SA Power Networks

2025-30 Regulatory Proposal Overview

JANUARY 2024





Network Service Area



Disclaimer

About this document

This document forms part of SA Power Networks' 2025-30 Regulatory Proposal to the Australian Energy Regulator, along with Attachments 0 – 20 and other supporting documents. All dollars shown in this document unless otherwise stated are in \$2025.

Company information

SA Power Networks is the primary electricity distribution network service provider for South Australia. For information about SA Power Networks visit sapowernetworks.com.au

Disclaimer

This document contains certain predictions, estimates and statements that reflect various assumptions concerning, amongst other things, economic growth and load growth forecasts that, by their nature, may or may not prove to be correct and are subject to ongoing change and development.

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Acknowledgement of Country

In the spirit of reconciliation, SA Power Networks acknowledges the multiple Traditional Owners of the lands that host the South Australian electricity network and their connections to land, sea and community. We would also like to pay our respects to Elders past and present and acknowledge that these are living cultures by paying respect to emerging leaders.



Presten Warren (b. 2000), Empowering South Australia, 2023, Acrylic on Canvas, 170cm x 90 cm

Commisioned by SA Power Networks for our 2023 Reconciliation Action Plan.

About SA Power Networks

Network highlights



SA Government committed to **100% net renewable** energy generation in SA by

2030



***350,000** solar PV systems enabled



71% of energy demand in SA **met by variable renewables** – second only to Denmark



~40,000 home batteries enabled



Around **\$20 billion** of renewable energy projects in the pipeline in SA



37% of customers in SA with solar – highest in NEM



Facilitating **12** Virtual Power Plants (VPPs) in SA



100% of distribution network demand regularly met by renewables



#1 ranked distributor for efficiency by the Australian Energy Regulator

SA Power Networks details

- > Primary distributor in South Australia
- > Supply South Australia's **1.7 million** population
- > Supplying over **915,000** homes and businesses
- > **1,800 employees** in more than 30 sites across the state
- > Recruited over 600 apprenticeships since 2003
- > Peak demand 3,193MW
- > Electricity distributed 9,858GWh
- > Network coverage over 178,000km²
- > Route length around **90,000km**
- > Oldest network assets in the NEM

Foreword



Peter Tulloch Chair SA Power Networks



Andrew Bills Chief Executive Officer SA Power Networks

This 2025-30 Regulatory Proposal has been several years in the making as we have undertaken many deep conversations with our customers, stakeholders and community about their energy needs.

We recognise South Australians are feeling the stress of significant cost of living pressures, including from high retail energy prices.

We also have considered a number of key challenges for us as a network services provider, including:

- the urgent need to step up investment in replacement of ageing and deteriorating assets in our network (the oldest in Australia) to maintain safety and current levels of reliability;
- building greater resilience amid worrying signs of more extreme weather events driven by our changing climate;
- ensuring we can support growing demand for and reliance on power as customers invest in behindthe-meter energy resources and electrify their households and businesses; and
- supporting the accelerating electrification of transport.

Therefore, in our 2025-30 Regulatory Proposal, we have sought to balance affordability with the need to step up our investment in the network and supporting operational capacity to meet these challenges. In real terms, SA Power Networks provides electricity distribution services today at a significantly lower annual cost per customer than at privatisation at the end of 1999.

We have kept increases in our part of the bill below CPI while doubling our number of field crews and improving average reliability by 25% for a customer base that has grown from 733,783 in 1999 to more than 915,000 today.

Our revenue is made up of a number of components. In 2025-30, while there are some cost drivers such as increasing levels of network asset investment and inflation, we have a major compensating factor due to a significant reduction in depreciation allowances in the period.

So, while we are proposing a 21% increase in investment in the network across 2025-30, we can deliver that without any material increase in our distribution component of the retail electricity bill.

In summary, we believe our 2025-30 Regulatory Proposal strikes an appropriate balance between keeping our prices stable, meeting strongly-identified customer needs, and supporting South Australia's shift to clean, reliable, and increasingly affordable energy.

Community Advisory Board



Dr. Jessie Byrne Chair Community Advisory Board



Kelvin Trimper AM Deputy Chair Community Advisory Board

SA Power Networks' Community Advisory Board (CAB), and its predecessor, the Customer Consultative Panel (CCP), acknowledge that they have worked closely with SA Power Networks in the planning and delivery of SA Power Networks' engagement process for its 2025-30 Regulatory Proposal

This process began in late 2021 and has required a significant and, at times, onerous commitment of our members and other external stakeholders over the past 28 months.

We recognise the various regulatory elements are complex. We thank SA Power Networks for its commitment and for using their best endeavours to ensure all external participants had the background knowledge and understanding to provide informed feedback on the Reset. Questions raised were dealt with professionally and with patience by SA Power Networks.

We acknowledge that, for the most part, the vast range of topics raised by consumers through the engagement process were satisfactorily considered. However, given the diversity of the CAB and other stakeholders involved, and given the complexity of the material covered, consensus was not possible on all elements of the Proposal or on its overall balance between service and cost.

We also acknowledge the role of the Australian Energy Regulator (AER) in determining whether all of SA Power Networks' Regulatory Proposal is 'prudent and efficient'. The CAB encourages all consumers who read this Proposal to provide feedback to the AER.

We look forward to continuing to work collaboratively with SA Power Networks as it finalises its 2025-30 Regulatory Proposal.

~VALE KELVIN TRIMPER~

SA Power Networks is extremely saddened to note the passing of Kelvin Trimper AM in January 2024.

We are very grateful for the significant role Kelvin has played in advising and supporting SA Power Networks to engage with communities across South Australia and giving consumers a real voice in planning for our energy future.

We extend our thoughts and sympathies to his family, friends and colleagues.





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1. Our Regulatory Proposal at a glance

SHAPED BY CUSTOMERS OVER FIVE ITERATIONS AND TWO YEARS OF ENGAGEMENT



FOCUSING ON OUTCOMES CUSTOMERS TOLD US MATTER

A reliable, resilient and safe network

Average reliability maintained by region

Targeted reliability and resilience improvements to worst served customers

Cyber security resilience maintained

Modest improvements in bushfire risk management

Customer experience, choice and empowerment

Digital enhancements to simplify and streamline customer service

Refined customer service incentive scheme targeted to what matters to customers

Refined connection policy to encourage flexible connections and support a two-way network

Enabling clean energy and unlocking future value for our state

Network upgrades to support continued solar take-up

New connection options and incentives for electric vehicles and smart appliances

DELIVERED BY EFFICIENT INVESTMENTS





OUR REGULATORY PROPOSAL AT A GLANCE | 13



People's Panel member Alicia

2. Overview

2.1 The unique South Australian context

The energy industry is undertaking a fundamental transformation as we seek to phase out fossil fuels, and investment by customers in customer energy resources, in particular solar PV, continues at an unprecedented rate.

This transition is only likely to accelerate over the remainder of this decade, and indeed, this acceleration must occur if we are to meet global carbon emissions reduction objectives. Although the energy transition is a global imperative, South Australia faces some unique challenges. In particular:

- World-leading Customer Energy Resource (CER) uptake: one in three of our customers have solar PV, sufficient to power the entire state on mild sunny days. This presents significant challenges, but also huge opportunities for clean, low cost energy for all customers if managed well.
- The oldest asset base, and lowest replacement rates in the National Electricity Market: although efficiently deferring asset replacement is desirable, and minimises customers' bills, inadequate replacement rates will ultimately result in reductions in network safety and reliability. While other jurisdictions have invested to accommodate growth, and a great deal of asset

replacement has occurred in tandem, we have not had these same drivers. With much of our network constructed in the 1950s and 1960s, increasing numbers of assets are reaching the end of their technical and economic lives.

Emerging climate change challenges: with bushfire risk an ever-present and increasingly concerning backdrop for the South Australian community, and customers increasing dependence on electricity for transportation and wellbeing, managing bushfire risk as well as ensuring resilience for regional communities, is a key consideration.

As we head into the second half of this decade, these challenges are converging. In addition, many of our customers are facing significant cost of living pressures exacerbated by increasing retail electricity prices, and although a large proportion of customers are benefiting from the savings available from adopting new technologies such as solar PV and electric vehicles, others are locked out due to split landlord, tenant incentives, or an inability to gain access to capital.

However, equally some of these challenges present opportunities. With many of our assets having now reached the end of their economic lives, they will no longer attract

depreciation revenue, putting significant downward pressure on distribution prices. The State Government premium feed-in scheme also expires during the period, resulting in materially lower electricity bills for most customers. Further, although a number of factors have driven up retail electricity costs for many customers, the combination of increased network throughput, the transition to electric vehicles, and low cost renewables, is forecast to significantly reduce customers' energy costs in the longrun (potentially to as little as a half of what they are today). If we can navigate our mid-term challenges, this presents an exciting future where energy is clean, reliable, abundant and affordable.

SA Power Networks is proud of our history in navigating these challenges and opportunities - improving service while materially reducing real prices to customers over the past two decades - and being recognised by the Australian Energy Regulator as the #1 most efficient distribution business in the National Electricity Market.

However, this is a particularly challenging context within which we have had to develop our 2025-30 Regulatory Proposal.

2.2 Understanding customers' needs

Within this context, it is imperative to understand customers' needs and wants in relation to the services our network provides, and on this basis, we have undertaken an extensive engagement process with our customers to shape our Regulatory Proposal.

Throughout this process, feedback from customers has been consistent. They want us to:

- Maintain network safety and reliability
- Support continued take-up of customer energy resources and the broader energy transition
- Provide good service
- > Keep bills as low as possible

The priority that individual customers place on each of these objectives, however, has varied considerably, and balancing these outcomes is enormously challenging. Some customers would prefer service levels reduce, to minimise cost as far as possible, whereas others would like service improved, and are willing to pay more for that. Many are somewhere in between.

2.3 Striking a balance between service and price

Acknowledging this significant challenge, we convened a People's Panel of 51 everyday South Australians, from diverse walks of life, and with a demographic aligned to that of the community as a whole, to provide advice on the best balance of service and price for electricity distribution services. Their role was to take off their individual hats, and weigh up the priorities, needs and wants of all South Australians.

In undertaking this task, the People's Panel took inputs from a wide range of sources, including the outputs from our extensive 'Focused Conversations' stage of engagement whereby we engaged with smaller groups of stakeholders including Government, consumer groups and industry experts, to consider specific aspects of the services delivered by SA Power Networks. These workshops considered various potential scenarios of service and expenditure and then made recommendations which were ultimately considered in totality by the Panel.

After 6.5 days of deliberation, the People's Panel provided us their advice in March last year.

While suggesting cuts to expenditure in a number of areas, the Panel recommended that SA Power Networks should maintain the safety and reliability of the network, and continue to support the energy transition, as well as making some modest service improvements - particularly for poorly served customers.

Although this outcome would require a significant expenditure uplift, the Panel appreciated that this could be undertaken without materially impacting customers' overall bills, on account of regulatory depreciation allowances reducing over the 2025-30 period, and expiry of the SA Government's Feed-in Tariff Scheme in 2028.

On the whole, we considered the recommendations of the Panel were well balanced, and on that basis, adopted them, largely unchanged, to construct our Draft Proposal, released in July.

2.4 Increasing cost of living pressures

Since the People's Panel convened, cost of living pressures have heightened, and the Draft Proposal provided an opportunity to test whether customers views as to the appropriate service-price balance would shift within this context.

Although responses to the Draft Proposal were mixed, all but two respondents re-affirmed their desire for us to maintain safety and reliability performance, and ensure we support the energy transition. A number of our Community Advisory Board committees also strongly supported the proposed service options within their specialist areas, including the Asset and Risk and Regional and remote sub-committees, and our Arborist Reference Group.

Our People's Panel also re-affirmed their support of the proposed service-price package as best balancing the needs of the community. However, nearly all respondents asked us to consider what more might be done so as not to add to cost of living pressures, and also to support those most vulnerable members of our community, particularly in the short-term.

2.5 Responding to feedback on our Draft Proposal

Given that the majority of responses to our Draft Proposal largely supported the service-price balance proposed, and the People's Panel retained their recommendations, we have seen no reason to materially alter the service-price balance proposed in our Draft Proposal.

Customers have been very clear that they do not want price reductions at any cost. The increased risk of fire starts, and degraded network reliability and resilience, that would result from maintaining current levels of expenditure, are not considered acceptable by the vast majority of our stakeholders.

However, we have given deeper consideration to removing those programs or initiatives that might be considered optional, and ways in which we could reduce or defer cost from even core programs particularly where the economic efficiency of such programs is marginal - even if supported by customers. On that basis we have made the following material changes from our Draft to this Regulatory Proposal:

- Refined our expenditure proposal in a number of areas through internal challenge, deferring or optimising spend;
- While still committing to progress our 'knock before you disconnect program' we will no longer seek further funding from customers to do this;
- Increased the productivity gains assumed will be delivered by our Asset Management Transformation Program (previously called our Assets and Work program), which now reduces our expenditure by a total of \$54m over 2025-30, as well as providing ongoing savings in subsequent periods;
- Proposed non-standard revenue smoothing to minimise short-term cost pressures on customers.

In aggregate, we have now incorporated nearly \$100m of productivity gains in our Proposal - responding specifically to stakeholders' feedback that we should seek to do more with less.

We have also decided, immediately and outside of the reset process, to undertake or support a number of programs being undertaken or proposed by the Energy Charter and the AER, including:

- Industry funding for financial counselling
- Voices for Power financial literacy program

We will also continue our selffunded community partnerships and grants program, designed to support customers in vulnerable circumstances.

And finally, despite mixed perspectives, we have decided to retain our proposal to introduce export pricing from 1 July 2025, taking additional price pressure off of those customers unable to invest in solar PV while also promoting efficient customer investment in the long-term.

2.6 Other impacts in moving from our Draft to the Regulatory Proposal

Since the release of our Draft Proposal, a number of external drivers have also materially impacted our Proposal. These include:

The proposed accelerated smart metering roll-out currently being considered by the Australian Energy Market Commission (AEMC). Supporting this roll-out will add \$5m to distribution costs beyond those included in our Draft. We also include \$9m of capital expenditure and \$1.4m per annum of operating expenditure for enhancing visibility of the dynamic state of our network through greater access to interval meter data resulting from this smart metering roll-out.

- A new small compensation claims regime. Which, although we consider in customers' best interests, will add \$20m to distribution costs.
- Increases in the risk free rate.
 Leading to a higher weighted average cost of capital (WACC), and therefore higher forecast regulated revenues and customers costs than in our Draft Proposal.

The refinements to our expenditure have been sufficient that the totex we now propose is lower than in the Draft Proposal, despite the expenditure increases.

However, we have no control over the weighted average cost of capital impacts, which have led to higher price forecasts in this proposal, including a small price uplift from 2024/25 to 2025/26. Ultimately, the price for customers over the 2025-30 period will depend upon the WACC at the time of AER's final determination which could be higher or lower than the figure used for this Proposal.

2.7 A Proposal capable of acceptance

We consider that our engagement program for this proposal has been successful in determining customers' priorities and preferences. Although some divergent views remain, our Community Advisory Board, in their Independent Report of our engagement process, supported the effectiveness of our engagement.

Customers and stakeholders have provided clear advice that they want network safety and reliability to be maintained, and for our network to support the energy transition.

Our 2025-30 Regulatory Proposal will deliver these two outcomes.

Maintaining service and positioning for the future will require a significant increase in our expenditure program. However, we have sought to reduce expenditure wherever this can be achieved without impacting service, and our Proposal represents a small reduction in totex as compared to the Draft, despite a range of new external obligations that have had to be incorporated. All areas of expenditure are supported by extensive and detailed business cases that comply with AER requirements and include quantified benefits wherever possible.

In aggregate, the net present value of these benefits exceeds our proposed new investments by more than \$0.5 billion, demonstrating the value to the South Australian community, and the overall efficiency of our Proposal. Despite the significant uplift in proposed expenditure, falling depreciation allowances over 2025-30 mean that customers' prices in real terms will remain roughly comparable to today. The expiry of the SA Government Premium Feed-in tariff scheme in 2028 will also provide some price relief to customers.

We will be continuing our focus on supporting those customers suffering greatest disadvantage - however we will not be seeking regulatory funding to do so.

With all these factors taken into account, we consider that this is a Proposal in the best interests of our customers, and capable of acceptance by the AER.





Ian charging his Tesla Model S



People's Panel independent advisor Andrew with SA Power Networks' Chief Customer and Strategy Officer Jessica

3. Our approach to customer and stakeholder engagement

Underpinning the development of our 2025-30 Regulatory Proposal has been a comprehensive engagement program – ensuring we understand what our customers value and focusing our engagement activities on what matters most to our South Australian community.

In developing our engagement program, we worked collaboratively with our Community Advisory Board and a Reset Subcommittee of that Board as strategic partners to develop and endorse our program. We undertook early engagement with our key stakeholders to refine the engagement program to ensure we focused on what matters. For our 2025-30 Reset engagement process, we undertook an iterative, scenario-based and outcomes focused approach to engagement and forecasting expenditures.

This commenced with development of key themes and priorities in late 2021, after which we consulted with a wide range of customers and stakeholders in our Broad and Diverse stage, which included visits to six regional sites. This was followed by a series of deep dive Focused Conversations on priority topics and the service-price trade-offs of different expenditure scenarios for those topics. Finally, in 2023 our People's Panel deliberated on the whole package of recommended initiatives to determine an overall service-price balance for customers in early 2023. The Panel's recommendations underpinned our Draft Proposal, published in July 2023.

This staged engagement process also enabled an iterative approach to forecasting our total capital and operating expenditure (totex), with each key stage of our engagement program directly informing each forecast iteration, and the outputs of each stage providing input into the next.

Figure 1. Key stages of engagement



3.1 Key themes arising from our engagement

Throughout our engagement, four key themes continued to recur and were reinforced and refined at each stage. These were:

- Maintain safety and reliability

 keep the lights on and minimise the risk of public harm from the failure or operation of network infrastructure.
- Deliver good service be easy to deal with and help customers navigate the complex choices in responding to the new energy future.
- Enable the clean energy transition – since this is fundamental to mitigating climate change, and over the long-term, will result in significant reductions to customers' energy bills.
- Keep the price as low as possible, and play your part in improving equity – because some customers are doing it particularly tough as interest rates and cost of living increases impact.

Figure 2. Key engagement themes



3.2 Engaging on price-service options

A notable change in our engagement approach for this Reset was to involve consumers throughout the entire process, rather than attempting to develop 'the one right number' and then trying to explain and seek support for our proposal.

Instead we:

 took a 'scenario' approach to forecasting and engagement by providing three alternative service-price outcomes in terms of how we can address the key drivers facing our business:

Basic scenario – a base- case counterfactual where we set out what would occur if we reduced our expenditure to just reflect recurrent or 'business-as-usual' practices;

- 2. Maintain scenario where we maintain current service and compliance to current and new obligations; and
- New value scenario where we achieve higher or differing service levels, or provide new services.
- > asked customers to recommend the service level and price outcomes balance they expect us to achieve in the 2025-30 period, and progressively refined our three forecast scenarios down to one scenario aligned to their expectations in a Draft Proposal, published in July 2023.

Feedback from submissions on our Draft Proposal has further shaped this Regulatory Proposal.

More detail of our engagement program can be found in Attachment 0.

Figure 3. Scenarios used to engage with stakeholders

PREVIOUS FIVE YEARS

SCENARIO 1 BASIC

Undertake only recurrent / business-as-usual practices and spend, and thereby demonstrate the risks of service degradation that would result

SCENARIO 2 MAINTAIN

Maintain / achieve an efficient / compliant level of service across our distribution system by proactively responding to investment needs

SCENARIO 3 NEW VALUE

Improve services to customers, derive new efficiencies and deliver new / valued services to customers

PRIC

CUSTOMER VALUE

The expenditure forecasts in this Regulatory Proposal are the fifth iteration that we developed with customers as shown in Figure 4.

Figure 4. Iterations in developing our forecast

Iteration 1 - THREE HIGH LEVEL SCENARIOS

PRELIMINARY RANGES

- Scenarios to indicate preliminary book-end ranges in potential customer service outcomes based on differing investment actions.
- Informed by high-level consumer engagement and research undertaken to date and business knowledge.

Iteration 2 - THREE SCENARIOS

INPUT TO FOCUSED CONVERSATIONS

 Book-end scenarios refined based on key service themes arising from Broad and Diverse engagement.

Iteration 3 - ONE RECOMMENDED SCENARIO FOR EACH AREA OF SERVICE

OUTCOMES FROM FOCUSED CONVERSATION AND INPUT TO PEOPLES' PANEL

- Consumer recommended scenario for each service area obtained from service topic specific Focused Conversations compiled to produce one overall forecast.
- Recommended scenario in each service area and in totality used as input to People's Panel.
- Regard to results of Customer Values Research (i.e. willingness to pay).

Iteration 4 - ONE RECOMMENDED SCENARIO AS A TOTAL FORECAST

OUTCOMES FROM PEOPLE'S PANEL AND INPUT TO DRAFT PROPOSAL

- Peoples' Panel evaluated all service area recommendations from Focused Conversations, individually and in totality with regard to overall service / price outcomes.
- Internal refinements to forecast inputs and expectations.
- Outcomes of and response to People's Panel used to produce one recommended forecast in totality as input to the Draft Proposal (i.e. willingness to pay).

Iteration 5 - ONE RECOMMENDED SCENARIO AS A TOTAL FORECAST

OUTCOMES FROM DRAFT PROPOSAL AND INPUT TO REGULATORY PROPOSAL Forecast has accounted for consumer feedback on Draft Proposal.



END 2021

AUGUST 2022

DECEMBER 2022

JUNE 2023

DECEMBER 2023



Matilda and Andrew using electrical appliances



People's Panel members David, Xin and Adam

4. Changes since our Draft Proposal

The table below summarises the feedback we received on our Draft Proposal and how we have responded in our Regulatory Proposal. These are dealt with in more detail in the subsequent sections, discussing the key themes of our Proposal.

Table 1. Affordable and equitable energy supply

Feedback received	Our response
The majority of responses largely supported the price-service balance proposed. No stakeholders supported a reduction in proposed service levels and there was strong support to restore the CBD reliability performance to target People's Panel representatives confirmed the service/price balance was still appropriate	Our Regulatory Proposal maintains service levels as proposed in our Draft Proposal. It also includes costs for two new external factors:
	 Proposed new small compensation claims regime; and
	> AEMC Rule change: accelerated roll-out of smart meters
	Notwithstanding these new costs, our total forecast expenditure is now lower than we proposed in our Draft Proposal. We will also absorb a number of other costs since our Draft Proposal within existing allowances, and have committed to deliver the 2025-30 capital program more efficiently
Affordability and wider cost of living pressures remain an ongoing concern for many customers and stakeholders who encouraged us to look at all ways to further support customers	We are also proposing a non-standard revenue smoothing profile to minimise price increases in the first three years of the 2025-30 period. Price increases in the final two years of the period will be offset by the cessation of the SA Government's solar feed- in tariff scheme in June 2028
There were mixed views on the introduction of export tariffs. Some responses supported the introduction of export tariffs to benefit vulnerable customers. Others queried whether small business exporting customers should be subject to export tariffs	We are proposing new solar export tariffs from 1 July 2025 on all residential and small business exporting customers with systems up to 30kW in capacity. This will improve customer equity: avoiding distribution costs for customers who do not have, or cannot access, solar
There was strong support for expanding the 'Knock before you disconnect' program	We will expand this program and fund it within existing allowances to support vulnerable customers avoiding disconnections
We should consider further ways to support vulnerable customers	We have reduced total forecast expenditure, removed two specific programs and will look to self-fund a new vulnerable customer assistance program. Our proposed revenue smoothing will also contribute to lower distribution prices in the first three years of the 2025-30 period
	We will continue to advocate for improved outcomes for customers experiencing vulnerability and continue to work with the SA Government as part of its Green Paper process to encourage solar programs and improved energy efficiency
	We are also now a full signatory to the Energy Charter, ensuring a continued commitment to improving customer outcomes and support funding for national programs to deliver better energy outcomes for all

Table 2. A reliable, resilient and safe network

Feedback received	Our response
There was strong support to maintain average reliability by geographic region and state-wide bushfire risk	Plans to maintain reliability by geographic region and state-wide bushfire risk are as per our Draft Plan. There has been a minor increase in forecast replacement expenditure due to improved CBD cable replacement cost estimates and to complete the replacement of the Northfield substation gas-insulated switchgear project currently underway
There was support for addressing the ageing assets issue in an efficient manner	We will continue to invest in our Assets and Work program and have committed to deliver the 2025-30 plan more efficiently (by a total of \$45m less than forecast). We have also quantified that our overall network asset replacement expenditure in total is efficient, with benefits to consumers exceeding costs
Proposed investments to restore CBD reliability were supported	Plans to restore CBD reliability to regulated target are as per Draft Proposal, but CBD cable cost replacement estimates have increased
Improving reliability and equity for worst serviced customers was supported	Targeted programs to improve reliability for our worst served customers in regional areas (where economic) are as per our Draft Proposal
There was support for targeted investment in network and community resilience	To improve the business case economics, we have reduced the scope of our new mobile generators initiative to reduce impact of long duration outages for regional/ remote customers
Expenditure on reducing bushfire risk, where efficient, was supported	Targeted programs to reduce the risk of bushfire (where economic) and reduce the impact of emergency power shutoffs are as per our Draft Proposal
While security of supply is important for customers, particularly as demand is increasing, discretionary spending should be deferred	With refinement to forecast inputs and timing, we have reduced the scope of some powerline and substation upgrades to maintain system security in light of increased customer demand
The community is concerned at Increased cyber security threats and the critical role of electricity	We have taken a risk prioritised approach to ensure that we are targeting the development of cyber capabilities that manage the most risk



Table 3. Customer experience, choice and empowerment

Feedback received	Our response
There was support for more timely, accurate and personalised online services	We will replace multiple legacy customer facing solutions with a consolidated, secure and fit for purpose solution. Since the Draft Proposal more of these solutions will be delivered through SaaS
There were mixed views on our proposed Customer Service Incentive Scheme (CSIS) with one stakeholder opposing any CSIS and another suggesting additional measures be included in the proposed CSIS	We propose a new CSIS as outlined in our Draft Proposal, to incentivise: • resolving customer enquiries on the first customer contact • providing more timely information on outage restoration times
There was support to update our Connection Policy to accommodate more clean energy	The Connections Policy is updated to cater for firm and flexible load connection services and for flexible generation connection services to support a two-way network
While there is general recognition that the industry is complex and customers are seeking an independent and trusted energy advisory service, stakeholders did not see this as a role for SA Power Networks	We will continue to advocate on energy advisory matters through the SA Government's Green Paper process

Table 4. Enabling clean energy and unlocking future value for our state

Feedback received	Our response
There was support for maintaining the 95% level of export service to support the energy transition	As per our Draft Proposal we plan to achieve this level of service but have revised down our forecast network upgrade cost estimates to keep solar curtailment below 5% for most customers
There was support for an economic transition to EVs to support decarbonisation	We are adopting a gradual, cost-neutral approach, phasing in EVs as it becomes economic to do so
Customers had mixed views about the introduction of an export tariff from strongly supportive to not supportive	All Export Customers with systems up to 30kW in capacity will be assigned to an export tariff from 1 July 2025



Members of SA Power Networks Executive Team at the People's Panel



Whitmore Square Substation - Central Business District

5. A reliable, resilient and safe network

Keeping the lights on and our customers safe





KEY INVESTMENTS



\$936 Million Repex



2010-15 2015-20 2020-25 2025-30

\$271 Million Fleet and Property

Responding to feedback and key changes since our Draft Proposal

The majority of submissions on our Draft Proposal indicated a high level of support for our proposed investments to maintain a safe, reliable and resilient network, including a submission from members of our People's Panel affirming their support. One submission had significant concerns with the levels proposed and one supported the outcomes delivered but urged consideration as to whether some expenditure could be reduced or deferred.

We have reduced proposed expenditure in this theme by \$27 million.

Throughout our engagement a key priority from our customers has been to maintain safety and reliability – to keep the lights on and minimise the risk of public harm from the failure or operation of network infrastructure. Achieving these outcomes requires ongoing investment in our network, given the deteriorating condition of our ageing assets and a forecast for growth in demand for electricity in the decade ahead. At the same time, customers have told us to keep the price as low as possible and play our part in improving equity.

5.1 Key opportunities and challenges

5.1.1 The condition of our network is deteriorating

SA Power Networks has one of the oldest electricity distribution networks in Australia and the construction profile has been uneven – with a large proportion of our network constructed in the 1950s, 1960s and 1970s. Much of the network will reach the end of its life in the coming decades.

Figure 5. SA Power Networks asset age profile



Source: SA Power Networks data

Given the long lives of the assets that make up the network, SA Power Networks has with a view to managing the network efficiently and not over-investing, replaced relatively little of the network constructed to date. In fact, we have maintained the safety and reliability of our network with the lowest asset replacement rate in the NEM.



Figure 6. Implied asset lives of various distribution businesses

Source: 'Ignoring a bath curve is a slippery slope', Energy Networks Australia 2021

While a low replacement rate of long-lived assets is appropriate and efficient when the assets are relatively new, this is not sustainable in the long-term. Without a continuation of an increase in replacement rates, failure of in-service network assets will

5.1.2 The demand on our network is increasing

In the coming decade the demand on our network will gradually increase as our customers move more of their energy needs to electricity.

The Australian Energy Market Operator (AEMO) notes in its latest forecast for electricity demand that while we can expect strong growth increase, leading to a gradual deterioration of service levels for customers and endangering the safety of the community.

in rooftop solar PV systems, demand will increase through the take-up of electric vehicles and the shift from gas to electricity.



Figure 7. AEMO SA maximum demand forecast

 AEMO Projection (Central POE 50) Actual 🗕

Source: AEMO ISP2022

In recent years demand on our network has seen relatively little growth due to the widespread uptake of rooftop solar PV. This has seen investment in the capacity of our

network at much lower levels than in earlier decades. While the uptake of solar PV is expected to continue, the peak demand is now occurring late in the day when output from

solar PV is minimal. In addition we see increasing demand from our customers including the uptake of electric vehicles and electrification of homes.

5.1.3 The reliability our customers experience varies across South Australia

With recent increases in network expenditure we have managed to meet the reliability targets in most regions set out in the South Australian Electricity Distribution Code (EDC) published by the jurisdictional regulator, the Essential Services Commission of South Australia (ESCoSA). However, the reliability of our network in the Adelaide CBD now needs to be corrected to bring performance back into compliance. Also, while we have generally been meeting regulated targets (other than in the CBD) – and on average our customers are experiencing less outages – customers in some regions suffer significantly more outages than the state average. Rural and remote communities supplied by long, radial networks particularly feel the effects of long duration outages. Critical infrastructure in these areas rely on a consistent power supply to deliver essential services such as water, health care and telecommunications.

Figure 8. Average minutes off supply per region



Source: SA Power Networks data

The Adelaide CBD network performance has been worse than the EDC target due to an increased number of underground cable faults. Without an increased works program, we can expect this performance to deteriorate further as the condition of the underground CBD cable network continues to degrade.

5.1.4 The risk of bushfire is increasing

Although we have robust businessas-usual practices to manage the bushfire risk each season (including pre-bushfire season powerline patrols, inspections and vegetation management), faults on our network can still result in fires. During the bushfire season, any one of these fires has the potential to result in a major bushfire that can result in significant losses to the South Australian community. We have extended our modelling to cover medium bushfire risk areas, giving us a better view of bushfire risk. Climate change will likely contribute to more frequent and severe high bushfire risk conditions, further increasing the risk to the community.

Figure 9. Projected increase in risk of bushfire incidents



2022 State of the Climate, The Bureau of Meteorology and CSIRO, © 2022 Commonwealth of Australia

5.1.5 Increasing cyber security threats

Recent cyber events affecting large corporations have demonstrated the growing importance of cyber

security. As an operator of critical infrastructure, we have an obligation under the Security of Critical

Infrastructure Act relating to the security and resilience of our network.

5.1.6 Our properties are in poor condition and have limited capacity

The majority of our depots across the state are in relatively poor condition and have limited capacity. To support our management of the electricity network, SA Power Networks has properties across the state including commercial offices, operational depots, training facilities and industrial facilities. Our properties are critical in supporting our electricity supply services by maintaining and storing essential network assets and providing a base for field staff and their equipment responding to unplanned and planned power outages. An independent assessment of our sites found the property portfolio to be ageing and beyond useful life. About 90% of the property portfolio has been assessed to be in poor to very poor condition, with over 25% of our assets reaching the end of their useful life in the 2025-30 period. These require significant capital upgrades and/or replacement to ensure continued, safe and efficient service delivery.
5.2 Options discussed with stakeholders

Through a series of Focused Conversations, we discussed investment options for the 2025-30 period in eight topic areas: Reliability and bushfire safety, CBD reliability, Assets and Work, Vegetation management, Security of supply (capacity), Network resilience, Information Communication Technology (ICT) cyber security, and Property.

Recommendations from these were then deliberated on by our People's Panel, who considered and recommended a total investment package which resulted in an overall service-price outcome. The People's Panel recommendations underpinned the positions we proposed in our Draft Proposal.

5.3 Feedback and how this shaped our proposal

In our Draft Proposal we noted the following clear and recurring feedback we heard:

- Customers support investment in replacing our deteriorating assets to avoid increasing risk of bushfires and outages, particularly in the face of climate change.
- It is important to consider equity between regions and customers when investing in the reliability of the network. Metropolitan Adelaide customers experience significantly better reliability than their regional counterparts. There is also diversity between regional areas and the performance they experience.
- The important role of the CBD in attracting investment and investment is required to meet reliability targets.
- Customers did not want security of supply in the network to be reduced with increasing demand for electricity.

- Customers strongly supported the need to invest in cyber security given the critical role of electricity.
- Customers recognised the need to respond to the condition of our property assets to maintain safe, suitable and efficient working environments to support our service provision.

These views shaped our Draft Proposal. We published our Draft Proposal in July 2023 and invited further feedback for a period of five weeks. We received 25 submissions from organisations and individuals.

For maintaining a safe and reliable network, there were high levels of support for network and cyber investments proposed by all segments (business, industry and consumer representatives, SA Power Networks consultative groups and sub committees, and residential customers) except from the South Australian Council of Social Services (SACOSS) which had significant concerns with the levels proposed and the South Australian Government who, while supporting network upgrades to maintain reliability and safety service levels, urged us to consider if we could delay some of our network asset replacement expenditure.

Through a process of continuing to apply a top-down and bottomup challenge to our forecasts we have refined our scope and forecast expenditure resulting in a net reduction of \$27 million to maintain a safe and reliable network in the 2025-30 period.

Table 5 summarises the expenditure levels now proposed in relation to maintaining a reliable, resilient and safe network. We have prepared business cases to verifying these plans and forecast expenditures as being prudent and efficient responses to address customer service needs.

5.4 Our proposal

Table 5 below summarises the proposed expenditure in relation to maintaining a reliable, resilient and safe network, in comparison to our Draft Proposal.

Table 5. Our proposal

Торіс	Proposal	Capital expenditure and new operating expenditure		
		Draft Proposal	Regulatory Proposal	
Reliability and Bushfire Safety	Invest in replacing deteriorating assets to maintain the current safety and geographic regional reliability levels of the network.	\$1079.0 Million Capex (5 years)	\$1092.2 Million Capex (5 years)	
	Invest in targeted augmentation programs to:			
	 reduce the risk of bushfire (where economic) and minimise the impact of public safety power shutoffs; 			
	 restore the reliability of the CBD to regulated reliability target; and 			
	 improve regional reliability, low reliability feeders and rural long feeder supply restoration. 			
Asset	Invest in next stage to deliver network investment more efficiently.	\$34.9 Million Capex (5 years)	\$34.9 Million Capex (5 years)	
Transformation Program		\$2.3 Million Opex p.a.	\$2.3 Million Opex p.a.	
		Offset by \$30 Million Capex (5 years) efficiency adjustment for network ex-penditure	Offset by \$45 Million Capex (5 years) efficiency adjustment for network expenditure	
Vegetation management	No new undergrounding program nor new expenditure for woody weed and sapling removal.	\$0	\$0	
Security of supply capacity	Investment to maintain Security of supply capacity in light of increased demand.	\$242.0 Million Capex (5 years)	\$240.9 Million Capex (5 years)	
Network resilience	Invest in new mobile generators to reduce impact of long duration outages for regional/ remote customers.	\$16.8 Million Capex (5 years)	\$8.2 Million Capex (5 years)	
	Community resilience fund component included in new 'Innovation Fund'.			

Торіс	Proposal	Capital expenditure and new operating expenditure		
		Draft Proposal	Regulatory Proposal	
ICT Cyber	A risk-prioritised approach to	\$2.4 Million Capex (5 years)	\$3.0 Million Capex (5 years)	
security uplift	face of increasing cyber threats.	\$13.9 Million Opex p.a.	\$13.0 Million Opex p.a.	
Supporting	Expenditure on supporting physical	\$36.8 Million Capex (5 years)	\$27.6 Million Capex (5 years)	
the network expenditure uplift	and labour resources (IT, property, fleet, corporate services) driven by our proposed uplift in network capital.	\$5.2 Million Opex p.a.	\$3.6 Million Opex p.a.	
Property assets	Refurbishing, renewing and rebuilding properties to address deteriorating condition, capacity limitations and opportunities for activity consolidation.	\$112.3 Million Capex (5 years)	\$113.6 Million Capex (5 years)	
Other Expenditure	Expenditures on programs and projects that were not selected	\$108.0 Million other Augex (5 years)	\$101.4 Million other Augex (5 years)	
related to enabling a reliable, resilient and safe network	for specific engagement under a desire to 'focus on what matters' most to customers (noting all costs were included in the total cost stack shown at each engagement stage).	\$135.1 Million other Fleet Capex (5 years)	\$131.7 Million other Fleet Capex (5 years)	
Total		Repex - \$930.3 Million	Repex - \$936.4 Million	
related to		Augex - \$515.4 Million	Augex - \$506.3 Million	
enabling a reliable, resilient and safe network		Property and Fleet - \$281.4 Million	Property and Fleet - \$270.7 Million	
		IT (A&W, Cyber) - \$40.1 Million Capex	IT (A&W, Cyber) - \$40.0 Million Capex	
		New Opex \$21.5 Million p.a.	New Opex \$18.9 Million p.a.	



Heather working in her home office

6. Customer experience, choice and empowerment

Responding to customers' desire for improved information and more responsive, accessible services



Desire for more timely, accurate and personalised online services

Replacing multiple legacy customer facing solutions with a consolidated, secure and fit for purpose solution

\$21 Million Capex and \$7 Million Opex p.a. ICT expenditure

Outcomes for customers:

- More accurate and timely outage information
- Accessible and seamless online experiences
- Cyber risk and customer data will be securely managed
- Real-time solar and network constraint information will be available

New Customer Service Incentive Scheme to improve customer experience

New scheme to incentivise:

- resolving customer enquiries on the first customer contact
- providing more timely information on outage restoration times

Flexible connections options enabling increased customer energy resources

Connections Policy changes to cater for firm and flexible load connection services and for flexible generation connection services to support a two-way network

Responding to feedback and key changes since our Draft Proposal

Since our Draft Proposal we have determined that more of the ICT associated with delivering more timely accurate and personalised online services will be sourced through Cloud Software-as-a-Service, reducing ICT Capex by \$17 million and increasing Opex by \$4 million per annum.

In addition, an Australian Energy Market Commission Rule change process has commenced to accelerate the roll out of smart meters to ensure all customers have a smart meter installed by 2030 and can access the benefits of smart meters sooner. As a result we will incur an additional \$5 million in operating expenditure over five years to manage the increased amount of interval data associated with the accelerated roll-out and have now included that amount in our Proposal. There will also be costs associated with the legacy meter reclassification as outlined in Section 12 in accordance with the AER's Guidance note. In response to feedback on our Draft Proposal, we also explored whether additional measures could be incorporated into our proposed Customer Service Incentive Scheme. However, the data that would be required to include these additional measures is not currently collected and doing so would incur material cost, which we don't consider customers would support. In this Proposal we are therefore retaining the CSIS parameters as outlined in the Draft Proposal.

Since our Draft Proposal we have also determined that we cannot offer firm generation connection services as we cannot guarantee sufficient capacity in the network at all times. The Connections Policy has been updated to reflect this.

Our customers have more options than ever before to meet their electricity needs, and they have told us that they are becoming more reliant on uninterrupted power supply. More flexible working arrangements, such as increased working from home, are contributing to this sentiment. Additionally, changes in technology and the rapid uptake of Customer Energy Resources (CER) such as solar and batteries are also fundamentally transforming the way customers use energy and want to interact with us.

This increasing reliance on electricity and our customers' need for accurate information about their power supply is reflected in the changing way customers communicate with us and their expectations of our services, which people are accessing at increasing rates. For example, in 2023, SA Power Networks:

- sent approximately 8.4 million text messages related to power outages.
- received 7.8 million page views and 1.9 million visits to the website to report or view power outages, amongst other page visits.

- > processed 21,125 requests for new, altered or abolished connections.
- conducted approximately
 3.4 million customer electricity
 meter reads (and sent 259,000 text
 messages related to these visits).
- answered over 270,000 phone calls.

6.1 Key opportunities and challenges

6.1.1 Customer expectations have evolved – there is a need for timely and accurate information

In addition to the energy transition underway and the increasing reliance on uninterrupted power - or accurate information to plan for outages – advancements in technology in other sectors continue to drive expectations in terms of customer service. Through extensive customer research conducted in late

2021, involving over 400 hours of qualitative and quantitative research with more than 1,200 people, we heard our customers expect great digital experiences, with many expecting personalised and on-demand services to be available at all times. Electricity reliability, safety, and affordability remain key concerns

for customers, but we also heard the quality of the service we provide to customers really matters to them.

Put simply, our customers have told us that how we have done things in the past is no match for what they want from us now, and into the future.

6.1.2 Delivering great service outcomes for customers requires a focus on digital capabilities and process efficiencies

While SA Power Networks has historically invested in systems and technology to deliver a reasonable level of online and SMS services to customers, these services have not been improved in many years. The current process and systems in place to manage customer services are inefficient legacy systems that are not designed to and cannot support the demand for fast, seamless, and selfservice capabilities which are being increasingly sought by our customers. Data shows that demand for online services is increasing year on year.

Additionally, a number of our digital services currently do not comply with modern accessibility standards, meaning that our services do not adequately support those customers who rely on assistive technologies or who face language barriers. Many of our outdated technologies are also not supportive of mobile interfaces, resulting in frustrating experiences for an ever-increasing number of customers preferencing mobile devices. Our ageing technology architecture, underpinned by outdated practices, is also exposing us to an increased cyber security risk.



Figure 10. Key customer electronic interaction statistics





Source: SA Power Networks data

Note the decrease in 2023 statistics is related to the lower number of weather events experienced in that year compared to the other years.

Engagement on this theme explored a range of options and scenarios for investment in digital channels to improve experiences and provide quicker, more accurate and comprehensive services for customers.

The feedback from customers, both through the research and through all stages of the engagement program,

confirmed that improving customer experience was important, and that customers are looking for us to enable new services and give them greater flexibility and choice in how they interact with us.

6.2 Options discussed with stakeholders

In our Draft Proposal we noted the feedback in earlier stages of engagement helped shape the four key topics presented as part of our Focused Conversations program:

- Personalised and on-demand services
- > Energy Advisory service
- Customer Service Measures and Incentives
- Connection Policy, Procedure and charges

Through the Focused Conversations workshops we discussed alternative investment options for the 2025-30 period for personalised and on-demand services and a new Energy Advisory Service.

Recommendations from these workshops and other Focused Conversation topics were then deliberated on by our People's Panel, whose recommendations underpinned the positions we propose in our Regulatory Proposal.

6.3 Feedback and how this shaped our proposal

In our Draft Proposal we noted that through our engagement process we heard:

- Customers are seeking access to more accurate and timely information and want greater levels of self-service through improved digital channels, however there were differing views on the appropriate levels of expenditure (and customer price impact) to deliver desired improvements.
- Simple information and impartial advice for customers is needed given complexity of industry. However views differed as to whether it was the role of SA Power Networks to provide this service.

These views shaped our Draft Proposal. We published our Draft Proposal in July 2023 and invited further feedback for a period of five weeks. We received 25 submissions from organisations and individuals. For customer experience, choice and empowerment, there was support for investments to improve customer experience, and majority support for the proposed Customer Incentive Service Scheme (CSIS) with a recommendation that additional measures be added.

In response to general concerns around energy affordability, we reduced the scope for customer experience, choice and empowerment for the Draft Proposal and reduced forecast expenditures for personalised and on demand services by around \$10 million. Since our Draft Proposal we have determined that more of the ICT associated with delivering more timely accurate and personalised online services will be sourced through Cloud Software-as-a-Service, reducing ICT Capex by \$17 million and increasing Opex by \$4 million per annum.

Since our Draft Proposal was published, an Australian Energy Market Commission Rule change process has commenced which,

amongst other things will make distributors responsible for developing a 'legacy meter replacement plan' to ensure all customers have a smart meter installed by 2030. The accelerated roll-out of smart metering will enable customers to access the benefits of smart meters sooner. Retailers will be responsible for installing smart meters at these sites and we forecast will incur an additional \$5 million over five years to manage the increased amount of interval data associated with the accelerated rollout. Our Regulatory Proposal now includes recovery of this amount as a new Opex step change.

On that basis we are proposing no material change in scope for customer experience, choice and empowerment from that set out in the Draft Proposal but we have refined our forecasts for personalised and on demand services. Table 6 summarises the expenditure levels now proposed in our Regulatory Proposal. We have prepared an economic business case for this plan and forecast expenditure.

6.4 Our proposal

In line with the final People's Panel recommendations and feedback received on our Draft Proposal,

no expenditure is proposed for an Energy Advisory Service. The proposed capital and operating expenditure for the personalised and on-demand services initiative is summarised in Table 6 below.

Table 6. Our proposal

Торіс	Proposal	Capital expenditure and new operating expenditure		
		Draft Proposal	Regulatory Proposal	
Personalised and on- demand services	Replace multiple legacy ICT systems with a consolidated, secure and fit for purpose solution.	\$38.2 Million Capex (5 years) \$2.9 Million Opex p.a.	\$20.9 Million Capex (5 years) \$6.9 Million Opex p.a.	
Metering	Increased operating costs to manage higher data volumes associated with more interval meters		\$1.0 Million Opex p.a.	

6.5 Customer service measures and incentives

Customer expectations are changing. Our Customers have told us that they value timely and accurate power outage information and that they are seeking us to resolve their enquiries on first contact.

In response to these customer priorities, we are proposing to introduce a new Customer Service Incentive Scheme (CSIS) for the 2025-30 period. We have also been engaging closely with the jurisdictional service regulator, ESCoSA, on the customer service measures contained in the Service Standard Framework for the 2025-30 period. Current measures for both frameworks centre around the response time to answer telephone calls.

We believe these are no longer reflective of customer service priorities or the changing ways that customers interact with us, such as the increasing digital communication channels. Current measures also do not consider the quality of communication or information provided to customers.

We presented and discussed with customers and stakeholders a range of options that could be included as part of a CSIS or a refreshed regulated customer service measure.

Options included regular customer satisfaction tracking, first call resolution, and new social media response times. Feedback on this topic confirmed that any new measures should consist of 'hard' data measures rather than subjective measures (such as customer satisfaction tracking) and should allow timely action and response by SA Power Networks.

Table 7 outlines the measures we have proposed for the CSIS.

Table 7. Customer Service Incentive Scheme measures under consideration

Торіс	Proposal	Current performance	Proposed target	Proposed weighting
First call resolution – General enquiries phone line	A greater number of customer general enquiry calls would be resolved on the first customer contact, avoiding delays in response time or the need to follow up.	54%	54%	30%
Timely restoration status updates	More timely information would be shared with customers via the website and SMS regarding the progress we are making restoring their unplanned outage.	59%	59%	70%

In its submission on our Draft Proposal, the Energy and Water Ombudsman (EWOSA) suggested more indicators for customer responsiveness and satisfaction are necessary. EWOSA suggested additional indicators could include the timeliness of resolving customer complaints that are not resolved during the first call, the responsiveness to queries submitted via email or through the website and delays in connections. They also considered that the time customers wait for their telephone call to be answered remains an important indicator of customer service.

In response to this feedback, we explored whether incorporating these additional new measures would be feasible. However we do not have existing data for these measures and developing the necessary processes to commence collecting this data would incur an unsupported additional cost. This is something we could consider in the next period for future incentive schemes and we will continue to engage with EWOSA about evolving our customer service measures to ensure continued alignment with customer expectations.

However for the 2025-30 period, we are proposing to retain the measures and weightings as outlined in Table 7.

6.6 Connection policy, procedure and charges

We discussed with customers and stakeholders, including members of our Connections Working Group, proposed changes for the 2025-30 Connections Policy. Stakeholders supported changes to the Policy that will introduce firm and flexible load and/or export pricing methodology for new connection services to support a two-way network. This has been updated in response to increased uptake of distributed energy technology by customers such as solar, batteries and electric vehicles. Specific updates to the Policy include:

- Lower upfront costs for customers selecting a flexible option (where applicable).
- A 'Firm Capacity' option for load customers, where capacity is reserved for the customer (including in demand/constraint forecasting) but not guaranteed under certain network operational scenarios.
- A 'Flex' option for certain types of customers where the customer has agreed to dynamically adjust their import or export power profile to operate within network operating limits therefore may not be charged an augmentation cost.

 A 'Load plus Generation' pricing option to ensure there is no double counting for those choosing a load and generation connection (such as Battery Energy Storage Systems, Load and solar combinations).

Our Connections Working Group supported these changes when we discussed them in November 2023.



People's Panel members Brandon and David



Solar panels on the roof of Andrew and Jessica's home

7. Enabling clean energy

Supporting continued uptake of customer energy resources and unlocking future value for our State

World leading Customer Energy Resources uptake



Increased capacity for solar

Network upgrades to keep solar curtailment below 5% for most customers

KEY INVESTMENTS



\$93 Million CER Capex (See Our Regulatory Proposal at a glance, page 10)

Electrification driving peak demand



Encouraging flexible loads

New services to enable and reward load flexibility and smart EV charging Decarbonisation of our fleet



Transitioning our fleet to EVs

A gradual, cost-neutral approach, phasing in EVs as it becomes economic to do so

Responding to feedback and key changes since our Draft Proposal

In submissions on our Draft Proposal there were high levels of support for our proposals to enable clean energy. Since then we have further refined our modelling of network hosting capacity and low voltage network augmentation costs. We have also reviewed and refined ICT cost estimates for supporting systems and included new 'network visibility' program costs to leverage the faster roll out of smart metering discussed in the previous section. The result is a net \$11 million decrease to enabling clean energy in 2025-30. South Australia is leading the world in the transition to renewable energy. More than one in three customers have installed solar, more than anywhere else in the world, and we continue to lead the nation in the uptake of home batteries. We also have a growing number of large-scale wind and solar farms across the state, harnessing South Australia's natural abundance of renewable resources.

In 2022, more than 68% of South Australia's electricity needs were already met by renewable energy. By 2030, the end of our next regulatory period, the South Australian grid will have reached net-100% renewable generation and South Australia will be a significant exporter of renewable energy to the rest of the nation. More than 60% of homes and businesses will have rooftop solar and electric vehicles will be a common sight on South Australia's roads.

Figure 12. South Australian region electricity demand met by renewables



Source: SA Power Networks analysis of AEMO data

Over the coming decade, clean, reliable, affordable electricity will become a key foundation of economic growth and prosperity in South Australia – reducing cost of living for customers, improving competitiveness of existing businesses and attracting new energy-intensive industries and those seeking to reduce their carbon footprint. Our distribution network plays a central role in enabling this transition. As rooftop solar continues to make up an ever larger portion of the state's generation mix, the state's energy system becomes increasingly reliant on SA Power Networks' electricity network to supply and redistribute this energy. We are at the forefront nationally in our efforts to adapt the network to operate in a 100% renewable energy future, with initiatives pioneered in South Australia such as 'solar sponge' tariffs, home battery 'virtual power plants' and 'flexible export' connections for solar now being adopted across the NEM.

Over the 2025-30 period we will need to substantially complete the transition to a truly 'two-way' distribution network able to support a 100% renewable electricity system.

7.1 Key opportunities and challenges

7.1.1 The continued growth of rooftop solar

There are currently 350,000 homes and businesses in South Australia that have rooftop solar, with a combined capacity of 2.5GW, making rooftop solar by far the biggest generator in the state. During spring and summer there are times when more than 90% of the entire electricity needs of the state are supplied by rooftop solar alone.

In October 2021 the net load on our distribution network fell below zero for the first time and we now regularly experience reverse power flows across large areas of the network during sunny conditions. No other large-scale electricity network in the world is operating in this way.





We have made considerable progress in the last five years in adapting our network to accommodate higher levels of solar. We have invested in improved voltage management across the network and we have successfully implemented Australia's first 'flexible exports' connection scheme for rooftop solar, a technology that takes advantage of the capabilities of modern smart solar inverters to dramatically increase the amount of solar we can connect to the network. As rooftop solar continues to grow in the 2025-30 period, however, reverse power flows during mild, sunny weather will exceed the capacity of our network assets across many parts of the network, particularly in the low voltage (LV) network. When this occurs, we need to limit customers' solar output in the middle of the day to stop the network becoming overloaded. This 'solar curtailment' reduces the feed-in tariff benefits for solar customers and reduces the amount of low-cost green energy in the system for others.

Today this happens in certain areas only, and for less than two percent of the time. It will become increasingly common in future as solar uptake grows unless we invest in adding more network capacity to meet growing demand for service. The main component of our proposed Customer Energy Resources (CER) integration expenditure is a program of targeted investments to add additional capacity in congested areas so that solar customers can continue to export, or feed in, their surplus energy to the distribution network.

7.1.2 Batteries and Virtual Power Plants – a more dynamic energy system

Batteries, large and small, are now an integral part of South Australia's electricity system. In addition to very large-scale batteries, like the 150MW Hornsdale Power Reserve (the world's first 'big battery'), which connect to ElectraNet's transmission network, we will continue to see growing numbers of mid-sized grid-connected batteries connecting to our distribution network. This will include the community batteries planned to be rolled out in South Australia as part of the Commonwealth Government's Community Batteries for household Solar scheme.

There are also now approximately 40,000 small-scale batteries in homes and businesses in South Australia, more than any other state. More than a third of these are enrolled in Virtual Power Plant (VPP) schemes which allow them to be centrally controlled and operated, enabling customers to earn money by using their batteries to trade in the wholesale energy market and to help stabilise the power system.

While batteries help soak up surplus daytime solar and reduce evening peak demand, the ability of batteries and virtual power

plants to switch between exporting and importing large amounts of energy in a very dynamic manner creates unique challenges for the distribution network. Since 2019 we have been developing and trialling the new systems, processes and services we need to support higher volumes of batteries and VPPs, to manage impacts on the network at least cost, and to help maximise the opportunities for customers, communities and VPPs to create value. Our Proposal includes expenditure to further develop and scale these capabilities.

7.1.3 Electric vehicles, electrification and smarter homes

Electric vehicle uptake is poised to accelerate in Australia with more affordable models becoming available, efforts underway to roll out public charging infrastructure,

including the South Australian Government's state-wide charging network, and national policy reforms driven by the Commonwealth Government's new Electric Vehicle Strategy. By 2030 we expect to see around 200,000 EVs on the road in South Australia.



Figure 14. Electric vehicle uptake in South Australia

Source: AEMO IASR 3.5/ESOO 2022

The transition to electric vehicles is part of a broader trend that will see homes and businesses increasingly move towards electrification in

Figure 15. The future smart electric home

the 2025-30 period, replacing gas appliances with electric to access lower costs and reduce emissions. The shift to EVs and increasing electrification will see the volume of energy delivered through our network increase by around 20% by 2030 as compared to today.

Like EVs, electric hot water systems and other appliances are becoming increasingly 'smart', able to be managed and scheduled to take advantage of rooftop solar and times when grid electricity is cheapest. This presents a tremendous opportunity for the distribution network and our customers. By putting in place systems and processes to enable customers to take advantage of smart EV charging and the future smart, electrified home, as we have for rooftop solar with flexible exports, we can keep much of this new load out of peak times, soak up excess daytime solar, and deliver much more energy through our existing assets. This will reduce costs to all in the long term.



Figure 16. Potential load shifting options

With demand-side flexibility we can help optimise energy use in the home, increase asset utilisation and decrease costs for all

solar

7.2 Options discussed with stakeholders

Through a series of three Energy Transition Focused Conversations we discussed options for investment in the 2025-30 period in three topic areas:

- Enabling distributed energy how much should we invest in additional export capacity?
- > Encouraging flexible loads.
- > Transitioning our own vehicle fleet to EVs.

Recommendations from these and all other Focused Conversation topics were then deliberated on by our People's Panel, who considered and recommended a total investment package which resulted in an overall service-price outcome. The People's Panel recommendations underpinned the positions we proposed in our Draft Proposal.

7.3 Feedback and how this has shaped our Proposal

In our Draft Proposal we noted we heard the following clear recurring theme in relation to our role in South Australia's energy transition:

- Customers strongly support investment in modernising the network to support the transition to a clean energy future in South Australia.
- It is important to ensure no one is left behind in the energy transition, particularly vulnerable customers and those who aren't able to access solar and other Customer Energy Resources of their own.
- Customers strongly supported the transition to EVs and felt it was important that our network connection process supports the rollout of public charging infrastructure in South Australia.
- Customers wanted to be able to make the most of their own smart and flexible resources, but found the energy system complex and hard to navigate.

These views shaped our Draft Proposal. We published our Draft Proposal in July 2023 and invited further feedback for a period of five weeks. We received 25 submissions from organisations and individuals. For enabling clean energy, our proposed investments to support the energy transition, adoption of flexible loads and our approach to transitioning our fleet remained supported. Export tariffs (discussed later in this Overview document) were generally supported by stakeholders but not by some residential customers or Business SA.

Since our Draft Proposal, we have included new costs (\$9 million Capex and \$7 million Opex p.a.) for a 'network visibility' program. This program will support managing higher volumes of data from the accelerated roll-out of smart meters, consequent to the AEMC metering framework review discussed in Section 6.3 above. It will support the development of analytics to determine actual hosting capacity, managing network demand and improving network voltage management. We have further refined our modelling of network hosting capacity forecasts and the cost of supporting systems, in a number of areas which has reduced the required forecast capital expenditure.

We have also reduced the forecast number of vehicles to economically transition our fleet, reducing Fleet Capex in this area.

These and other changes summarised in Table 8 result in a net \$11 million decrease in capital investment to enable clean energy in 2025-30. We have prepared business cases to support all these plans and forecast expenditure as being prudent and efficient responses to address customer service and compliance needs.

7.4 Our proposal

Table 8 notes the expenditure levels now proposed in our Regulatory Proposal in comparison to our Draft Proposal. Forecast CER capital expenditure in this 2025-30 Regulatory Proposal is \$93 million. This is a 121% increase on the \$42 million we are spending in 2020-25 to develop systems and capabilities to enable flexible exports (DOEs) for solar customers. This capability is now in place and forms the foundation of our CER integration approach going forward.

Table 8. Our proposal

Topic Proposal Capital expenditure and new ope			v operating expenditure
		Draft Proposal	Regulatory Proposal
Enabling distributed energy – export capacity	Investments to maintain a target service level for export customers across the network. Various options were considered and stakeholders favoured a target service level of 95% for most customers. This means that most solar customers can expect to be able to export all their surplus energy to the distribution network 95% of the time, but may have their solar output reduced 5% of the time, when the network is congested.	\$77.0 Million Capex (5 years) \$0.8 Million Opex p.a.	\$70.1 Million Capex (5 years) \$0.9 Million Opex p.a.
Encouraging flexible loads	 Develop the following services: new 'dynamic operating envelope' flexible load connection capabilities for residential and business customers. tariff incentives for smart appliances. flexible load connection options for large loads e.g. highway EV charger sites or community batteries. data publication services for customers (network capacity). 	\$15.0 Million Capex (5 years)	\$7.7 Million Capex (5 years)
Network Visibility	Acquiring and processing voltage and other power quality data now expected to be available from a faster rollout of smart metering, to efficiently manage network operations, increase CER hosting capacity and improve safety	Not included in Draft Proposal	\$9.1 Million Capex (5 years) \$1.4 Million Opex p.a.

Торіс	Proposal	Capital expenditure and new operating expenditure		
		Draft Proposal	Regulatory Proposal	
CER Compliance	Working with the solar industry to improve solar inverter compliance to technical standards and improve export service performance	\$6.1 Million Capex (5 years) \$0.9 Million Opex p.a.	\$5.7 Million Capex (5 years) \$0.5 Million Opex p.a.	
Transitioning our vehicle fleet to EVs	Take a cost-neutral approach to transitioning our vehicle fleet to EVs where we will only replace a petrol or diesel vehicle with an EV if it costs the same or less than the vehicle being replaced.	\$8.4 Million Capex (5 years) \$-0.3 Million Opex p.a.	\$2.9 Million Capex (5 years) \$-0.3 Million Opex p.a.	
Total Expenditure		CER \$98.1 Million Capex (5 years) Fleet \$8.4 Million Capex (5 years) \$1.4 Million Opex p.a.	CER \$92.7 Million Capex (5 years) Fleet \$2.9 Million Capex (5 years) \$2.5 Million Opex p.a.	



People's Panel member David



lan working from his home office

8. Affordable and equitable energy supply

Ensuring distribution services remain afforable for all South Australians



Ongoing challenge and refinement of costs

- Where possible, we have deferred or optimised expenditure
- We have increased the capital productivity gains delivered by the Assets and Work program
- We will absorb the South Australian Government's
 \$1 Million increase in annual distribution licence fees
- We are proposing a nonstandard revenue smoothing profile to minimise short-term cost pressures for customers

Knock before you disconnect

Program to support customers avoiding disconnections

Seek to expand internally; other costs to be recovered from retailers

Vulnerable Customer Assistance Program

Approximately \$1.5 Million of support for vulnerable customers to be funded internally

Customer guidance on affordability

Customers recognised the opportunity presented by:

- SA Government FiT scheme expiry in 2028
- lower depreciation allowances
- energy transition and electrification

Resulting in proposed expenditure largely only to maintain existing services and service levels, with modest expenditure for targeted improvements only where significant customer value and support

Our advocacy role

Customers encouraged SA Power Networks to continue to advocate for improved outcomes for customers experiencing vulnerability

Affordability as a continuous lens

Customers experiencing vulnerability and their advocates were well represented at every engagement stage

Customers were presented with the total bill impacts of their recommendations at every stage

Overall service/price balance was deliberated on and agreed by the representative People's Panel

Solar export tariff

Proposed introduction of a solar export tariff to reduce costs for customers who don't have, or can't access, solar

Responding to feedback and key changes since our Draft Proposal

Affordability concerns and asking SA Power Networks to do more for vulnerable customers was a strong theme in a number of submissions on our Draft Proposal. Recognising this we are proposing to develop a new 'Vulnerable Customer Assistance Program' but will look to fund this program internally by redirecting existing sponsorship and partnerships funding. We are also now proposing to progress the 'Knock Before You Disconnect' program (which had been proposed in our Draft Proposal) without seeking additional funding for this initiative. Following the advice of our People's Panel regarding lobbying the State Government for a new small compensation claims scheme, and as a result of these ongoing discussions, we are also exploring a new small compensation claims regime with relevant parties. We forecast this will require additional funding of \$4 million p.a. and this amount has been included as new Opex in this Regulatory Proposal.

Access to essential services, such as electricity, is necessary to sustain the health and wellbeing of our community. Currently, affordability of energy and the rising cost of living is an issue affecting many Australians and is a topic of considerable national and state debate. The affordability of energy is an issue across Australia and is influenced by a range of factors. While our charges are now around 25% of the typical average residential electricity bill, SA Power Networks has an important role to play in ensuring electricity remains affordable.

Given current challenges, ensuring an Affordable and Equitable Energy Supply for our customers was a key overarching theme of our engagement program and overall approach to the 2025-30 Regulatory Proposal. We were strongly encouraged by stakeholders to ensure the community voice was at the forefront of our core decisionmaking about overall customer price impacts across all expenditure areas and tariff designs proposed in this Draft Proposal. At the same time, under this theme we also discussed with stakeholders a range of options, programs and initiatives designed to support customers who are in vulnerable circumstances.

This engagement theme also allowed us to continue to discuss and refine the current initiatives we are delivering as part of our Vulnerable Customer Strategy, which was developed in conjunction with our Community Reference Group in 2019.

8.1 Key opportunities and challenges

We know that for many customers, a sizeable part of their income is spent on energy, especially for people from vulnerable and diverse backgrounds. For some customers, electricity costs account for five percent¹ or more of their disposable income. Similarly, for energy-intensive businesses, energy can make up a significant component of their costs. Our engagement under this theme discussed options for delivering an affordable and equitable electricity supply for all our customers, while ensuring adequate investment to support customers' desired service levels.

We are very aware of our role in managing an essential community asset for the long term. In that context we have been conscious that we should balance the needs and demands of customers now with those of the customers of the future, which includes not passing on today's costs to future generations.

We also acknowledge that while customers can significantly reduce their costs through new technologies such as solar, batteries and electric vehicles, or more efficient appliances, many of our customers do not have the means or opportunity to invest in this cost-saving technology.

Balancing desired service levels with an affordable electricity price, as well as how we could support more customers in vulnerable circumstances, were some of the key areas we discussed with stakeholders and customers under this topic.

In particular we wanted to understand:

- What can/should SA Power Networks provide to help support customers in vulnerable circumstances?
- What is the role of distribution network service providers?
- > Where should we focus our efforts?
- > What level of service would our customers support?

1) Source: AER 2023, Annual Retail Market Report 2022-23 (aer.gov.au) page 51, figure 2.19 – electricity costs for low and average-income households – South Australia.

8.2 Options discussed with stakeholders

Participants at our Broad and Diverse workshops discussed and identified a range of possible programs that SA Power Networks could invest in to improve equity and support vulnerable customers. The initiatives discussed, in order of consumer preference, were:

- > Solar for Renters program
- Vulnerable Customer Assistance Program
- > Life support customer changes
- > An 'Essentials' network tariff
- Provision of education/ information/advice

• A review of the outage and damages claims scheme

Following the feedback received from the Broad and Diverse workshops, further engagement involved:

- Focused Conversation workshops that explored how we could support vulnerable customers and understand what would work in South Australia.
- 13 possible initiatives explored in depth by external stakeholders and SA Power Networks staff, focusing on initiatives that would bring most value to customers.

Throughout all stages of the engagement program we worked closely with our vulnerable customer advocates to ensure the views of customers in vulnerable circumstances were given a strong voice throughout these engagement activities.

Recommendations from these and all other the Focused Conversation topics were then deliberated on by our People's Panel, who considered and recommended a total investment package which resulted in an overall price-service outcome. The People's Panel recommendations underpinned the positions we proposed in our Draft Proposal.

8.3 Feedback and how this shaped our proposal

In our Draft Proposal we noted some very clear recurring themes in the feedback we received in relation to equity, vulnerable customers and affordability:

- While there was strong community support for SA Power Networks playing a part in improving equity and assisting customers in vulnerable circumstances, there were mixed views about the role we should play, as opposed to the role of Government, consumer advocacy groups or retailers.
- We were encouraged to adopt a strong advocacy position to support people in vulnerable circumstances.
- All customers should have access to an affordable and reliable supply of electricity. SA Power Networks' priority should be ensuring people stay connected to supply.

- It is important to ensure no one is left behind in the energy transition, and all people can access the benefits of solar and other technologies to help reduce energy costs.
- There is a need to develop programs that provide long-term support that are more than quick fix or band-aid solutions.
- Education and information are crucial as the electricity industry is complex and hard to navigate.

These views shaped our Draft Proposal published in July last year. Of the initiatives considered, only the Knock before you disconnect program received wide support and was included in our Draft Proposal. The Vulnerable Customer Assistance Program was supported provided it was funded 50/50 by SA Power Networks. We did not include a Vulnerable Customer Assistance Program in our Draft Proposal as we could not establish an economic business case to support this program.

These views shaped our Draft Proposal. We published our Draft Proposal in July 2023 and invited further feedback for a period of five weeks. We received 25 submissions from organisations and individuals. For affordable and equitable energy supply, there was support for expanding the Knock Before You Disconnect program. There was also support for the Innovation Fund although one stakeholder wanted us to better explain the long term efficiency improvements that would result (which we have now done in our business case).

The majority of submissions were satisfied that the Draft Proposal appropriately balanced the overall service/price trade-off. However, affordability and financially supporting vulnerable customers remains a concern for many stakeholders including SACOSS and EWOSA.

Listening to this feedback, we have now decided to progress a new Vulnerable Customer Assistance Program in 2025-30. We will fund this program internally through redirecting funding available in our existing Sponsorships and grants program and are not seeking any new funding as part of our 2025-30 Regulatory Proposal.

We are also now planning to expand the Knock Before You Disconnect program in 2025-30 within existing funding allowances. Where possible we will absorb any new or

8.4 Our proposal

Table 9 below outlines the expenditure now included in our Regulatory Proposal in comparison to our Draft Proposal.

Table 9. Our proposal

incremental costs, or engage with retailers to encourage them to cover costs as they apply to their customers.

We have also refined our expenditure proposals in a number of areas through internal challenge, deferring or optimising spend and increased the capital productivity gains assumed to be delivered by our Assets and Work program.

Since our Draft Proposal, the South Australian Government has advised it will increase our annual licence fees by \$1 million per annum. We will absorb this cost increase internally and have not included this additional cost in our forecasts in this Proposal. Following the advice of the People's Panel, we have also been exploring a new small compensation claims regime with relevant parties. This will increase the amount of claims and damages that will have to be paid by SA Power Networks, forecast at \$20 million over the five year period.

We expect this will be a new obligation and have therefore included funding for this in this Regulatory Proposal.

In response to stakeholder and customer feedback, in our Proposal we are also now proposing a nonstandard revenue smoothing profile to minimise short-term cost pressures on customers. This is discussed further in Section 10.

Торіс	Proposal	Capital expenditure and new operating expenditure		
		Draft Proposal	Regulatory Proposal	
Equity and Vulnerable Customers	'Knock Before You Disconnect' program to make site visit pre-disconnection part of business as usual.	\$0.3 Million Opex p.a.	\$0 Program will be expanded without further customer funding	
Vulnerable Customer Assistance Program	 A program to assist vulnerable customers that may include: Small grants for customers to improve energy efficiency and other measures A new SA Power Networks van to support the community during periods of extended outages 	Not included in Draft Proposal	\$0 Program will be developed internally	
Claims and Damages regime	New small compensation claims regime	Not included in Draft Proposal	\$4.0 Million Opex p.a.	

We will work collaboratively with our Community Reference Group to implement the Vulnerable Customer Assistance Program and utilise our sponsorship and community grant funding to support those more vulnerable in our community. In addition, we also recognise that we have a significant advocacy role to play publicly to governments, and within our industry, for sensible public policy measures which can improve energy affordability in the short and long-term.

In 2023 SA Power Networks also became a full signatory of the Energy Charter, which is a voluntary coalition of businesses across the energy supply chain who are committed to working together to deliver better outcomes for customers and communities. A key principle of the Energy Charter is affordability and supporting vulnerable customers, further sharpening our focus on this important topic. We are also a signatory to the Energy Charter's Cost of Living Statement of Support, which commits us to a variety of support measures for people experiencing vulnerability due to the impact of cost of living pressures.



People's Panel member Alex with SA Power Networks' subject matter expert Caprice



SA Power Networks' subject matter expert Alex and Community Advisory Board Deputy Chair Kelvin

9. Our expenditures have been subject to significant challenge

To ensure that our totex forecast for the 2025-30 period is aligned to achieve the outcomes our customers expect, our forecast was developed via multiple tiers of internal and external challenge (summarised in Figure 17). The forecasts in this Regulatory Proposal are the result of this approach.



Figure 17. Tiers of internal and external challenge

TIER 1 Customer expectations

Customers shaped service and price outcomes

- > Key engagement themes and issues identified Broad and Diverse engagement
- > Outcomes for individual service areas explored Focused Conversations
- Total service / price outcome balanced People's Panel
- Currency / affirmation of recommendations submissions on Draft Proposal

TIER 2 Internal challenge

Multiple expenditure forecast iterations

- Forecasts progressively refined and tested by Executive Steering Committee
- **•** Forecast iterations transparently presented to stakeholders
- External technical reviews of Augex, Repex, CER integration
- Commitments on productivity included in the proposed expenditure

TIER 3 Forecast selection

Applied conservatism to forecasting

- Middle scenarios adopted for key input forecasts
- Climate change expectations used only for sensitivity analysis
- Used willingness to pay survey primarily as a cross-check on reasonableness
- Applied probilistic analysis to defer capacity upgrades triggered by our Distribution Network Planning Criteria
- Taken risk through strong efficiency assumptions on asset management improvements
- Sensitivity analyses conducted on all relevant expenditure areas

Options testing

Investment tested for alternative scenarios, options, sensitivities

- Counterfactuals and options analysis on
 all expenditure areas
- Repex tested against AER Repex model

TIER 4 Customer service value analysis

New or improved services valued using customer willingness to pay survey

 Customer preferences for new or improved services objectively valued / monetised via willingness to pay survey Existing services underpinned by customer service risk / benefit analysis

 Value to customers presented by expenditure forecasts determined via customer service risk analysis

Optimisation

Optimisation between asset classes and expenditure categories

 Assessed the most efficient combination of expenditure types to deliver particular service outcomes

9.1 Challenge Tier 1 – Customer expectations

As the key challenge, our forecast was shaped by customers to reflect the service and price outcomes they value:

- Multi-staged engagement
 program conducted a
 comprehensive multi-staged
 engagement program spanning 5
 forecast iterations. This afforded
 customers the opportunity to
 actively participate in shaping
 the service and price outcomes
 derived from our forecast totex.
- Outcome-Focused Engagement - our engagement efforts were concentrated on service and service level outcomes, clearly articulating individual and total expenditure, as well as price impacts. This approach empowered customers to make informed recommendations by understanding the inherent trade-offs. Utilising a scenariobased approach, we progressively refined options based on customer preferences through the various stages of our engagement program, ultimately converging on the recommended forecast we propose.
- Draft Proposal as a final step, we invited submissions on our Draft Proposal, encouraging customers and stakeholders to validate that their recommendations on service outcome preferences remained current, especially given ongoing cost-of-living concerns. Additionally, this step sought confirmation that our proposed means of delivering these preferences remained appropriate in the evolving economic landscape.

9.2 Challenge Tier 2 — Internal challenge

Internal scrutiny and refinement was integral to each forecast iteration, with a dual top-down and bottom-up challenge within our business. This involved:

- Executive Management Reset Steering Committee – our forecast iterations underwent evaluation and approval by our Steering Committee. This included a top-down "sanity-check", offering direction to explore optimisation between initiatives, and testing justifications against the NER.
- Business-wide coordination group – led by our Regulation Team, a business-wide group reviewed the forecasts. This ensured consideration of interactions and opportunities to optimise between expenditure areas, alignment of key forecasting inputs, and adherence to regulatory expectations in methodologies and business cases.
- External Technical Review our forecasts and methodologies underwent external technical review, focusing on key areas such as Augex on reliability and bushfire, Augex capacity, CER integration, and property expenditure. This external scrutiny refined costings and scope, ensuring that customer-preferred outcomes aligned to economic efficiency.
- Top-down productivity commitments – as a further top-down challenge, we made substantial productivity commitments by lowering forecasts below their potential levels. This included taking on more risk through strong assumptions on direct efficiency gains from our proposed Assets and Work ICT investment. We factored these efficiencies into the forecast additional resourcing requirements supporting the increase in network Capex. Additionally, we incorporated

the AER assumption on Opex productivity. Notably, we decided against proposing additional expenditure for certain scope increases resulting from customer preferences (e.g. VCAP and KBYD programs) and governmentmandated increases in our distribution licence fee.

9.3 Challenge Tier 3 – Forecast selection and options testing

We also challenged our business toward downward conservatism in selecting forecasts. Examples include:

> Repex forecast scenario

- choosing a Repex forecast scenario that, while efficient (with benefits of risk avoidance outweighing Repex costs), requires less expenditure than alternative scenarios our analysis deemed economic. We opted against higher cost scenarios, as they did not deliver the service level outcome (maintaining historic reliability by geographic region) and price balance (mindful of general affordability concerns) our customers told us they prefer under the current circumstances.

> Climate change projections

- opting for conservatism by not incorporating climate change projections into forecasts. While projections suggested increasing network risks from more frequent and extreme weather events, we erred on the side of caution. Climate change projections were only used to test the sensitivity and reasonableness of our network expenditure forecasts, primarily based on historic weather patterns.

Network Capacity Augex

- temporarily taking on higher risk by deferring some network capacity Augex triggered by our long-standing Network Planning Criteria. This was accomplished by incorporating probabilistic analysis, addressing affordability concerns prudently and efficiently while monitoring the trajectory of demand increases and the potential for mitigation through flexible load management.

Sensitivity analyses

applied to all relevant
 expenditure areas to consider
 potential variations and impacts.

 Alignment with AEMO scenarios

 aligning all network Repex and Augex on load and CER to middle forecast scenarios developed by the Australian Energy Market Operator (AEMO), ensuring consistency with industry wide projections.

 We also challenged our business across all areas to rigorously test forecasts and initiatives against alternatives (alternative options as well as non-network alternatives):

- developing three scenarios with a base-case counterfactual across all key expenditure areas to engage and determine the service outcomes valued by our customer;
- ensuring that all business cases include a base-case counterfactual (either 'do nothing' or 'businessas-usual') and multiple investment options (where credible) to ascertain the preferred option, and also outline reasons for why some options are deemed noncredible; and
- for relevant asset classes, comparing our network Repex forecasts against the AER's Repex Model.

9.4 Challenge Tier 4 – Customer service value analysis and expenditure optimisation

To enhance our capability in identifying customer service value and risk, we undertook substantial measures to objectively ensure that our forecasts were reasonable and in customers' interests. This included:

- Alignment with AER guidance

 documenting and aligning forecasting methodologies across all areas to AER guidance.
- Bilateral challenge by AER staff

 engaging in extensive bilateral challenge sessions with AER staff on our forecasting methodologies, which influenced our approaches and materially reduced our Repex forecasts.
- Network asset risk analysis – significantly improving our network asset risk analysis, allowing us to objectively quantify, in monetary terms, customer benefits resulting from network Repex and Augex in terms of reliability and safety. This capability enabled us to uniquely configure expenditures to achieve specific target outcomes and provide confidence that our forecasts are not only customersupported but also efficient and prudent.

CER integration modeling

- leading the NEM in modeling capabilities for CER integration, enabling us to precisely quantify customer benefits and assess the effects on service levels from our expenditure forecast on export service.

- Risk Analysis for non-network expenditure – implementing risk analysis for all non-network expenditure, including a comprehensive asset condition/ risk register for property assets. This ensured that quantified risks and customer service benefits are identified for all non-recurrent initiatives, particularly where new or aiming to improve outcomes.
- Willingness to pay survey – surveying willingness to pay (Customer Values Research) across seven key areas to objectively value, in monetary terms, new or improved services recommended by customers. Survey results serve as an additional reference and challenge point, confirming underlying analyses of quantified customer benefits and gauging broader customer support for specific initiatives.
- Probabilistic risk analysis for network capacity – incorporating probabilistic risk analysis to forecasts on network capacity and security, ensuring that investments for contingent events triggered by our network planning criteria are economically justified.

Our enhanced risk analysis capability has also enabled us to explicitly optimise expenditures, including:

- Between Repex Asset Classes

 choosing the most efficient combination of Repex asset classes to achieve targeted service level outcomes, i.e. maintaining reliability by geographic region and safety in aggregate.
- Across expenditure types

 optimising the most efficient combination of Repex and Augex to achieve targeted service level outcomes, particularly for improvements to CBD reliability to comply with service standards (combining cable Repex and feeder automation Augex).

Figure 18 summarises how our total forecast expenditures have been progressively refined throughout our engagement program in response to all tiers of challenge. Opex figures exclude \$14 million of debt raising costs. Capex figures are before \$21 million of Fleet disposals. SA POWER NETWORKS 2025-30 REGULATORY PROPOSAL

Figure 18. Significant refinement through multiple iterations

\$5,147M	\$5,476M	Č 8. 0. 64 84		
	\$2.027 Oney	54,841141	\$4,382M	\$4,372M
\$1,993 Opex	92,037 Open	\$2,034 Opex	\$1,929 Opex	\$1,970 Opex Including 32m of new externally driven scope increases
\$3,155 Capex	\$3,440 Capex	\$2,807 Capex	\$2,452 Capex	\$2,401 Capex
Iteration 1	Iteration 2	Iteration 3	Iteration 4	Iteration 5
Customer drivers	Broad customer feedback shaped expansion of scenarios with more new and improved services, broader reliability and safety levels and resilience considerations	Focused Conversations recommendations reduced three scenarios down to one, preferring service outcomes that were mostly Scenario 2 (maintain and comply) with some more limited inclusion of Scenario 3 (new value) options	People's Panel recommended lower spend / scope than Focused Conversation recommendations removing some Scenario 3 programs in vegetation management, equity and vulnerable customers, and customer experience and interactions	Feedback on our Draft Proposal indicated our overall service levels proposed remain appropriate and in customers interests, but reinforced desires to continue to consider affordability challenges, ensure investments are prudent and efficient, find ways of delivering more for less
Internal challenge	Refinements to expectations, inputs, approaches, and costing of broader range of services and service levels	Refinements to expectations, inputs and approaches, particularly refinements to Repex probabilities and costs, optimisation of Augex and Repex, removal of programs difficult to justify, lower resourcing costs	Refined expectations, inputs, approaches, particularly: higher Augex demand and capacity costs; reductions in Capex and Opex from refined forecasts; Capex efficiency adjustment from asset management improvement investment	Final refinements to costs, removal of programs, and expanded efficiency assumptions and productivity commitments, to deliver a further reduction in forecast expenditure despite a number of scope increases driven by external market reviews or government directives

9.5 Multiple information sources indicate our proposal is in customers' interests

Developing our proposal in the current environment and addressing competing considerations has required a delicate balance of service and price. We considered that this was best managed by ensuring that the plans we put forward, were not solely guided by any one consideration, and that we had regard to multiple sources of customer preference information, economic efficiency, and other indicators of economic / customer value via willingness to pay analysis of our customers, as outline in the Figure 19 and Table 10.

In summary:

- the service levels we proposed to achieve have been shaped by engagement with both consumer representatives and stakeholders as well as everyday citizens;
- achieving each of these proposed service levels is efficient for customers, as expenditure for each service level derives quantified benefits (in monetary terms) that outweigh costs;
- for service levels experienced by more specific cohorts of customers, our survey of customer values research indicates that the broader customer base is willing to pay for the service outcomes; and
- in aggregate we estimate that the total of the new investments we propose for 2025-30 (total Capex and new Opex) is demonstrably efficient, driving consumer benefits (monetised benefits of customer service outcomes) that we quantify will exceed investment costs. This equates to a net benefit of more than \$500 million in NPV terms over 20 years.

Figure 19. Our approach to balancing service and price outcomes



Table 10. Key information sources guiding our Proposal

Engagement with informed customer representatives and stakeholders	Deliberative engagement with People's Panel	Our proposal	Economic analysis of efficiency via monetised consumer benefits	Willingness to pay survey (customer values research)
Maintain overall reliability by geographic region	Supported	Adopted	Repex is NPV positive overall	
Improve reliability for the CBD to comply to standard	Supported	Adopted	Least cost to comply	
Improve reliability for worst served customers	Supported	Adopted	Augex programs are all NPV positive	General customer base willing to subsidise
Maintain overall safety risk posed by asset condition	Supported	Adopted	Repex is NPV positive overall	
Minimise bushfire risk via network upgrades	Supported	Adopted	Augex programs are NPV positive	
Maintain network security and capacity to meet demand	Supported	Adopted	ICT program is NPV positive	Customers willing to pay to minimise long-duration outages.
Maintain cyber security via stronger controls to meet compliance expectations	Not supported Panel recommended we invest more to exceed expected compliance	Revised to take risk prioritised approach to security controls	ICT program is NPV positive	
Improve personalised and on demand digital service capabilities	Non-consensus	Revised to focus on improvements saving costs to us and customers	ICT program is NPV positive	General customer base is willing to pay for improvements
Maintain export service at current levels, achieving 95% for 90% of customers	Supported	Adopted	CER integration program is NPV positive	Customers willing to pay for proposed service level

Sum total of costs and benefits of Capex and new Opex, derives a positive NPV result of circa \$500m over 20 years.


Jessica, Harvey and Matilda enjoying their solar powered home

9.6 Key interrelationships

Interactions between expenditures were considered and aligned to customer outcomes

In forecasting expenditure, consistent with the AER's Better Resets Handbook, we engaged with consumers and configured 'inputs' of capital and operating expenditure programs and projects to align to the customers' preferred service level outcomes. In doing so, we considered the multiple actual and potential interactions between these expenditure inputs, so that we could:

- avoid double counting ensure that there was no double counting so that consumers do not pay more than they need to; and
- optimise for efficiency select the most efficient combination of investment actions to achieve the desired service need.

Our approach is set out below with respect to each service level.

Table 11. Service outcomes and expenditure interactions

Service outcome	Proposed projects / programs to achieve outcome	Interactions considered	
Maintain overall network reliability by geographic region	Repex – assets replaced to maintain risk posed by deteriorating asset condition	 Interaction with CER integration – assets replaced by Repex a not triggered for replacement by CER export program as they are included in the base CER capacity modelling 	< are iey
		2. Interactions with Augex reliability maintenance and improvement programs considered in Repex modelling but ha no material impact	had
		 Interaction with CBD reliability improvement program considered by this reliability program selecting the most efficient combination of cable replacements (Repex) and automation upgrades (Augex) 	
		 Interaction with Augex worst served customers reliability improvement programs cross checked and improvements accounted for in Repex modelling but not material 	
	Augex – upgrades to maintain underlying reliability risk posed by animals and weather	5. Interaction with Repex as per (2)	
Improve reliability in the CBD	CBD reliability improvement program (Repex and Augex)	6. Potential interaction with Repex on Hindley Steet substation switchgear replacement, but this program replaces a specific CBD asset in response to future risk, whereas the CBD improvement program considers current drivers of poor reliability in the CBD and performance over the whole CBD	n îc
		7. Interaction with Repex as per (3)	
Improve reliability for worst-served customers	Augex 'worst served customers reliability improvement programs'	8. Interactions between the 3 sub-programs of this overall program considered by cataloguing asset upgrades to identify and eliminate duplicated / related upgrades. this also allowed optimisation to ensure each sub-program is efficient	tify /ed
		 Interactions with Opex considered by accounting for reduced costs of supply restoration response being factored in as a negative Opex step change 	ed

Service outcome	Proposed projects / programs to achieve outcome	Interactions considered	
Maintain overall network safety risk	Repex – to maintain safety risk posed by deteriorating asset condition	10. Interaction with Augex bushfire risk mitigation programs considered by risk reduction from Augex accounted for in Re modelling – Augex achieves an efficient reduction in risk, and Repex then maintains that bushfire risk	{epex nd
	Augex – bushfire risk mitigation programs to efficiently address bushfire risk	11. Interaction with Augex reliability improvement programs considered but not quantified in bushfire analysis as not in th order of benefit of bushfire risk reduction	the
Achieve CER export service level of 95% for 95% of customers	CER integration expenditure program	 Interaction with CER compliance program considered by accounting for the increase in hosting capacity the complian- program provides, reducing the need for upgrades – benefit: CER compliance program not used to support CER integration program 	nce its of on
		13. Interaction with network visibility program which increases efficiency of flexible exports considered by accounting for accounting for the reduced levels of export curtailment	5
		14. Interaction with Augex capacity program component addressing low voltage quality of supply considered via combined modelling, with CER Augex preventing future grov in export driven quality of supply issues and Augex then maintaining spend at historic levels	owth
Maintain overall network security and ability to meet demand	Augex capacity program to ensure sufficient capacity to meet forecast demand	15. As per (13) in relation to CER integration	
		16. Interaction with Demand Flexibility program considered by the flexibility program targeting a portion of reliability risk remaining from the Augex capacity program to ensure no overlap	
		17. Interaction with Repex considered with programs cross- checked, with high voltage assets replaced via the capacity Augex program not being included in the Repex	
Reduced network capital delivery costs	ICT 'assets and work' program to improve asset management process efficiency to reduce costs of delivering network work	 Accounted for in total network Capex – cost reduction achiev through the program is applied as a separate adjustment to c total forecast Capex for 2025-30 	eved) our
Emissions reduction	Fleet program includes the acquisition of some electric vehicles where efficient on total cost of ownership basis	19. Interaction with Opex accounted for via a negative step chan to our Opex	ange

9.7 Innovation Fund

Through the process of external and internal challenge and forecasting iterations, some potential initiatives that were deemed to be misaligned to regulatory expectations and lacking clear customer value were excluded from our forecasts.

However, through this process we also identified some potential initiatives that are likely to drive long-term customer benefits but these are difficult to discern at this point given that they involve innovation.

Throughout our engagement program, our customers have expressed a desire for us to be innovative in how we respond to emerging challenges and opportunities arising from a rapidly changing energy system including:

- future risks arising from climate change with respect to the resilience of our network services, and how we might work with community groups and service providers;
- opportunities to green our business and contribute to a net-zero future; and
- how we can respond to changes in the market and how customers and their agents and market participants can interact with our business (for example in obtaining information on the capacity of our network in a dynamic way).

Some of these topics were explicitly deliberated on by our People's Panel and one recommendation was the creation of a 'community resilience fund' to co-fund resilience projects with community groups in regions most exposed to the effects of climate change. Other topics in this area were more generally discussed through our earlier Focused Conversations.

Pursuing innovation initiatives within the context of a Regulatory Proposal presents challenges. Even if such initiatives are expected to drive long-term consumer benefits, forming business cases to justify expenditure is difficult when these initiatives involve benefits which are difficult to determine.

This is because they are either difficult to quantify / monetise at this time, or the actual initiatives remain uncertain as to the specific delivery model, technology and partnering arrangement that could be used. Furthermore, the AER's Demand Management Innovation Allowance Mechanism (DMIAM), which usually funds innovation initiatives, is focused on management of demand on the network and does not address a range of broader innovation opportunities. Given these challenges, our Draft Proposal proposed, with the endorsement of our CAB as the strategic partners in our engagement, to consolidate a number of potential initiatives involving innovation into an explicit 'Innovation Fund'.

We proposed that our Innovation Fund would be capped at \$20 million for 2025-30, split 80 percent into capital expenditure and 20 percent into operating expenditure. The fund would have a scope targeting three broad areas of innovation that collectively address the key focus areas we heard through our engagement outlined in Figure 20. Figure 20. Innovation fund

Community resilience

Exploring joint funding with third parties for resilience initiatives such as battery backup for extreme weather events; information sharing with other utilities and emergency services agencies; and other initiatives to be determined¹

Enabling and leveraging the future market

Providing information on the dynamic condition / state of the network to third parties (through, for example dynamic locational pricing models, market interfaces); leveraging services from CER (particularly scale Virtual Power Plants and community batteries); and innovation in managing the increasing system security challenges and broader market reforms²

Sustainability solutions

Including technology innovation and potential partnering to explore electrifying our heavy fleet on a customised basis and modelling of potential changes in field work scheduling to integrate Electric Vehicles into our fleet en-masse³

1. The community resilience fund initiative was recommended by our People's Panel.

2. This addresses initiatives discussed in our Energy Transition Focused Conversations.

3. This was discussed in our Energy Transition Focused Conversations

Together with the CAB, we will further develop the governance arrangements for the Innovation Fund. We envisage that a CAB Sub-Group could be formed to refine the principles that should be used in selecting initiatives to fund and provide some oversight in selecting the initiatives to fund.

Through our engagement program, customers have been generally supportive of innovation initiatives but have raised questions about how they can be assured that allowed funds will actually be used and not simply underspent, and how knowledge obtained might be shared. Therefore, we propose to include the following safeguards for consumers:

- > the fund would be on a 'use it or lose it' basis, with underspends returned to customers in the next regulatory period and with operating expenditure excluded from the base year in future periods;
- the fund would be excluded from the AER's Efficiency Benefit Sharing Scheme (EBSS) and Capital Expenditure Sharing Scheme (CESS) to ensure we do not benefit if allowed funds are underspent; and
- we would commit to knowledge sharing to benefit the broader market, and seek opportunities to leverage the value of the fund via additional third party funding opportunities such as government renewables funding.

We received positive feedback through several submissions on our Draft Proposal for this initiative and have therefore retained it in our Regulatory Proposal.



SA Power Networks' subject matter expert Duska with independent subject matter expert Jen

10. 2025-30 Expenditure, revenue and price summary

10.1 Revenue and expenditure forecasts

The principal Attachments to our Regulatory Proposal detail our 2025-30 proposed expenditure and revenue requirements that arise from delivering the service outcomes described in this Overview document. • a 21% increase in capital expenditure;

 an 18% increase in Main Standard Control Services operating expenditure; and

In summary, in real 2025 dollar terms we are proposing:

• an 8% increase in Main Standard Control Services revenue.

Main Standard Control Services exclude 'legacy metering services' which are proposed to be reclassified as Standard Control Services for the 2025-30 period. Legacy metering services are discussed further in Section 12.



Figure 21. Forecast 2025-30 capital expenditure (before disposals) (\$2025)

The material 21% uplift in our capital works program for 2025-30 (totalling \$2,401 million before \$22 million of Fleet disposals) is required to:

- replace deteriorating network assets to maintain:
 - average reliability at a geographic region level; and
 - > state-wide bushfire risk levels;

Source: SA Power Networks data

- restore CBD reliability to target and target reliability improvement for worst-served customers and regions;
- upgrade areas of our network to meet new load growth and to enable more solar exports;
- refresh and replace existing IT systems, enhance online services to customers and improve asset management efficiency; and
- refurbish, renew and replace ageing and capacity constrained properties, efficiently transition to EVs, and increase fleet volumes to resource network work uplift.



Figure 22. Forecast 2025-30 Main Standard Control Services operating expenditure (exc Debt raising) (\$2025)



Forecast operating expenditure in 2025-30 is \$2,044 million, comprising:

- \$1,970 million Main Standard Control Services;
- \$60 million Legacy Metering Services, see Section 12; and
- > \$14 million Debt Raising Costs.

The forecast Main Standard Control Services expenditure of \$1,970 million represents an 18% increase on current period expenditure. The main drivers of this increase are:

- a change in accounting treatment for procuring 'software as a service';
- increased measures to address cyber security threats;
- higher insurance costs;
- the accelerated rollout of smart meters and the associated increase in network analytics;

- an uplift in resourcing costs for higher capital program uplift; and
- an expected new regulatory obligation relating to claims and damages.

These drivers are described in more detail in Attachment 5 and 6 of our Regulatory Proposal.



Figure 23. Forecast 2025-30 Main Standard Control Services revenue (ie excluding legacy metering services revenue) (\$2025)

Source: SA Power Networks data

Total forecast revenue in 2025-30 is \$4,782 million². Main Standard Control Services revenue growth is predominantly due to:

- a higher allowed rate of return on assets from higher interest rates; and
- operating expenditure increases; partially offset by
- lower depreciation as many of our existing assets become fully depreciated.

As indicated in Figure 22 above, we are proposing a non-standard revenue smoothing profile (yellow line) for the 2025-30 period. This smoothing approach results in \$65 million less distribution revenue recovery in the first three years of the 2025-30 period.

This revenue profile will minimise average distribution bill increases in the first three years of the 2025-30 period. Consequent distribution bill increases in the final two years of the 2025-30 period will be offset by customer bill reductions from 2028/29 onwards, due to the cessation of the SA Government's solar feed-in tariff scheme in June 2028. Customer bill impacts are discussed further below.

10.2 Customer bill forecasts

SA Power Networks acknowledges the current cost of living pressures on the community with affordability being a key customer and stakeholder concern. In an attempt to provide some relief in the first three years of the new regulatory period we are proposing a revenue smoothing profile which minimises distribution bill increases in the first three years of the 2025-30 period. There will be a consequent step up in distribution bills in Year 4. However the impact of this step increase on customer bills will be offset by the conclusion of the SA Government PV Feed in Tariff scheme (44c/kWh) in June 2028 lowering residential bills on average by \$46.

Figure 24. Forecast annual average Residential bills (\$2025)³



Source: SA Power Networks data

3) Customer bill impacts represent distribution network charges (excluding legacy metering costs, which are forecast as approximately \$14 per annum).

The introduction of new export tariffs from 1 July 2025 will alter overall average outcomes for solar and non-solar customers. While actual customer bills will depend on individual consumption and export levels, non-solar residential customer bills will be lower than the overall average by approximately \$3 per annum and bills for solar residential customers will be approximately \$7 per annum higher than the overall average. There will also be impacts as a result of increasing energy volumes forecast to be delivered to customers over the 2025-30 period.





Source: SA Power Networks data

4) Customer bill impacts represent distribution network charges (excluding legacy metering costs, which are forecast as approximately \$14 per annum for small business customers).

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People's Panel members Judith and Lachlan

11. 2025-30 Tariff Structures

11.1 Consumption tariff structures

Many of our current tariff structures will remain fit for purpose over the 2025-30 period and we propose to largely retain our existing consumption tariff structures for 2025-30. There are no structural changes proposed for customers whose consumption is still metered by a (legacy) accumulation meter, who currently represent around 60% of our customers. These meters are read manually, typically every 90 days, and only record the total electricity consumed in that period: they do not record what time of day the electricity is used.

Approximately 40% of our customers now have remotely-read interval (or "smart") meters which record electricity consumed every 30 minutes. These meters enable development of more cost-reflective, 'time of use' tariff structures for customers. In 2025-30 we are proposing the following changes for time of use tariffs:

- minor changes to price windows in our residential tariffs;
- the introduction of customer choice tariffs for residential and small business customers who predominately or solely meet their

energy needs through electricity but have sufficient flexibilities in their appliances/loads;

- the introduction of a new small business sub tariff class for customers consuming less than 40 MWh per annum;
- new flexible demand tariffs to be available and reward large business customers who can shift their load away from peak demand periods; and
- new generation tariffs for customers with large battery systems or solar farms connecting at higher voltages.

11.2 Export tariff structures

A recent change to the National Electricity Rules (NER) introduced the concept of export tariffs as a means for distribution businesses to recover the cost of investments made specifically to add more export capacity in networks to relieve export-related congestion. The rule change also enables distribution networks to reward customers with export credits when they export into the distribution network at times when it is most needed.

We are forecasting export-related congestion in our low voltage areas of our network in 2025-30. The capital cost to alleviate this congestion to maintain a 95% target export service level for 95% of solar customers, represents three percent of our total capital expenditure program in the 2025-30 period. We plan to recover these costs from exporting customers only, as they are the customers who are driving these costs and receive the majority of the benefit of reducing those constraints. This aligns with the general pricing principle in the NER that network tariffs should be cost-reflective.

We are proposing the introduction of new export tariffs for all residential, small and medium business customers with small embedded generation (solar and/or battery systems less than 30kW in capacity), from 1 July 2025 with no ability to opt out. Export tariffs will have:

- a 9 kWh daily free threshold for interval-metered customers and 11 kWh daily free threshold for accumulation-metered customers;
- > export charges of 1c/kWh for exports above the free threshold during 10am-4pm for interval-metered customers and 0.75c/kWh for exports above the free threshold for accumulationmetered customers; and
- export credits payable to residential and small business customers on our 'Prosumer' tariff for any exports that occur during November – March, between
 5pm – 9pm for interval-metered customers.

No export tariffs will be applied for medium to large exporting customers (those with systems greater than 30 kW in capacity) – who typically connect at higher voltages in our distribution network (where no constraints are forecast). However, these customers will receive a pricing signal via the connection process.

11.3 Stakeholder engagement

SA Power Networks has engaged extensively with stakeholders through a series of Tariff Focused Conversation workshops on both consumption and export tariffs. This engagement helped shape the tariff structures which were included in the Draft Proposal and are now proposed in the Tariff Structure Statement (TSS) forming part of our Regulatory Proposal. We also asked our People's Panel to deliberate on the timing and pace of introducing export tariffs. The Panel did not reach consensus on a preferred option and in our Draft Proposal we adopted the recommendation from our Focused Conversation workshops: that all Export Customers (new and existing) be assigned to an export tariff from 1 July 2025. The introduction of an export tariff is also supported by our Community Advisory Board. Retailer engagement was also key in developing the TSS. SA Power Networks formally engaged with retailers via workshops in 2022 and 2023. Recognising retailers may not want to actively engage in a group forum, we also held individual sessions with a number of retailers to respond to their questions and comments. A number of the new tariffs proposed in the TSS originate from trial tariffs over the 2020-25 period and the evolution of these tariffs has been as a direct result of retailer engagement.



Barossa Depot

11.4 Feedback on our Draft Proposal

While export tariffs were generally supported by stakeholders, they were not supported by some residential customers nor Business SA who cited a survey of its members where more than two-thirds of respondents opposed export tariffs. We discussed the actual survey responses with Business SA further and could not identify grounds to alter our proposal. We therefore propose to maintain the introduction of export tariffs, to all residential, small and medium business exporting customers, with systems up to 30kW in capacity, noting export charges will only be levied above the free daily export threshold. We believe this appropriately balances costreflectivity and customer equity considerations: recovering the costs

to alleviate solar congestion forecast in the 2025-30 period from those customers causing this congestion and who predominantly benefit from alleviating that congestion.

All customers and stakeholders were strongly of the view that the introduction of export tariffs should be supported with an information and education program for a variety of stakeholders including customers, Retailers and solar installers. We recognise and acknowledge this and will work with our stakeholder groups to progress a suitable program.

We also received feedback on our tariff assignment policy for small business customers which does not allow those customers with usage of less than 160 MWh p.a. and demand greater than 120kVA to opt out of demand charges. The EV Council suggested we should align with other distribution networks to allow small business customers access to volumetric charging only, regardless of demand, as failure to do so would hamper EV uptake in South Australia. We considered this option but believe it introduces a cross-subsidy and is less cost-reflective of the customer use of the distribution network. We therefore propose to maintain our current tariff assignment policy as it is the most equitable outcome for all small business customers.

11.5 2025-30 Tariff Structure Statement

Our Tariff Structure Statement (TSS) is set out in Attachment 18 of our Regulatory Proposal and provides further details on our proposed consumption and export tariffs in 2025-30.

The Attachment outlines the key challenges we are trying to address as a distribution network and how tariffs can play a role. It details our forecasts of both consumption and exported energy through the period and what trends we are seeing in distribution network demands. The TSS demonstrates how our proposed tariff structures have been influenced through our extensive stakeholder engagement process and how these tariffs impact residential, business and vulnerable customers. The inclusion of export tariff fact sheets with worked examples provides practical resources for stakeholders in developing their export tariff knowledge. The Attachment also outlines how the TSS is compliant with the Distribution Pricing Rules of the National Electricity Rules.

There are several key benefits and risks arising from the TSS. As customers transition to time of use tariffs, a residential customer with no change in usage behaviour, on average, will have the same distribution bill outcome as being on a single rate tariff. However, when a customer does have a time of use tariff they can make informed decisions about their usage and shift loads to the middle of the day when distribution network capacity is at its greatest, and prices are cheapest, thereby reducing distribution network changes. Customers with export capacity up to 30kW are at risk of increased distribution network charges if they export large amounts of solar during the middle of the day. However if customers respond to these pricing signals by increasing load consumption and reducing exports in the middle of the day they will benefit, and benefit further from an export credit if they can also export during summer peak times (5pm – 9pm).

The transition of all customers with up 30kW of export capacity being assigned an export tariff on 1 July 2025 with no opportunity to opt out is a simple clear transition pathway and customers will benefit from lower charges if they respond to the price signals in our tariffs. The simple transition arrangements proposed will be easily understood by all stakeholders impacted. This simplicity is critical for customer and retailer understanding and successful implementation.

Large business customers opting in to our proposed flexible tariff structures will be rewarded through reduced distribution bills and greatly benefit the distribution network by helping reduce peak demand, increasing utilisation and lowering future augmentation costs.

11.6 Customer impacts of our Proposal

In addition to our average bill impact analysis in section 10.2, we have developed six customer personas to illustrate the potential annual bill impacts of our proposed 2025-30 tariff structures compared with estimated 2024/25 prices⁵. These impacts are shown in Table 12 below in nominal dollar terms.

Table 12. Customer persona bill impacts (\$nominal)

	Pensioner without solar	Couple without solar	Family without solar	Family with solar	Family with solar and battery	Family with EV, solar and battery
Annual usage (kWh)	2,520	3,960	8,540	5,100	2,300	15,520
Solar system	-	-	-	6kW panels	6.6kW panels	11.5kW panels
				6kW Inverter	5kW Inverter	7kW Inverter
			2024-25			
Residential single rate	\$432	\$566	\$996	\$673	\$411	\$1,650
Residential time of use	(\$28)	(\$34)	(\$43)	+\$18	(\$56)	(\$466)
Residential electrify	(\$21)	(\$23)	(\$79)	+\$24	(\$64)	(\$421)
			2025-26			
Residential single rate	\$443	\$578	\$1,009	\$685	\$422	\$1,667
Residential time of use	(\$22)	(\$36)	(\$37)	+\$35	(\$48)	(\$338)
Residential electrify	(\$21)	(\$23)	(\$79)	+\$25	(\$64)	(\$422)
Electrify Export Credits				(\$74)	(\$58)	(\$3)
Export charges	-	-	-	+\$2	+\$2	+\$3

The customer personas utilise 12 months of consumption and export data. Figures shown in green represent annual savings for these customers if they move from a single rate tariff to a time of use tariff and maintain the same consumption, export and time of use profile. Figures in red represent annual bill increases, which can be avoided if the customer were to change their consumption and/or export profile and use less electricity in higher price periods and use more of their solar generation.

Customer bill impacts represent distribution network charges (excluding legacy metering costs, which are forecast as approximately \$14 per annum).

5) Prices shown are latest estimates. Actual 2024/25 prices will be approved by the AER by May 2024.

11.7 Key interrelationships with other aspects of the Proposal

In the development of our tariff structures it was critical to ensure that pricing direction aligns and supports the efficient management of our distribution network and our proposals to meet the challenges and opportunities emerging in 2025-30. Outlined in the table below are the key interrelationships between tariffs and other aspects of our Proposal.

Table 13. Key tariff interrelationships with our proposed expenditure

Tariff Structure	Proposal Interrelationship
Export Tariffs <30kW	CER distribution network augmentation expenditure is proposed to be recovered via new export tariffs for those customers who export and directly benefit from the low voltage distribution network augmentation.
	Export tariffs are applicable to all customers with the ability to export <30kW from 1 July 2025 with no ability to opt out. This transition strategy aligns with our broader tariff strategy of cost reflectivity. By having one date at the beginning of the regulatory period where all eligible customers are subject to an export tariff, we are able to progress more equitable pricing outcomes.
Export Tariffs >30kW	There is no proposed CER augmentation expenditure related to export >30kW and as such no proposed export tariffs for customers with systems >30kW. These systems typically connect at higher voltages in our distribution network where no congestion is forecast in the near term.
	Customers with >30kW export will receive a pricing signal when they connect to the distribution network through their connection and augmentation charges in accordance with our Connection Policy.
Residential Time of Use (ToU) tariffs – Solar Sponge	All Residential ToU tariffs, including Controlled Load, are proposed to continue to have a Solar Sponge time window in 2025-30 and extend it by 1 hour to 4pm. This is the lowest priced time window to signal that the distribution network has the highest available capacity in this window.
	This tariff structure aims to increase load on the distribution network during times of low and sometimes negative demand and respond to one of our key challenges on the distribution network.
Residential and Small Business ToU tariffs	As EV numbers continue to rise, it is critical that customer's EV charging behaviours do not create new peaks on the distribution network leading to inefficient capital expenditure and ultimately increased prices for all South Australians. ToU pricing encourages shifting load away from Peak demand windows and our proposed tariff structures in Residential and Small Business support this distribution network objective.
Electrify ToU tariffs	Proposed capacity augmentation is based on the 2022 ESOO growth rate. An increase in electricity consumption from macro factors such as electrification, particularly of business, transport and the residential sector, up-take of EVs and renewable targets, as well as localised factors, such as in-fill housing and residential developments and commercial and industrial loads is necessitating a step increase in capacity augmentation expenditure to maintain security and reliability of supply.
	ToU pricing plays a critical role to encourage distribution network usage outside of Peak demand windows and reduce the need for network capacity augmentation.
Large Business Flexible Tariffs	Proposed flexible tariff structures for load and generation for Large and Major Business customers incentivises efficient use of the distribution network, contributing to lower augmentation expenditure.
	The tariff encourages a response when it matters most to the distribution network, that is hot summer evenings.
	The flexible offering aligns with our proposed connections policy as customers who elect to be flexible will avoid augmentation costs for the flexible portion of their connection.



Jessica working from her home office

12. Legacy metering services

12.1 Background

Since December 2017 retailers have been responsible for installing new and replacement meters for customers which must be remotely read interval meters, often referred to as 'smart' meters. SA Power Networks retained responsibility for providing metering services to the legacy manually read accumulation meters, including operation, manual reading, and maintenance until they are replaced with a smart meter.

The number of legacy meters has been reducing gradually over time. However, the roll out of smart meters has been slower than anticipated, delaying realisation of benefits to individual customers and the wider power system. In August 2023, the Australian Energy Market Commission (AEMC) issued its final report on the review of the regulatory framework for legacy metering services. Amongst other things, the AEMC report recommends accelerating the roll out of smart meters to all customers by 2030, with distributors to develop a 'legacy metering replacement plan' and Retailers to be responsible for installing smart meters at legacy sites over the 2025-30 period.

The AER considers this report and its recommendations represent a material change in circumstances, allowing a variation from the service classification and form of control outlined in its Final Framework and Approach Paper issued in July 2023. The AER issued a Guidance Note in November 2023 proposing that it would be more appropriate and equitable to reclassify legacy metering services as Standard Control Services (SCS), enabling legacy metering costs to be recovered from all customers who will receive the 'whole-of-system' benefits that smart meters will provide.

Our 2025-30 proposal for legacy metering services has been prepared in accordance with the AER's Guidance Note.

12.2 Recovery of legacy metering services costs in 2025-30

In accordance with the AER's guidance, we propose that legacy metering services in the 2025-30 period:

- be reclassified from Alternative Control Services to Standard Control Services (SCS);
- are provided under the SCS revenue cap but treated separately as a sub component of SCS. This separation maintains transparency of the metering costs and any true-ups or other necessary adjustments within the 2025-30 period; and
- adopt the AER's proposed price control formulae.

12.3 Legacy metering expenditure, revenue and pricing

Consistent with the AER's guidance:

- we have separately forecast legacy metering services revenue using the AER's post-tax revenue model;
- we have no forecast Capex associated with legacy metering services;
- our legacy metering asset base will be fully depreciated by 2025 (the metering asset base value in the 2025-30 period will be zero);
- we have forecast legacy metering Opex separate to our main SCS Opex forecasts. These costs will be excluded from the efficiency benefits sharing scheme (EBSS) applicable in the 2025-30 period; and
- we will recover these legacy metering services costs as a fixed charge from all our low voltage customers.

We are also proposing to include the incremental transitional costs to support the accelerated rollout of smart meters by 2030 within SCS metering, where these costs will be recovered from all customers. Once the rollout program is completed, these costs will cease. Any recurrent Opex costs, that will continue beyond 2030. have been included as a step change within our main SCS proposal. We acknowledge not all meters may be replaced by 2030, any residual metering costs at this stage will be included within SCS for the 2030-35 regulatory period.

Our forecast Opex and revenue for legacy metering services is provided in Figure 26 below. Forecast Opex costs for 2025-30 is \$60 million and include our base legacy metering costs and incremental legacy metering transitional costs as mentioned above. Our base legacy metering costs are expected to continue to decline over the period as legacy meters are replaced with smart meters. Noting this, our costs to provide legacy metering services are forecast to increase on a per unit basis as the density of legacy meters declines.

Legacy metering services revenue of \$61 million is forecast for 2025-30. We note our legacy metering revenue is forecast to decline from prior periods with the metering asset base expected to be fully depreciated in the first year of the 2025-30 regulatory period.



Figure 26. Forecast legacy metering Opex and revenue (\$2025)

Source: SA Power Networks Data

We propose to recover the legacy metering revenue from all low voltage customers, as a fixed charge component. Further detail on pricing is provided within Attachment 18 – Tariff Structure Statement.



Adelaide Skyline



Adelaide Central Markets

13. Alternative Control Services

In the current 2020-25 regulatory period, Alternative Control Services include legacy metering services, public lighting services and a range of ancillary network services which are a mix of fee-based and quoted services. Noting our proposed reclassification of legacy metering services to Standard Control Services as outlined in Section 12, for the 2025-30 period we are proposing that Alternative Control Services include public lighting services and fee-based and quoted ancillary network services. A summary of our Alternative Control Services proposal is provided below, for further details refer to Attachment 15.

13.1 Public lighting services

SA Power Networks provides public lighting services to 69 customers throughout South Australia, including local councils and the Department for Infrastructure and Transport (DIT). There are approximately 238,000 public lights installed across our network. Of these, 138,000 (58%) have been upgraded to Light Emitting Diodes (LEDs), providing improved energy and maintenance outcomes for our customers. We are continuing to proactively upgrade the remaining High Intensity Discharge (HID) lights to LEDs where this is cost-effective.

We consulted directly with public lighting customers through Focused Conversation workshops held in October 2022 and May 2023 to help inform our 2025-30 Regulatory Proposal. We also continued to work collaboratively with the Public Lighting Working Group on key matters affecting the delivery of public lighting services in South Australia. Throughout this consultation, public lighting customers told us they wanted the following changes to service levels which we have adopted in our proposal:

- replacement of public lighting columns with an 'extreme' condition rating, with all other columns continuing to be inspected every five years in high corrosion zones and every 10 years in low corrosion zones. We currently replace columns with 'extreme' and 'very high' condition ratings;
- introduce a simple and complex classification of single light out faults, recognising that some faults require a longer lead time for repair (for example faults associated with a cable fault). Public lighting customers supported repairing simple faults within five business days (metropolitan and regional) and complex faults within 30 business days;

- noting the obsolete nature of high intensity discharge (HID) lighting as we transition to LEDs, the bulk lamp replacement program undertaken for HID lighting will be discontinued; and
- explore smart lighting opportunities on a council-bycouncil basis as a quoted service.

Proposed public lighting prices for 2025-30 vary from customer to customer based on the specific services selected. We are forecasting average price reductions for HID lights (20%), with increased pricing for LEDs (1%) associated with forecast increased weighted average cost of capital (WACC) and inflation.

13.2 Ancillary Network Services

Ancillary Network Services are a diverse range of customer requested services that we provide on an as-needs basis (for example network asset relocations, premises energisation/de-energisation, special meter reading, and connection services).

The cost of each service is paid for by the customer requesting the service. Services are charged as a fixed fee where they are relatively standard and predictable in nature or on a quoted service basis for non-routine work. For quoted services, charges are levied on a time and materials basis.

For the 2025-30 period, we propose to provide most of the ancillary services activities that were provided to customers in the current regulatory period. The underlying nature of these services remains consistent with that provided in the 2020-25 period, therefore we are proposing to apply the AER's price cap formula to the current fixed fees for 2025-30.

We have also proposed a small number of new fixed fees for 2025-30, including:

- Multi-site outages for the purpose of replacing a legacy meter. This will reflect the changes associated with the AEMC's final report 'one-in-all-in' approach to meter replacements to improve meter replacement efficiency and the customer experience.
- Requests to complete an emergency supply restoration in relation to metering equipment not owned by the distributor. This is to ensure continuity of supply for customers where a retailer's metering provider may be unable to immediately remediate the installation.

Retailer request to knock before an installation is disconnected for non-payment. This would be completed a few days before the disconnection date, encouraging the customer to contact their retailer prior to disconnection.

The proposed new fixed fees have been developed on a cost build up basis, reflecting the relevant labour rates and average time required to perform the task.



Andrew, Jessica, Harvey and Matilda



SA Power Networks' Head of Regulation Richard

Have your say

The AER is expected to publish an Issues Paper highlighting key elements of our proposal in March 2024, hold a Stakeholder Forum in April 2024 and invite stakeholder submissions in May 2024.

We strongly encourage stakeholders to continue to engage with the AER's process, to provide your views on how well SA Power Networks' Regulatory Proposal reflects your desired service level and price outcomes.

Further information will be available on the AER's website at *SA Power Networks - Determination 2025–30 | Australian Energy Regulator (aer.gov. au).* The AER will then make a Draft Decision in September 2024. We also encourage customers and stakeholders to continue to engage with us on our plans. Visit *talkingpower.com.au* and register your details to stay in touch with the conversation.

Glossary

Acronym	Full Name
ACS	Alternative Control Services
Augex	Augmentation expenditure
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Mark Operator
AER	Australian Energy Regulator
САВ	Community Advisory Board
Capex	Capital expenditure
CBD	Central Business District
ССР	Customer Consultative Panel
CER	Customer Energy Resources
CESS	Capital Efficiency Sharing Scheme
CPI	Consumer Price Index
CSIS	Customer Service Incentive Scheme
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DIT	Department for Infrastructure and Transport
DMIAM	Demand Management Innovation Allowance Mechanism
DOEs	Dynamic Operating Envelopes
EBSS	Efficiency Benefit Sharing Scheme
EDC	Electricity Distribution Code
ESOO 2022	Electricity Statement of Opportunities 2022
EV	Electric vehicle
EWOSA	Energy and Water Ombudsman of South Australia
FiT	Feed-in tariff
GW	Gigawatt
GWh	Gigawatt-hour
HID	High intensity discharge
IASR	Inputs, Assumptions and Scenarios Report

Acronym	Full Name
ICT	Information and Communications Technology
ISP2022	Integrated System Plan 2022
KBYD	Konck before you disconnect
kVA	Kilovolt amperes
kW	Kilowatt
kWh	Kilowatt-hour
LED	Light emitting diode
LV	Low voltage
MW	Megawatt
MWh	Megawatt-hour
NEM	National Electricity Market
NPV	Net present value
Opex	Operating expenditure
p.a.	Per annum
POE50	50% probability of exceedence
PV	Photo-voltaic
Repex	Replacement expenditure
SaaS	Software as a Service
SACOSS	South Australian Council of Social Services
SCS	Standard Control Services
SMS	Short messaging service
ToU	Time of use
TSS	Tariff Structure Statement
VCAP	Vulnerable Customer Assistance Program
VPP	Virtual power plant
WACC	Weighted average cost of capital









Empowering South Australia