premiums. This is material and well in excess of the trend factor that applies to opex.

However, we are mindful of the need to manage this cost and explore alternatives to avoid realising such a material increase in costs. We have considered several risk-cost trade-off options for reducing our premiums. These include the following:

1. No policy limit/rely exclusively on pass-throughs - this is inconsistent with the Board Risk Management Policy and financial risk strategy.
2. Reduce liability limit-reducing cover to \$550M would reduce our current premium by approximately \$1.6M, while increasing risk.
3. Increase in policy deductible - we are considering what increases could be made within certain contractual obligations we have in place around maximum policy deductibles.
4. Removal and/or reduction of professional indemnity from placement.
5. Establish a captive insurance company - we are investigating this option further.
6. Reduction in the breadth of policy terms and conditions.
7. Aggregation of bushfire limits throughout the entire placement.

Based on these options, particularly items 2, 3 and 5, we have adopted an estimate of \$36M, which is below the range provided by our expert.

Security of Critical Infrastructure Act 2018 (Cth)

The SOCI Act was amended in March 2022 to strengthen the security and resilience of critical infrastructure.

We are still in the process of assessing if and how the Act applies to us and what the costs of compliance could be. While this is a new obligation that is likely to require material investment, there is a degree of uncertainty as to the quantum and timing.

We have estimated the ongoing opex costs to be in the order of \$48M to meet our compliance obligations. However, this is a high level estimate that requires validation.

It is for this reason that we do not consider the costs can be estimated with a sufficient degree of certainty to be included as a step change at this time. We will revisit this position in consultation with stakeholders in advance of our Revised Proposal in January 2024.

DER enablement network visibility

We forecast \$15M of additional costs for DER visibility and voltage management. This is driven the following factors:

- the metering competition reforms, which mean that meter data is owned by third parties
- the DER Access, Pricing and Incentives Rule Change, which sets out our obligation to service export hosting and the ESB's-Post 2025 future market program which sets out the technical regulatory activities that will be delivered over, the next three years
- the need to develop efficient and prudent investment to service DER hosting per the AER's DER Expenditure guidance note.

The level of LV visibility has been developed to maximise the project NPV. Without it, we would not be able to manage and/or optimise hosting constraints across our network as effectively. We estimate this inability would increase the DER capex by \$33M. Improved LV visibility also has a number of safety and reliability benefits shared by all customers and allows for more equitable hosting capacity improvement.

We note this cost is driven by a change in obligations related to meter ownership and an efficient capex/opex trade-off supported by a quantified assessment of options.

In the broader context of a constrained approach to step changes, we propose a step change of \$13M. We note the AEMC's proposed reforms to accelerate the uptake of smart metering may impact this initiative. We will update our position in our Revised Proposal once these reforms are finalised and assessed in more detail.

Solar soak/off-peak conversion

We anticipate \$12M of additional opex for accelerating the natural churn of meter replacements, focused on customers with hot water systems.

This accelerates the solar soaking benefit and helps avoid replacement capex for ripple control systems in zone substations or the installation of new systems in new substations.

The incentive payment is based on the market tender process for our off-peak+trial conducted in Albion Park. This trial demonstrated that smart meters could be used to deliver flexible and reliable hot water solar soaking.

The forecast program defers \$11M of capex and \$1M of opex and improves hosting capacity valued at \$2M. It also reflects the feedback we have from customers to offer them opportunities to maximise the value of their DER investments and to be more innovative in our approach to managing the network.

As mentioned above, we propose a constrained step change of \$10M for the 2024-2029 period.

Demand management

As discussed in our augex proposal, we have materially constrained our augex forecast from \$550M to \$412M. In part, this is driven by an expectation that external factors may change the timing and need for investments.

Another driver for achieving the allowance will be identifying efficient non-network alternatives. Of the augex not included in our proposal we consider three to four sites are candidates for demand management solutions totalling approximately \$50M.

This is likely to require \$3M to \$6M in additional demand management opex over the 2024-2029 period. This amount is derived from our New Technology Master Plan (NTMP) tool.

This tool is consistent with the RIT-D guidelines and evaluation methods. It allows us to screen potential network investments to assess network support options such as embedded generation, virtual power plants, grid-scale batteries, commercial direct load control and residential behavioural demand response.

Our proposal is a step change of \$4M for the 2024-2029 period.

NSW Guaranteed Service Levels

The NSW Government will amend our Distribution Licence conditions to, among other things, introduce a new customer GSL to apply from 1 July 2025.

For Endeavour Energy, this will involve:

- **Level 1-** a \$120 payment (to be escalated by CPI annually) for customers who experience 20 hours of outage(s) or 10 outages per calendar year.
- **Level 2-** a refund of the distribution component of the average residential bill for customers who experience 48 hours of outage(s) or 20 outages per calendar year.

This scheme is likely to see a material increase in the number of claims for compensation made by residential and small business customers. We anticipate this to be in the order of \$6M if 50% of estimated eligible customers take up the opportunity and accounting for the associated administration costs (0.2 FTE).

We assess options to improve service for worst-served feeders. However, network upgrades are often impracticable and/or more costly than a modest and recurrent level of non-compliance.

While this cost relates to a new obligation and efficient capex/opex trade-off (in part), it is subject to a degree of uncertainty as to the level of take-up. Therefore, we have decided not to propose a step change amount for the 2024-2029 period at this stage.

Trend factors

Consistent with our Preliminary Proposal, our Draft Proposal is to apply trend factors using the AER's standard approach.

The trend factors contain three key areas:

- **Price growth-** this is to account for reasonably known and quantifiable real price changes expected in labour and materials.
- **Output growth-** this is to account for opex changes associated with delivering changes in outputs (e.g., more network, more customers) over time; these outputs are derived from the opex cost function models used by the AER for benchmarking purposes.
- **Productivity-** this is to account for a reasonable expectation of the efficiencies a benchmark firm is expected to realise over a period.

Price growth

We have obtained an independent expert forecast from BIS Oxford Economics of forecast price changes in labour, material and land.

For labour, the forecast is for the Wage Price Index of the electricity, gas, water and waste services sector in NSW.

This forecast has been applied to the AER's benchmark opex labour/non-labour split estimate of 59.2%. We note the AER's standard practice is to average our labour price forecast with its own consultant forecast.

For materials, we have decided not to apply the forecasts to the 2024-2029 period consistent with the AER's general approach not to do so.

Output growth

We have applied output growth per the AER's standard specifications and weightings using forecast customer, energy, demand and circuit line length growth.

Productivity

We have applied the AER's 0.5% benchmark productivity factor. We do not consider further productivity savings warranted as our base year (FY2023) is well below the that AER's substitute estimate and reflective of the benefits of our current period of ICT transformation.

We will continue to pursue additional efficiencies in accordance with the incentive-based regulatory framework. Note that such savings will become more difficult and riskier to unlock as they converge with the efficient frontier.



Other building blocks

Return on capital

In order to invest in the network and maintain a safe, reliable and secure supply, it is necessary for revenue to be set at a level that enables Endeavour Energy to recover its efficient costs, which includes an adequate return to investors.

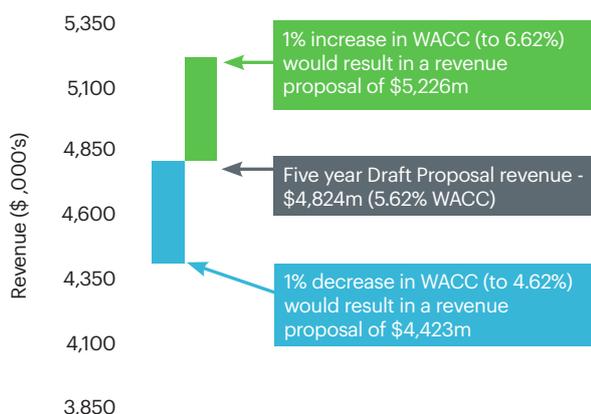
The AER sets the ROR as part of a binding instrument (the RORI), which is set every four years. The 2018 RORI applies to our 2019-24 determination. This RORI is currently under review and will be replaced by December 2022. The updated 2022 RORI will apply to the 2024-2029 determinations.

The Draft 2022 RORI was published in June 2022. We have estimated the WACC using this draft RORI, noting that we have serious concerns with the AER's draft decision to reduce the term of equity to five years.

Based on the prevailing risk-free rate⁹ and cost of debt¹⁰, we estimate an average WACC of 5.62% for this Draft Proposal.

As the largest single driver of revenue, small variations in the ROR can have a large impact on forecast revenues. The ROR in our formal submission in January 2023 will be updated and then again in our Revised Proposal and the AER's draft and final decisions. Market conditions remain dynamic and material changes could occur between each of these points in the proposal process.

For illustrative purposes, the revenue impacts of ROR variations are provided below.



For stakeholders interested in RORI matters, we would encourage you to participate actively in the AER's 2022 RORI review process.

Return of capital (depreciation)

Depreciation is the allowance provided so capital investors recover their investment over the economic life of the asset (return of capital).

We have applied the standard, straight-line depreciation approach and standard asset lives approved by the AER in previous periods. In the 2019-24 period, we moved from a weighted average remaining life method to calculating the remaining life of assets to a period-by-period approach.

This change was to better match the depreciation allowance to the economic life of the assets. Under the weighted average remaining life method, the indexation of the RAB results in a deferral of the recovery of the value of the asset, which extends the average remaining life of the asset. This is similar to a home mortgage, where repayments in the early years of the loan primarily cover the interest costs rather than the loan amount.

For the 2024-2029 period, we propose moving from our period-by-period tracking to the year-by-year tracking approach. This approach is the default method contained in AER models and is used by the majority of networks currently. Since we made the move to period-to-period tracking during the 2019-24 period this will have a minimal impact on the 2024-2029 revenues.

This change produces depreciation schedules that better reflect the nature of the assets and their economic life and it ensures that total depreciation (in real terms) equals the initial value of the assets. Overall, this approach is neutral in net present value terms, but it will reduce long-term RAB growth and help reduce the risk of future price shocks.

⁹ We have estimated the risk-free rate using a 20-day average from late August 2022. This will be updated in our January 2023 proposal.

¹⁰ Based on a 10-year trailing average cost of debt. This will be updated in our January 2023 proposal.

We also propose the addition of new asset classes to account for the change in the accounting treatment of leases. Specifically, we propose the addition of:

- a 'short-term capitalised leases' asset class with a standard life of five years. To capture fleet leases and our Sydney CBD office
- a 'long-term capitalised leases' asset class with a standard life of 20 years. To capture our Parramatta head office lease.

For the long-term capitalised leases, there will be no additions over the 2024-2029 period as we have entered into our new Parramatta lease during the current period. Instead, an opening balance will be established via an adjustment in the RFM.

For the short-term capitalised leases, an opening balance will be set in the same manner and additions will be included for the 2024-2029 period. These amounts are contained within the overall fleet and buildings and property forecasts outlined in the capex section earlier. These amounts have been incorporated within the constrained ask for these non-system capex categories and within their historical trends.

Incentive schemes

As a monopoly service provider, networks lack the competitive forces required to discover the optimal cost-service quality mix. While the AER regulates networks, it also lacks the perfect information required to specify this mix. Instead, the regulatory framework in Australia, like many internationally, relies on incentive schemes to encourage networks to 'reveal' these efficient cost and service levels to the AER and drive continuous improvement.

To do this, the AER has developed the following incentive schemes:

- **the Service Target Performance Incentive Scheme (STPIS)**, which provides incentives to maintain or improve operational performance
- **the Efficiency Benefit Sharing Scheme (EBSS)**, which provides incentives to achieve and maintain operating efficiency improvements
- **the Capital Expenditure Sharing Scheme (CESS)**, which provides incentives to make capital expenditure efficiency gains
- **the Demand Management Incentive Scheme (DMIS)** which provides incentives to undertake efficient demand management and funding for innovative trials.

We propose to apply these schemes in the forthcoming regulatory period in accordance with the AER's prevailing guidelines. Based on our actual and forecast capex and opex spending we forecast carryover payments of \$6 million (\$FY2024) and \$138 million for the 2024-2029 period from the CESS and EBSS, respectively.

The CESS outcome is driven by the disposal of our Huntingwood main office site and the adjustment for the deferral of \$58 million of augex deferrals from the current period to the next.

The EBSS outcome is driven by material improvements in our efficiency following our ICT transformation and other productivity initiatives.



Stakeholder Deep Dive, August 2022

Customer Service Incentive Scheme

In addition to the incentive schemes above, we also propose that a CSIS applies for the 2024-2029 period. This scheme would replace the 0.5% revenue at a risk that is currently covered by the telephone answering component of the STPIS.

We have received feedback from stakeholders during the 2019-24 determination process that the customer service component of the STPIS is an antiquated and incomplete measure of customer service. This advice is backed by service priorities identified by our Customer Panel, which ranked answering phone calls low (thirteenth priority). We are currently in the process of improving our customer experience. It is important that incentive schemes reward (or penalise) outcomes that customers value.

Through our business-as-usual engagement activities and consultation with the RRG, we investigated a series of measures that would better reflect the priorities of our customers. This engagement made it clear to us that outages, planned or unplanned, were a major inconvenience to our customers and something we could improve our management of.

Subsequently, the quantitative survey of more than 1,250 customers identified information about planned outages as a priority future service and the Customer Panel strongly endorsed the service improvement priorities that would form our proposed CSIS.

Following these engagements, we propose a series of measures aimed at improving our planned and unplanned outage management. Specifically:

- improving logistics on planned outage management with 0.25% of revenue at a risk split between
 - the percentage of planned outages starting within 30 minutes of the communicated start time. To improve the start of the planned outage window times communicated to customers
 - the percentage of actual outage durations finishing within 1 hour of the planned duration. To improve the estimation of work and planned outage durations communicated to customers
- improving customer satisfaction with 0.25% of revenue at a risk split between
 - unplanned outage customer satisfaction score
 - planned outage customer satisfaction score
 - general enquiry customer satisfaction score.

We will propose targets for each of these based on historical performance. These targets will be updated for our January 2023 Proposal (and Revised Proposal).

We also note that separately the AER is currently reviewing incentive arrangements for export services, which will be finalised by December 2022. This review may necessitate changes to our incentive arrangements for the 2024-2029 period.

Corporate tax

Under Australia's tax system, dividends are paid out of company profits that have been taxed in Australia and have imputation credits attached to them. The 'cost of tax' building block is reduced to account for the value shareholders place on imputation credits (gamma), reducing the required return to those shareholders. The AER's gamma estimate is 58.5%.

We also note that following the Federal Court ruling on *Victoria Power Networks Pty Ltd v Commissioner of Taxation* ([2020] FCAFC 169), which dealt with the tax treatment of capital contributions in Victoria, capital contributions are not assessable for income tax purposes. However, the Australian Taxation Office has not since clarified how this case applies in other jurisdictions. Instead, it remains open for networks to assess whether the case applies in their context.

We are awaiting advice on the application of the case in the NSW context. Until clarified further, we have taken the view that the case does apply in NSW. Based on the NSW regulatory framework, this means the gifted assets we receive are not assessable for tax purposes in their entirety.

Therefore, we have adjusted the treatment of capital contributions in the AER's post-tax revenue model to account for this change. This results in a material reduction in the tax building block from \$141 million (\$FY2024) in 2019-24 to \$71 million (\$FY2024) in 2024-2029 .

Tariffs

Network tariffs are how customers are charged for their network service and energy usage. Endeavour Energy charges network tariffs to retailers, who then pass them on to their customers. These tariffs enable distributors to recover revenue to build, operate and maintain the network that is used to convey electricity. The AER regulates these tariffs annually so that consumers pay no more than necessary for safe and reliable electricity services.

The overarching purpose of our tariff strategy is to make energy more affordable by providing customers with the information they require to improve network utilisation by making informed and efficient decisions about their use of the network and their investment in new technologies such as solar, batteries and EVs.

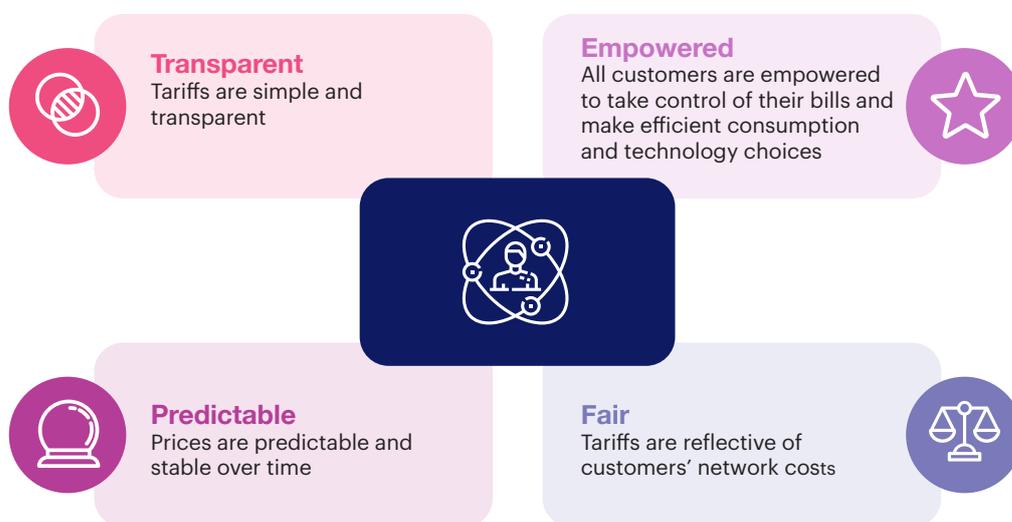
Enabling customers to make appropriate decisions about network use and investments in alternative technologies will assist Endeavour Energy in making future network investments that customers are willing to pay for and, ultimately, provide the network services customers want to use at the lowest possible cost.

The pace of this reform is impacted by:

- what customers want
- what impacts they will face
- the roll-out of smart meters, which make it possible to record when energy is used at different times of the day; and
- retailer adoption.

This means tariff reform strategies can evolve as stakeholder understanding develops and new technologies and service models emerge. To help distributors, the AER has provided guidance on how network tariff reform can be implemented, including through the use of trials to test innovative tariffs.

We also engaged with our RRG in developing guiding principles for our approach to tariff reform. The figure below represents our pricing principles. Consideration of customers, from small to large energy users and providers, is central to our strategy. We consider our objective and principles to be consistent with the Network Pricing Objective and the Pricing Principles as set out in the National Electricity Rules.



Tariff structures

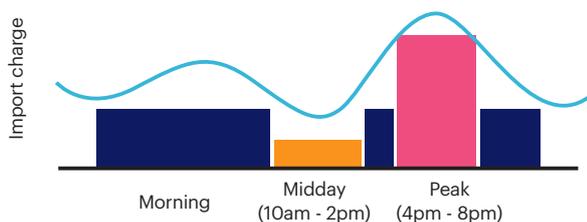
To achieve our objective and support retailer adoption, we propose to modify and supplement our two existing cost-reflective tariff structures in our cost-reflective tariff suite:

- STOU Energy - an energy-based tariff with prices that vary depending on the time of day and time of year that energy is consumed
- STOU Demand - a demand-based tariff that reflects the peak monthly usage, with prices that vary depending on the time of day and time of year that energy is consumed.

We propose to modify these structures with the inclusion of a low priced Solar Soak period in the middle of the day when PV export is at its highest.

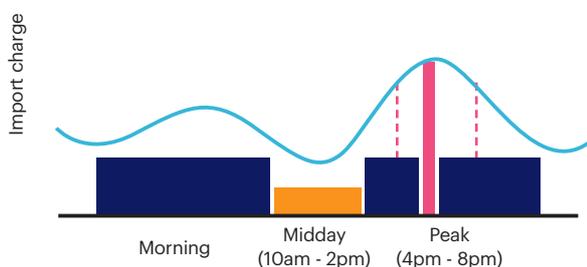
This price signal should provide customers with an incentive (through lower-price) to produce and consume electricity during the time of high solar export.

STOU Energy



Tariff structures and times remain constant between high and low seasons. All prices are based on energy (c/kWh). Peak prices change between seasons.

STOU Demand



Tariff structures and times remain constant between high and low seasons. Peak prices change between seasons and are based on demand (c/kW/day). All other prices are energy based.

Our initial position was that the STOU Demand tariff would be the default cost-reflective tariff option as it is more aligned to costs. However, we have received strong feedback from retailers that demand-based tariffs are, in their view, more complex and less marketable to customers.

In response to this feedback, our STOU Energy tariff will be used as our default cost-reflective tariff option. Note that customers will still be able to choose to switch to the demand-based tariff.

Assignment policy

Endeavour Energy developed the 2019-24 Tariff Structure Statement assignment policy with the support of stakeholders. The introduction of our STOU Energy and STOU Demand cost-reflective tariffs was a significant milestone for efficient tariff reform.

With many reform programs, there is the risk of creating 'winners and losers'. To mitigate the potential political and customer risk, we introduced:

- transitional tariff structures that transition to cost-reflectivity over time
- a discount to cost-reflective tariffs relative to our non-cost-reflective tariff option to apply to 90% of our customers
- an 'opt-out' assignment policy that allowed customers who defaulted to the cost-reflective tariff to opt-out to a non-cost-reflective tariff option.

Despite the mitigations, large numbers of retailers continue to exercise their ability to opt-out of these tariffs on behalf of customers. For this reason, we believe a change in our tariff assignment policy should be considered in this next regulatory reset.

Endeavour Energy proposes a new assignment policy in the 2024-2029 regulatory control period that aims to accelerate the transition of customers to more appropriate tariffs. That is, all customers with enabling smart metering will be assigned to our STOU Energy tariff. These customers will be allowed to opt-out of the STOU Energy tariff to our STOU Demand tariff; however, the option to opt-out of cost-reflective pricing will be removed.

This plan aims to accelerate the transition to cost-reflective tariffs for both new and existing customers, which retailers have largely opted out of to date.

To manage adverse customer impacts, this assignment will occur over a two-year period. A customer will remain on their existing tariff for the first 12 months¹¹ after obtaining smart metering before being assigned to a transitional STOU Energy tariff for an additional 12-month period. The latter is a diluted version of the fully cost-reflective tariff. This period will provide customers with an opportunity to understand, monitor and adjust their energy usage with the benefit of smart metering.

In developing this position, we have weighed divergent views of customers, retailers and stakeholders. Our Customer Panel were supportive of cost-reflective tariffs and keen to make use of opportunities to better manage and reduce their electricity bills. The majority (55%) also initially favoured strengthening our assignment policy. However, in our more recent engagement with our Customer Panel, the majority (60%) favoured an opt-in approach to tariff assignment. This may reflect growing concerns with cost of living pressures and their ability to respond to these price signals. We will seek to further understand consumers' concerns about their ability to respond to cost-reflective tariffs and opportunities to improve education as we refine our Proposal for submission in January 2023.

Conversely, our expert stakeholders were more strongly (71%) in favour of strengthening our policies consistent with the aims of policymakers.

Export tariffs

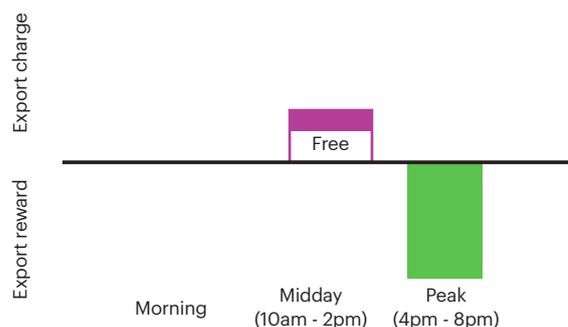
We believe that export tariffs can be used to improve the utilisation of the network. During periods of peak export (generation by domestic solar), potential augmentation costs can be avoided if customers are incentivised to move the discretionary load to act as a solar soak. Where these costs cannot be avoided, an export price signal (charge) will encourage exporting customers to use our network only where the benefit they derive exceeds the cost of providing the additional export capacity. Conversely, during periods of high import demand, an export incentive signal will encourage exporting customers to shift their export to a period where it reduces potential augmentation costs.

Our existing tariffs only signal the costs of additional load during peak demand through peak charges. We view the possibility of providing cost-reflective prices and rewards for two-way flows as an opportunity to transform our approach to tariffs, offering our customers a suite of tariffs that empower choice and control over their energy use and technology choices.

To facilitate export pricing, we propose two-way flow tariffs to signal to customers both the costs and benefits of their energy consumption and generation behaviour by using a simple, transparent and predictable combination of prices and rewards for flows in either direction.

It is proposed that Endeavour Energy's export charge and reward tariff be offered as an addition (or 'secondary tariff') to both the STOU Energy and STOU Demand tariffs outlined above.

Export charge and reward (prosumer)



Tariff structures and times remain constant between high and low seasons. export and reward charges will change based on the season. The Export reward will be energy-based. We are yet to finalise an energy- or demand-based structure for the export charge. Our preliminary analysis suggests a basic export level of 2-3kW.

We received strong support from our Customer Panel (81% in favour), RRG and Deep Dive stakeholders (90% in favour) to introduce export rewards and charges.

Assignment policy

We propose an opt-in assignment policy for existing customers and opt-out for new or upgrading customers from 1 July 2025 to the proposed export tariff and reward.

This is consistent with the feedback we have received from customers. The majority of our Customer Panel (who are existing customers) preferred an opt-in approach to export tariffs (53%)¹². Our stakeholders were similarly supportive of an opt-in approach (57%).

In balancing this feedback, we consider a stronger policy appropriate for new and upgrading customers. These customers should be presented with cost-reflective information upon which to inform the decisions they are actively making with regard to their investments in DER. However, existing customers should have greater flexibility until such time as they are considering whether to replace or upgrade their existing systems.

¹¹Note that re-assignments will occur on a bulk rather than real-time basis, meaning customers could remain on their existing tariff for a period longer (but not shorter) than 12 months.

¹²28% of the remaining customers preferred mandating, While 19% preferred deferring export tariffs until at least 2030.

New technologies and energy services

There has been some interest from customers and stakeholders in understanding how our cost-reflective tariffs will apply to emerging technologies and network services and whether specific tariffs are required.

Electric vehicles

EVs have the potential to become a material new driver of network demand over the coming years. Tariffs can play an important role in alleviating network constraints that could arise from charging EVs during times of peak demand.

We have consulted with stakeholders on how our existing suite of tariffs applies to EVs. In principle, we consider EV charging should be treated in the same manner as any other load connecting to the network. It is for this reason we do not consider EV-specific tariffs required.

Instead, we consider our proposed tariff structures will appropriately incentivise optimal charging times for EVs. For private residential and commercial charging and public fast-charging stations consuming less than 160 MWh per annum, customers will be able elect either an STOU Energy- or Demand-based tariff. Both tariffs encourage customers to shift charging times outside of the peak window. The addition of the Solar Soak window will further incentivise charging during the middle of the day when solar PV output is high.

We also note that EV customers could adopt a 'controlled load' or 'scheduled load' option¹³. Endeavour Energy is currently exploring dynamic scheduled load options through our Off-Peak+ technology and tariff trials.

Grid-connected storage

The advent of grid-connected batteries and the sophistication of their operators presents a prime opportunity to avoid network costs through the application of highly efficient price signals that promote efficient network utilisation.

Our tariff structure for grid-connected batteries promotes economic efficiency during peak demand events through the introduction in the peak demand period of a:

- marginal cost-based import charge that encourages a battery operator to manage its demand
- marginal cost-based export reward that encourages a battery operator to export energy, thereby freeing up capacity on higher levels of the network.

Similarly, economic efficiency is promoted during peak export events through the introduction in the peak export period of a:

- marginal cost-based export charge that encourages a battery operator to manage its exports
- zero price for imports that encourages a battery operator to shift load to those times, otherwise known as solar soaking.

We have elected not to reward customers for increasing load during peak export events due to the risk that customers increase the load by operating appliances that provide no amenity at that time, for example, by leaving lights on during the middle of the day. A consistent approach is proposed for grid-connected batteries by using a very low (or zero) price rather than a reward to encourage load shifting into peak export periods.

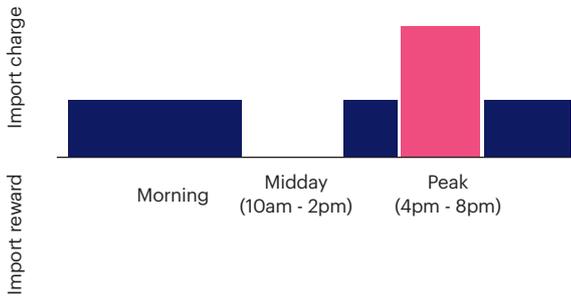
Just like all other customers, battery connections should contribute to the recovery of residual costs across the network. This reflects the battery's use of the entire network to import electricity and, potentially, access wholesale and ancillary service markets. Residual costs are recovered through a fixed charge and variable import charges. Residual costs are not returned to the battery operator through the "mirrored" export reward.

All variable prices are levied on a per kilowatt-hour (kWh) basis, which reflects feedback from battery operators identifying potential scope to manipulate a demand-based export reward, that is, to receive a financial reward without a commensurate benefit to the network.

¹³Note that Controlled or Scheduled load options require specific wiring and metering arrangements at the customers premise before they can be enabled. These costs are payable by the customer

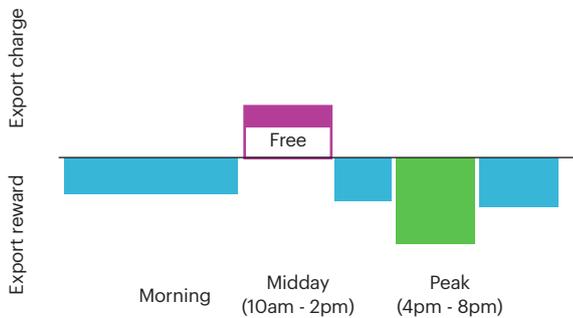
Low-voltage grid-connected battery

LV grid battery (imports)



The STOU Energy tariff structure and times apply and remain constant between high and low seasons. The peak charge will change based on the season. The import tariff includes DUOS LRM and residual cost recovery in addition to TUOS and JSA amounts.

LV grid battery (exports)



The STOU Energy tariff structure and times apply and remain constant between high and low seasons. The peak reward will change based on the season. The export reward tariff includes DUOS LRM, in addition to TUOS and JSA amounts (all negative prices). The DUOS residual cost from the import charge is not returned to the battery operator through the export reward. We are yet to finalise an energy- or demand-based structure for the export charge. Our preliminary analysis suggests a Basic Export Level of 2-3kW.

High-voltage grid-connected battery

The key distinction in the tariff structure applied to batteries connected to the high-voltage network is the absence of an export charge and a much lower (or zero) price when exports are most prevalent. This is because exports do not significantly exceed localised imports on the high-voltage network, such that there are no 'peak export events' that impose costs on the network.

In addition to providing an export reward during the peak demand period, the tariff structure also includes a small export reward in all other time periods. This reflects the avoided transmission and jurisdictional scheme costs that result from reduced import demand from the transmission network.

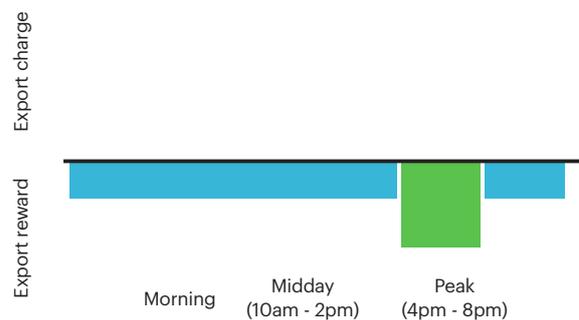
Finally, residual costs are recovered through a fixed charge and variable import charges. Residual costs are not returned to the battery operator through the export reward.

HV grid battery (imports)



The STOU Energy tariff structure and times apply and remain constant between high and low seasons. The peak charge will change based on the season. The import tariff includes DUOS LRM and residual cost recovery, in addition to TUOS and JSA amounts.

HV grid battery (exports)



The STOU Energy tariff structure and times apply and remain constant between high and low seasons. The peak reward will change based on the season. The export reward tariff includes DUOS LRM, in addition to TUOS and JSA amounts (all negative prices). The DUOS residual cost from the import charge is not returned to the battery operator through the export reward.

Community batteries

Community battery projects are expected to emerge in the coming years as a way of cost-effectively managing two-way flows within the low-voltage distribution network. By providing the opportunity for local network customers to 'store' local network flows to be used during demand peak times, a community battery can address problems arising from solar peak events while reducing peak import costs.

A key challenge for distributors is how best to allocate network benefits from the community battery between the battery operator and the community battery participants. Some distributors have been exploring the local use of system charges, which provide a network tariff discount for local energy flows. However, these tariffs generally require complex accounting of the exports and imports of community battery participants and operators and result in challenges when those flows do not align.

It follows that our approach is to provide the network value of community batteries directly to the community battery operator through the network tariff structure, who can then determine how that value is transferred to community battery participants. The network tariff discount during peak export periods and the rewards when exporting at other times, reflect the network value that operation of a community battery delivers.

We consider this approach consistent with the Rules and promotes the adoption of cost-reflective tariffs. In the future and potentially in trials, potential improvements for investigation include:

- reducing the level of residual costs recovered from variable import charges outside the peak demand period
- defining peak demand and peak export periods in a dynamic manner
- using location-specific estimates of LRMC as the basis for price signals and rewards.

Embedded networks

Embedded networks are private networks that serve multiple premises and are located within and connected to, our distribution network through a single connection point.

Endeavour Energy's network is growing at a rapid rate, driven in part by significant Greenfield developments across the network. We anticipate that a proportion of these developments will become embedded networks.

The issue is that the embedded network will be assigned to a low-voltage demand tariff (or high-voltage, depending on the size), but their energy consumption is markedly different to the average customer assigned to these tariff classes (TC). This is because the 'child' connection points are actually a collection of SME businesses and residential customers as opposed to an individual business or industrial customer.

This misalignment creates an opportunity for embedded network proponents to engage in inefficient arbitrage of the small residential and larger customer tariff structures.

Over time, this increases the costs that will need to be recovered from all network customers. It follows that there is a need to consider whether embedded networks are charged differently from other network connections to ensure equitable treatment of network cost recovery.

We are currently exploring the implementation of an Embedded Network tariff that includes an additional demand charge to our standard demand-based commercial tariffs. Stakeholders support the introduction of an Embedded Network tariff for the 2024-2029 regulatory period.



Western Sydney site tour, May 2022

Other matters

Service classification

The AER is required to classify the services it provides and determine what form of control applies. This decision is guided by the Rules and is primarily an assessment of which services have monopoly characteristics and which can be provided competitively. Monopoly services are suited to more direct control by the AER (i.e., setting a revenue allowance or price) and are funded by all customers.

The F&A process, which sets out the AER's intended services classification, was finalised in July 2022. We accept the outcomes of this process, noting that adjustments may be required as the ESB's Post-2025 reforms, particularly in relation to system strength services, are implemented.

Pass-throughs

The Australian regulatory framework is an ex-ante, incentive-based one. However, the Rules do allow for decisions to be revisited and revised in certain circumstances. Pass-throughs cater for high-consequence events of uncertain timing or cost.

It can be inefficient for a network (and, therefore, customers) to fund the mitigation of all risks in a revenue allowance, for instance, the impacts of a terrorist event, natural disaster or retailer insolvency. Rather than manage these risks via capex or opex, the Rules prescribe several events that trigger a reopening of a determination where a certain event occurs with a material cost impact.

In addition to these prescribed events, a network can nominate several additional events in their regulatory proposals. We intend to nominate several events that the AER routinely approve. These are:

- the insurance cap
- the insurer's credit risk
- natural disasters
- terrorism.

We will review our current definitions to bring them into alignment with more recent AER decisions and to ensure their coverage remains appropriate (for things like natural disasters that are long-running and/or interrelated and for cybersecurity attacks).

Contingent projects

Similar to the above, there can be large capital projects of uncertain timing or cost that can be managed on an ex-post basis. This means rather than include an uncertain project in a network's capital allowance, the AER can instead review it and specify a trigger event.

Only where this trigger event occurs would the project then be formally reviewed and approved by the AER and the revenue allowance adjusted to include it.

Based on the materiality threshold in the Rules, this option is only available for projects with costs in excess of \$48M for Endeavour Energy. As a distribution network, we rarely have projects in excess of this cost. For the 2024-2029 period, there are no projects exceeding this cost threshold of uncertain timing or scale. As a result, we do not intend to include any contingent projects in our proposal.

Alternative control services

We also provide a number of other services that are associated with owning and operating an electricity distribution network.

These services are typically provided to a discrete and identifiable customer(s) and/or have the potential to one day be provided on a competitive basis. The AER regulates these services separately as Alternative Control Services and typically sets a maximum price that can be charged on a per-service basis or the method and inputs required to quote a price for less uniform services.

Public lighting

We currently manage over 205,000 streetlights across our network area on behalf of councils and the NSW Government. The charges vary depending on whether the customer funds the cost of the light and installation upfront and based on the technology type.

For the 2024-2029 period, we have updated our Public Lighting Model in accordance with industry best practices. The new model seeks to improve the simplicity and useability of the model. For instance:

- more than 300 line items will be reduced to more than 130 line items and eventually fewer than 90 once old technology luminaires become redundant (expected to occur by FY2025)
- legacy tariffs for pre-2009 public lights TC1 and TC2 tariffs will be reduced (TC1 from several dozen to two) or removed entirely (TC2)
- a standardised fee for all TC4 pedestrian category road luminaires and all major road luminaries (above 33W) will replace dozens of different TC3 tariffs.

We believe this model will provide greater transparency to councils and the AER to benchmark costs. It will also allow us to assess and incorporate new tariffs for new technology lights more quickly.

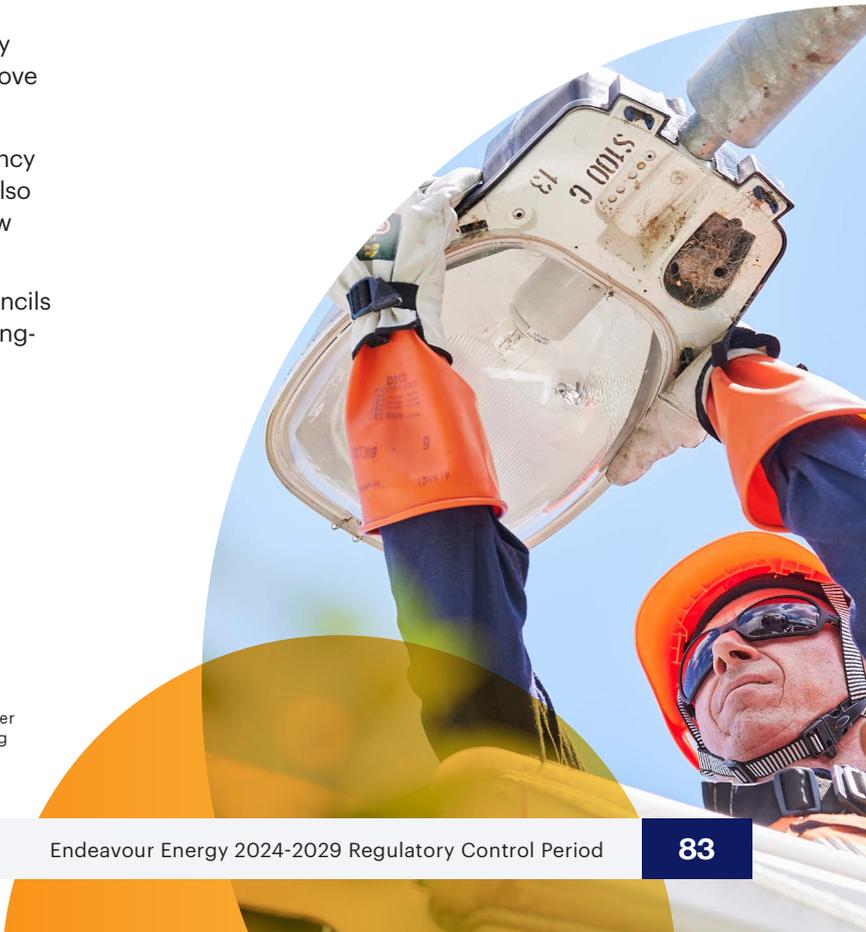
We know the transition to LED lights is critical to councils in achieving decarbonisation targets and realising long-term energy savings.

We are also mindful of providing a value for money service. On this, our proposal will:

- reduce TC3 and TC4 charges for most LEDs (Note that some new LED technologies are expected to carry a higher price)
- unwind cross-subsidies between old technology and LED prices, reducing LED maintenance and installation costs
- adopt a 10-year maintenance cycle for LEDs (rather than six years as is common practice), in addition to our existing 16-year life which is relatively longer than other DNSPs
- increase the cost of old technology luminaires (Note that LED tariffs are generally reducing), providing incentives to councils to transition to LEDs; with our ongoing support, we expect this transition to be completed by FY2025.

We have engaged with councils on these proposed changes. A number of areas for further investigation and improvement were identified that we will look to action in advance of our January 2023 Proposal and/or our Revised Proposal in January 2024.

¹⁴Due to assumed labour constraints, the model predicts a stable level of meter replacements each year, implying that the proportion of existing stock being replaced increases through the period.



Legacy metering

We are responsible for maintaining and operating Type 5 meters (Time-of-Use Interval) and Type 6 meters (basic accumulation) for existing customers. All new meters, whether replacing an existing meter or for a new customer or upgrade, are provided on a competitive basis by meter providers (not Endeavour Energy) and must be remotely read interval meters (advanced meters).

For the 2024-2029 proposal, we have adopted the AER's standardised metering models and forecasting approach.

Our metering costs will be correlated to the pace of the transition of customers from legacy metering to advanced metering. It is likely this will be impacted by the AEMC's ongoing review of its metering competition reforms, which is canvassing options for increasing the pace of the transition and the associated benefits of advanced metering.

Our forecast must also account for the cost-savings created by the transition as we maintain a decreasing number of meters across our network.

We engaged HoustonKemp to provide a forecast meter churn rate for the 2024-2029 period and estimate a diseconomies of scale factor representing the average avoided scheduled meter reading cost as a proportion of each meter replacement.

Based on HoustonKemp's time-trend model, our churn rate averages 6.5% per annum over the next period. As noted above, the AEMC's metering review could result in material changes to this estimate.

We have adopted the diseconomies of scale factor that the AER applied to us in its 2019-24 determination. This is because HoustonKemp found that no meaningful statistical relationship could be derived between the stock of legacy meters and the cost of scheduled meter readings.

This suggests the gradual and largely ad hoc approach to replacing legacy meters (which we have no control over) does not provide us scope to optimise our meter reading routes to significantly lower our metering costs. These opportunities will likely improve once the proportion of legacy meters remaining in a given area reaches a point of critical mass (more so, loss of mass) and enables us to reconfigure reading routes to minimise our meter reading costs.

As a result of the dwindling customer base and diseconomies of scale it creates, metering prices are forecast to increase during the FY2024-29 period:

As a result of the dwindling customer base and diseconomies of scale it creates, metering prices are likely to increase during the FY2025-29 period and beyond at an accelerating rate.

We remain of the view that the metering asset base, which has a remaining life of 13 years and value of \$14M, should have been recovered via the standard control service RAB at the time the service was reclassified.

We remain open to views as to how the recovery of this amount could be accelerated in a manner that balances customer impacts while better facilitating the transition to advanced metering without longstanding legacy charges. In particular, we suggest the metering RAB is instead recovered via the SCS RAB to avoid adverse customer impacts. We intend to engage further on this issue following the finalisation of the AEMC's metering review.

Ancillary network services

We provide a number of non-routine, customer-specific or requested services that have either a fixed fee for standard works or a quoted fee for non-standard works.

This covers a broad range of services such as basic connection offers, design, certification and inspection of Accredited Service Provider work, reconnections and disconnections and special meter readings.

These fees are mostly labour-based. The AER typically uses an estimate of efficient labour costs (per type of labour) from benchmarking analysis. We have used the benchmark labour rates that apply to the current period to set out prices for the 2024-2029 period. Note that this labour benchmark is across Australasia and the NSW labour market in electricity services tends to be more competitive and expensive.

We have also adopted the AER's standardised model for Ancillary Network Services. In doing so, we have simplified our approach by reducing our applicable labour types from 18 to six (in line with most networks). We will also propose a few minor amendments to capture new service iterations and/or billing improvement opportunities.

In the customer's voice

*'Great to start the conversation. It felt like genuine consultation and interest in our views.
Thank you'*

**Illawarra, South Coast and Southern Highlands local government workshop,
May 2022**

'I felt that our voices were heard and our opinions valued. It was good to see that some of EE's positions changed in response and where they didn't, the reasons why were explained'

**Customer Panel,
September 2022**

'What I enjoyed most about the session was hearing from other high-end customers about their experiences with Endeavour Energy'

**High-energy users forum,
February 2022**

'Had a good feeling and appreciated that our voices are listened to'

**In-language exploratory research (Vietnamese),
September 2021**

'From what I saw, the proposal incorporates most of what I heard during this process. EE clearly listened to the consensus'

**Customer Panel,
September 2022**

'The overall idea of Endeavour Energy wanting to hear from us gave me hope for the future'

**Residential exploratory focus group research,
August 2021**

'I think the overall experience was great. The questions asked and topics discussed were engaging and relevant'

**Small- to medium-business exploratory focus group research,
August 2021**

'I think that having senior executive members of the company involved with the customers and available to directly answer questions and listen to opinions shows a genuine desire to listen to the community. This is refreshing'

**Customer Panel,
June 2022**



*Western Sydney Local Council
Workshop, June 2022*



*Western Sydney site tour,
May 2022*



Stakeholder Deep Dive, July 2022



Stakeholder Deep Dive, August 2022

5. Next steps: How to engage



*Stakeholder Deep Dive,
August 2022*

How to have your say on this Draft Proposal

We welcome your feedback on this Draft Proposal. Throughout the document, we have highlighted some questions you might want to consider as you develop your response. For ease of reference, we have collated each of these questions below. In addition, we have three overarching questions that we invite you to consider and share with us:

1. What are your priorities or the priorities of the stakeholders you represent?
2. What can Endeavour Energy do to deliver on these priorities?
3. How should we engage with our customers and stakeholders as we further embed engagement into our day-to-day practice?

Section	Questions for feedback
Our changing energy landscape	<ol style="list-style-type: none"> 1. What do you consider to be the key changes that have occurred since April 2022? 2. How do these changes impact you or the customers you represent? 3. What changes (if any) should Endeavour Energy make to its Draft Proposal in response to these changes?
Customer insights and engagement	<ol style="list-style-type: none"> 1. What are your reflections on the engagement we have undertaken since our April 2022 Preliminary Proposal? 2. What are the key messages we must balance and respond to? 3. What changes (if any) should Endeavour Energy make to its Draft Proposal in response to the feedback it has received? 4. What topics and/or stakeholders should be the focus of ongoing engagement?
Proposed 2024-2029 forecasts and positions	<p>The inputs covered in this section, were:</p> <ul style="list-style-type: none"> • revenue and bill impacts • capital expenditure proposal • operating expenditure proposal • rate of return and depreciation • incentive schemes • tariff structures • alternative control services <p>For each of these inputs, we would like to understand the following:</p> <ol style="list-style-type: none"> 1. Have we understood and responded appropriately to the feedback we have received? 2. Does this Draft Proposal deliver outcomes that meet the expectations and needs of you and/or the customers you represent? 3. What aspects of our position should be the focus of any further review and/or refinement?

You can respond to all of these questions or just the ones that are most relevant to you or your organisation or community.

Please be sure to start by explaining who you are, whom you are representing (if you are writing on behalf of a business, organisations or group) and where you live.

This will help us understand your feedback in the context of the challenges of your particular community.

To ensure your feedback can be fully considered, submissions must be received by 30 November 2022.

Glossary

Acronym	Meaning
AER	Australian Energy Regulator
ACS	Alternate Control Services
ADMS	Advanced Distribution Management System
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
ANS	Ancillary Network Services
ASP	Accredited Service Provider
ATO	Australian Taxation Office
Augex	Augmentation expenditure
BESS	Battery Energy Storage Systems
CALD	Culturally and Linguistically Diverse
Capex	Capital Expenditure
CCP	Consumer Challenge Panel
CECV	Customer Export Curtailment Value
CESS	Capital Efficiency Sharing Scheme
CFI	Case for Investment
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSIS	Customer Service Incentive Scheme
CSR	Corporate Social Responsibility
Ctrl	Control
DER	Distributed Energy Resources
DERMS	Distributed Energy Resource Management System
DMIA	Demand Management Innovation Allowance
DMIS	Demand Management Incentive Scheme
DNSP	Distribution Network Service Provider
DOE	Dynamic Operating Envelope
DRC	Debt raising costs
DSO	Distribution System Operator
DUOS	Distribution Use of System
DVMS	Dynamic Voltage Management System
EBSS	Efficiency Benefit Sharing Scheme
ERC	Equity raising costs
ESB	Energy Security Board
ESG	Environmental and social governance
EVs	Electric Vehicles
F&A	Framework and Approach
FCAS	Frequency Control Ancillary Support
FGRG	Future Grid Reference Group
FLISR	Fault location, isolation and service restoration
GRESB	Global Real Estate Sustainability Benchmark
GRP	Gross Regional Product
GSL	Guaranteed Service Level
GW	Gigawatt
GWS	Greater Western Sydney
IAP2	International Association of Public Participation
ICT	Information and Communication Technology
ISP	Integrated System Plan
kV	Kilovolt
kWh	Kilowatt hour
LED	Light-emitting diode
LRMC	Long-run marginal cost
LV	Low-voltage
MD	Maximum Demand
MPFP	Multilateral partial factor productivity
MTFP	Multilateral total factor productivity
MVA	Million Volt-Amps

Acronym	Meaning
MW	Megawatt
MWh	Megawatt Hour
NEM	National Electricity Market
NER	National Electricity Rules
OEF	Operating Environment Factor
Opex	Operating Expenditure
PCSC	Peak Customer and Stakeholder Committee
PTRM	Post-tax Revenue Model
RAB	Regulated Asset Base
RAP	Reconciliation Action Plan
Repex	Replacement Expenditure
ReRG	Retailer Reference Group
REZ	Renewable Energy Zone
RFM	Roll Forward Model
ROR	Rate of Return
RORI	Rate of Return Instrument
RRG	Regulatory Reference Group
SAP	Systems, applications and products
SAPS	Stand-Alone Power Systems
PV solar	Solar Photovoltaic
STPIS	Service Target Performance Incentive Scheme
TOU	Time of Use
TSS	Tariff Structure Statement
UAV	Unmanned aerial vehicle
VPN	Victorian Power Networks
VPP	Virtual Power Plant
WACC	Weighted Average Cost of Capital
WARL	Weighted Average Remaining Life





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