



# Improving reliability for regional communities





## We want to hear from you

### Purpose of this consultation

We're seeking your feedback on how we can best improve reliability for our regional customers and communities supplied by rural long feeders.

Your feedback on our draft Regional Reliability Improvement Plan (the proposed Plan) will help us test and refine possible solutions and the investment that may be included in Western Power's AA6 proposal to improve power reliability outcomes for customers and communities most affected.

Our proposed Plan explains some of the reliability challenges affecting regional areas and the improvements we are considering for inclusion in our AA6 proposal. Community input is extremely valuable before Western Power finalises the proposal it intends to submit for regulatory assessment.

### Why this matters

Safe and reliable power is essential for everyday life. In some regional communities supplied by rural long feeders, unplanned outages happen more often and last longer than elsewhere on the network, affecting homes, farms, businesses, and local services.

### What we have heard so far

We know that power reliability matters deeply to regional communities, as does affordability. Communities want practical improvements focused on where they will make the biggest difference.

### Why poor reliability occurs

Regional powerlines often cover long distances through challenging terrain and are more exposed to weather, vegetation, and environmental impacts. When faults occur, crews may need to patrol and access remote sections of the network before repairs can begin, which can make restoration more complex and take longer.

### What Western Power proposes

Our proposed Plan outlines a targeted and practical reliability improvement pathway for consultation, focusing on areas where outages are having the greatest customer impact. As different areas experience different reliability challenges, the proposed Plan does not apply a single solution.

It identifies potential improvements based on local outage causes, network conditions, and community needs. These may include established network solutions, newer technologies, operational improvements, and lessons from recent pilot projects. The final scope, timing and delivery of any program remain subject to Western Power's AA6 proposal, Economic Regulation Authority (ERA) assessment and final determination, and any required Government funding or policy decisions.

### What this means for regional customers and communities

Our aim is to identify practical options to reduce the impact of outages on communities where reliability challenges are greatest. Depending on outage causes, proposed solutions may include strengthening parts of the network; improving fault finding, isolation and restoration; or providing local backup power supply in selected places, including non-network solutions. Solutions would be progressed only where they are technically suitable, provide community benefit, and are supported through the relevant regulatory and funding approval pathways.



## Next steps

Once the consultation period closes, we'll consider your feedback alongside technical analysis, delivery experience, affordability and broader planning requirements in finalising the proposal to be submitted as part of Western Power's sixth Access Arrangement review.

The ERA will assess that proposal and make its final determination on approved expenditure and revenue for the period from July 2027. Delivery of any resulting program will also depend on any required Government funding or policy decisions.

We'll share key outcomes of this consultation with all stakeholders.



**Western Power**  
 General enquiries 13 10 87  
 Emergencies 13 13 51  
 TTY 1800 13 13 51 | TIS 13 14 50  
 363 Wellington Street, Perth 6000  
[westernpower.com.au](http://westernpower.com.au)

## How you can provide feedback

We're inviting submissions by email, online, or by letter during the consultation period, which closes on 6 November 2026. We're continuing to engage with stakeholders (including the Economic Regulation Authority, Government, and interested community representatives) as we refine the Plan over the coming months.

Your feedback is essential and will guide us in that work before the Plan is submitted as part of our next Access Arrangement proposal, which is assessed by the Economic Regulation Authority to determine Western Power's approved expenditure and revenue for the period from July 2027.

Important: Consultation does not lock in delivery of the proposed program. Any future program will depend on the proposal Western Power submits, the ERA's assessment and final determination, and any required Government funding or policy approvals.

## How you can have a say

We want to understand:

- what matters most to you and your community
- where reliability problems are having the biggest impact on your everyday lives
- which types of improvements would be most valuable locally.

We also welcome your view on how reliability improvements should be balanced with affordability over time to ensure the proposed Plan better reflects local priorities before it is finalised for submission and assessment.

Focus areas we need your feedback on include:

- Our approach is to balance affordability, delivery constraints, the scale of reliability improvement, and the number of customers and communities who'll benefit. Please tell us if this approach feels reasonable.
- We're focusing first on areas experiencing the most severe reliability impacts. Are the proposed targeted areas provided in section 5 the right ones to focus on first?
- We've trialled a range of solutions to improve reliability and aim to build on this further. What are your views on these types of solutions and their suitability for your community?
- As regional powerlines are long, exposed, and often remote, improvement will take time. Is the proposed pace and scale of improvement reasonable, taking affordability into account?
- Improving reliability requires continued investment over time, including changes to parts of the network and the use of innovative technologies where appropriate. Is the proposed level of investment reasonable?

## Beyond the scope of this consultation

Consultation seeks input on our proposed Regional Reliability Improvement Plan (RRI) in the context of our role and responsibility in providing safe, reliable, and affordable electricity services as the network operator of the South West Interconnected Network. It is not a commitment that all proposed initiatives will proceed.

### Other parts of the network

We maintain a broader reliability strategy and investment program to help all areas of the network meet regulatory requirements, as far as reasonably practicable. This consultation, however, is focused on regional communities supplied by rural long feeders and the proposed actions to improve reliability outcomes for those customers.

The proposed Plan is an important step toward improving regional reliability, while recognising that not every issue can be addressed at once. The timing and scale of improvements must be balanced with affordability, delivery constraints, ERA assessment and final determination, and available funding. Any proposed expenditure remains subject to regulatory approval and relevant Government funding decisions.

### Wider investment decisions

We manage a broader investment program to maintain and enhance the network to meet service obligations. This Plan does not attempt to consolidate all network programs or make trade-offs across those broader investment priorities.

## Further information

For general enquiries about this consultation, please contact [communityenquiries@westernpower.com.au](mailto:communityenquiries@westernpower.com.au). We'll aim to respond within 48 hours.

Further information about Western Power, the network, reliability performance, and the regulatory process is available on our website and the Economic Regulation Authority's website.

## Why reliability can be lower for customers in rural areas

The network supplying regional customers was largely built more than 50 years ago and consists mainly of long overhead lines exposed to pollution, storms, lightning, bushfires, and other environmental challenges.

“Rural long feeder” is a specific term within the regulatory and reporting framework that applies to Western Power. Rural long feeders supply over 100,000 regional customers. Figure 1 shows the extensive reach of rural long feeders, which span large distances to supply electricity to regional communities across WA.

## What do we mean by reliability?

Reliability is linked to the everyday operation of electricity networks ensuring that electricity reaches those who need it, when they need it.

We measure reliability by:

- how many customers are affected by power outages
- how often customers experience a power outage
- how long the power outage lasts

We measure, report and respond to reliability performance using industry standard metrics – System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI).

As shown in Figure 2, rural long feeder reliability performance has remained broadly consistent over the last decade, with annual results affected by weather, bushfires, and other events. Average outage duration remains around 700 minutes per customer per year, compared with the 290-minute benchmark now applied in Access Arrangement 5.

As this benchmark is materially lower than performance, this proposed Plan sets out a staged, targeted pathway for consultation to improve outcomes for the customers and communities most affected.

Customers supplied from these feeders are exposed to longer restoration times, greater sensitivity to network faults, and more limited operational flexibility than customers supplied from urban networks.

System-wide reliability averages do not reflect the experience of all regional customers on rural long feeders. In some areas, customers can experience more frequent or longer outages because the network covers long distances and faults can be harder to locate, access and repair.

This proposed Plan recognises that challenge and seeks feedback on a targeted pathway to reduce the impact of outages for customers and communities most affected by these conditions.

It brings together material factors influencing the current reliability of supply to customers served by rural long feeders and outlines a staged proposal for improvement.

Figure 1: The scale and reach of the rural long feeder network

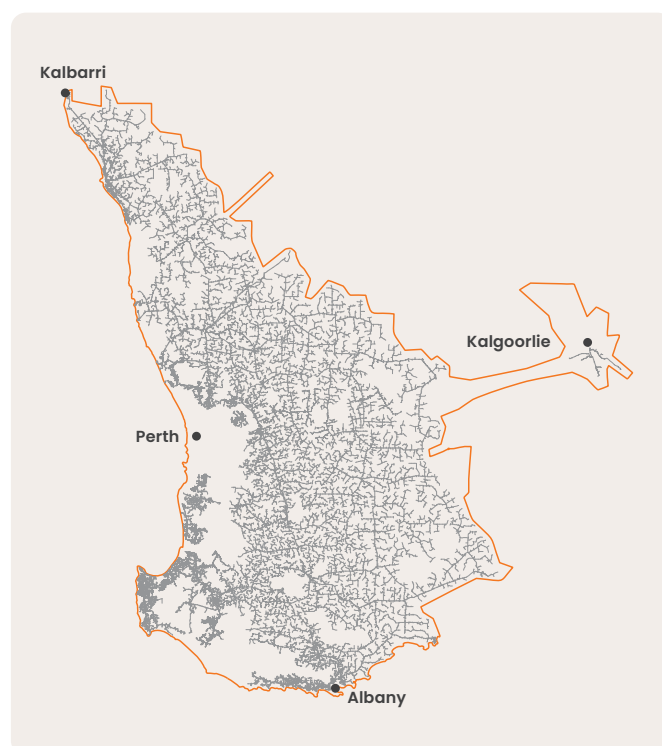
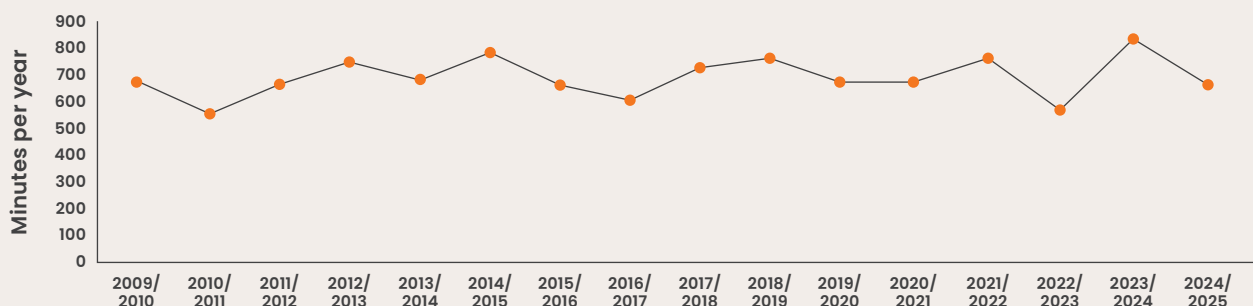


Figure 2: Rural long feeder SAIDI performance



## 1. Reliability improvement initiatives underway (2022–2027)

### We're trialling reliability improvements through the Regional Reliability Initiative – testing what works best to inform future planning.

We're delivering a series of projects under the RRI in priority areas. Each project targets the specific causes of outages on local feeders and may address one or more of the five sources of reliability improvement.

We're doing this by using solutions designed to maximise customer benefit by targeting specific root cause issues on feeders. Reliability data is considered alongside community insights to understand local impacts, evaluate effectiveness and inform future investment decisions.

Figure 3 shows the four initial priority areas, selected based on the severity of reliability impacts experienced over the last five years. Customer minutes lost, shown as CML, measures the combined duration of supply interruptions experienced by customer connected to those feeders over the five-year period.

Figure 3: Initial priority RRI locations and characteristics

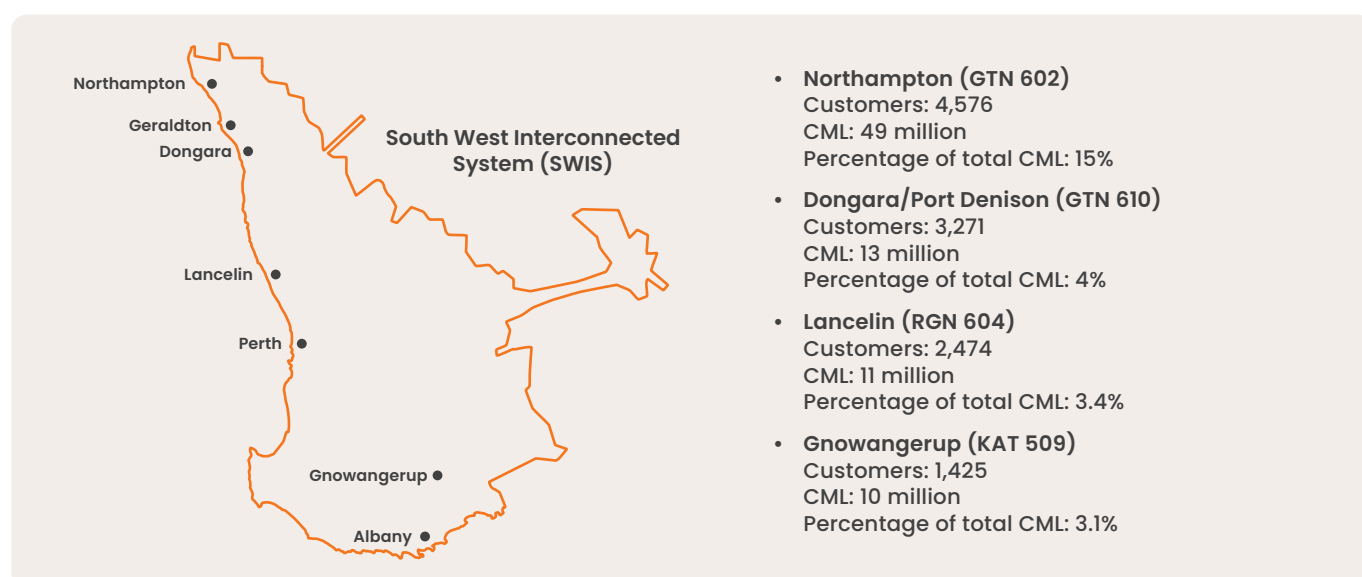
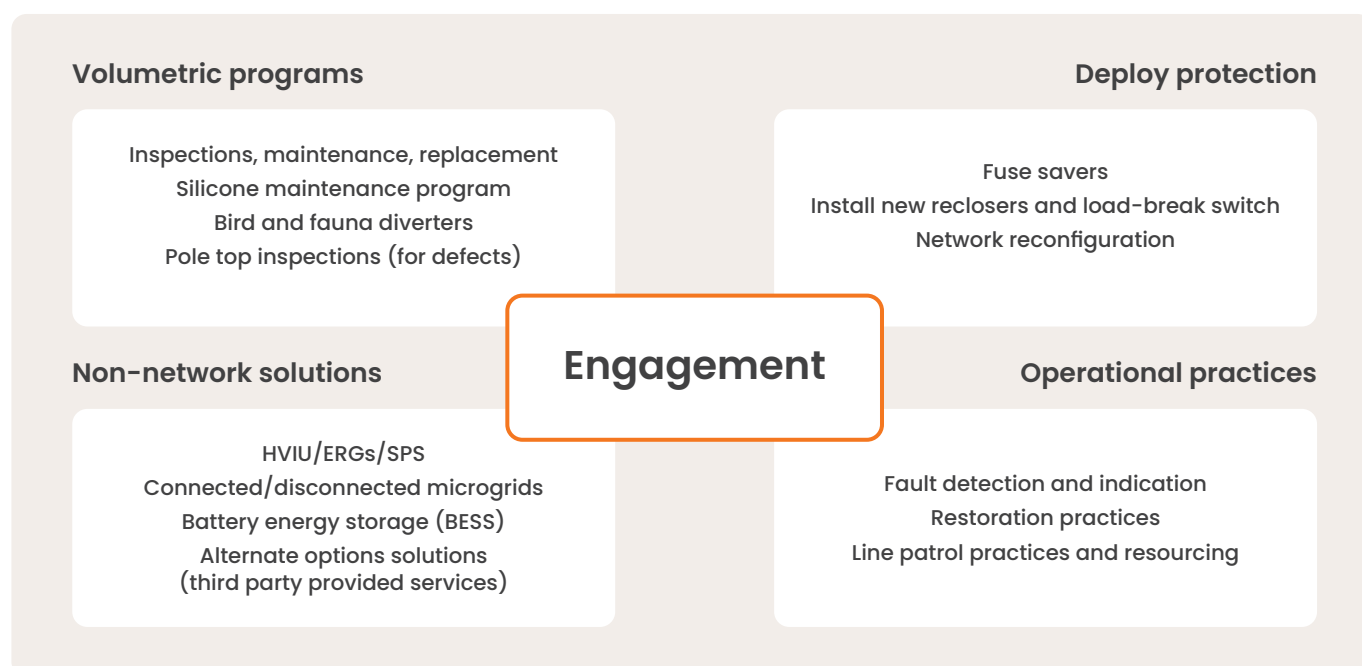


Figure 4: Solutions toolbox for rural long feeder reliability improvement



## 1.1 Extending reliability improvement trials for 20,000 customers

Solutions for each of the target areas were selected from the “Reliability solutions toolbox” identified in Figure 4. We also pulled from the same toolbox to target solutions for a further six feeders experiencing severe reliability impacts, and to assess the impact of traditional network solutions on 10 other feeders. Learnings from this work are informing the improvements we’re proposing for 2028 to 2032.

The recently installed Lancelin solution is shown in Figure 5, where six trailer-mounted Emergency Response Generators (ERGs) are connected to a High Voltage Injection Unit (HVIU). Connecting generators to the existing network helps maintain supply during extended outages, while the trailer-mounted design allows the generators to be relocated as network and operational needs change.

Since November 2024, the Lancelin solution has delivered strong customer benefits, avoiding more than 10 million customer minutes of interruption to date, more than five times the original estimate.

## 1.2 Indicative benefits of the reliability initiatives underway

By the end of the 2022–2027 period, we expect to have invested approximately \$88 million in targeted reliability initiatives. These initiatives are expected to support an estimated 20–30% improvement for about 20,000 regional customers who are expected to benefit from the works.

Figure 5: Lancelin HVIU and Emergency Response Generator facility



## Non-network solutions explained



### Battery Energy Storage System (BESS)

A large-scale battery that stores electricity and releases it when needed. BESS can help manage peak demand, support network reliability and defer the need for some network upgrades.



### Stand-alone Power System (SPS)

A self-contained power system made up of solar panels, a battery and a back-up generator. An SPS can supply one or two properties without a connection to the main electricity network.



### Emergency Response Generator (ERG)

A temporary generator used to maintain power supply during outages, maintenance or emergency network works.



### Microgrid

A power system that typically supplies a township and combines solar panels, battery storage and a back-up generator. Power is distributed throughout the town using local powerlines.

A microgrid can operate independently of the main electricity network or remain connected, providing back-up supply if there is an interruption to grid power.



### High Voltage Injection Unit (HVIU)

Equipment that enables generators to be connected to the network quickly, providing additional electricity when needed.

## 2. What customers have told us

### **The growing digital economy raises the stakes on reliability. The quality of electricity supply matters more than ever.**

To understand community priorities, we engaged with stakeholders and communities in regional areas most likely to benefit from future reliability improvements. We also launched the **Let's Talk Power Regional Connect** website, providing project information, interactive maps and ongoing updates for each target area. Following the engagement, we shared outcomes with participants and encouraged local governments to distribute the information through their own channels.

Building on the work already underway, we gathered stakeholder and community input from the regional communities most likely to be affected by future reliability improvements.

We heard regional customers consistently prioritise reliable power supply and support practical, affordable improvements to the network.

Feedback showed strong support for improving reliability in the most affected communities, while also reinforcing the importance of affordability and clear communication about the benefits, costs and trade-offs of proposed investments.

## 3. Western Power's Reliability Improvement Strategy

### **Our strategy targets the different causes of supply interruptions.**

We considered three different ways to improve regional reliability:

1. Targeted improvement pathway focusing on improving reliability in targeted areas (regional customers, townships, feeders). The historical rural long feeder performance analysis over 2021–2025 demonstrates that a small subset of feeders, selected towns and some remote customers account for a disproportionate share of reliability impacts. The data shows that targeting these regional feeders, towns and customers will provide the highest reliability improvement impact.
2. Broad improvement pathway which aims to provide benefits to as many regional customers supplied by rural long feeders as possible. However, unlike Option 1 (Targeted), the level of improvement for customers experiencing the most severe reliability impact would be more limited, as investment would be distributed across the broader customer base of 100,000 customers rather than focused on areas experiencing the highest reliability impacts.

3. Accelerated improvement pathway that pursues substantial regional reliability improvement for customers supplied by rural long feeders where practical, affordable and supported by approvals, through a combination of network and non-network solutions. It represents a higher-cost pathway aimed at moving performance materially closer to the benchmark or materially improved reliability outcomes over time.

After considering customer preferences, particularly regarding affordability and improving reliability for those experiencing the most severe impacts as quickly as practicable, we consider that a targeted approach provides the most practical balance between impact, affordability, and community benefit for the proposed pathway.

Reliability outcomes are improved through a combination of five mechanisms:

- reducing the number of faults
- reducing the number of customers affected by a fault
- improving the speed at which faults are detected and located
- reducing the time required to restore supply, and
- providing alternate or local supply where restoration is delayed.

The interventions described in this proposed Plan are intended to act on one or more of these mechanisms, depending on the underlying cause of poor reliability in each location.

In practical terms, the proposed pathway applies different solutions in different places, based on local conditions, customer needs and long-term value. It combines modern technologies with proven approaches, tailored to the feeders and locations experiencing the most severe reliability impacts. This is intended to help maximise customer benefit per dollar, subject to regulatory assessment and funding approval.

This proposed Plan sits within our wider network strategy, which aims to balance reliability, safety, affordability, and flexibility to adapt in the future.

### 3.1 Proposed investments for 2028–2032

We're consulting on proposed investments for targeted regional areas experiencing poor network reliability, focusing on those experiencing the most severe reliability impacts.

We've refined the proposed approach based on learnings gained through the delivery of the Regional Reliability Initiative, including clearer identification of the areas likely to provide the highest benefit, and the extent to which the program could be scaled in response to customer preferences, affordability, delivery practicalities, regulatory assessment and funding decisions.

Complementary investments may support this proposed approach. Replacing and rebuilding parts of the network, strengthening resilience to major weather and bushfire events, and responding to other climate-related risks could contribute to better reliability for customers and communities over time.

#### Four-pronged approach for the period 2028–2032

Our preferred approach remains targeting investment where it can make the biggest difference. This means targeting feeders, towns, and customers experiencing the most severe reliability impacts, rather than spreading investment evenly across the whole regional network. Through this targeted approach, around 34,000 customers (approximately 34 per cent of the Rural Long network) are expected to receive measurable reliability improvements. We have developed the proposed pathway using a four-pronged approach focused on areas of the network experiencing the highest reliability impacts:

- Rural long feeder program proposes to target feeder sections experiencing the most severe reliability impacts across the shortlisted targeted regional feeders (12,000 customers).

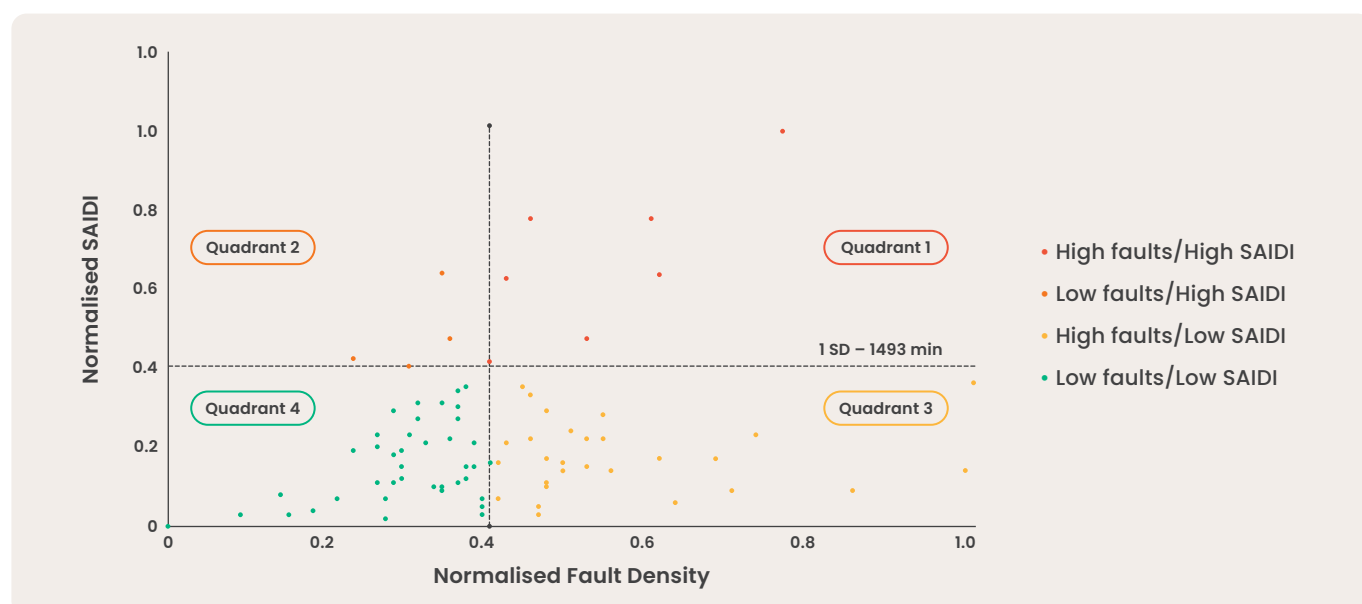
- Targeted towns program proposes to deploy targeted local resilience and backup supply solutions for towns experiencing the most severe reliability impacts, including HVIU/ERG capability, across the shortlisted towns (2,086 customers).
- Customers experiencing the most severe reliability impacts may receive targeted alternative supply solutions at individual premises, subject to assessment.
- Targeted maintenance programs and modern technology proposes tailored volumetric programs to address root-cause issues to other priority feeders. Solutions include early fault detectors (EFD), fuse savers, fauna mitigation, pole top fire mitigation, and load break switches.

Over the longer term, reliability planning is expected to continue to evolve as technology, customer needs, delivery experience, regulatory decisions and funding decisions are made. The proposed direction is toward a more flexible mix of network and local supply solutions over time.

#### How feeders, towns, and customers were selected

Figure 6 shows an example of our analytical process, which is to map the five-year average performance of each of the 81 rural long feeders against two dimensions: normalised SAIDI (vertical axis) and normalised SAIFI (horizontal axis). SAIDI is a measure of average duration of interruptions and SAIFI is a measure of average interruption frequency, and both are industry-standard measures of reliability. Quadrant 1 represents the feeders experiencing the highest reliability impacts as measured by these two metrics.

Figure 6: Analytical approach for towns supplied by rural long feeders



Indicative customer benefits from the proposed 2028–2032 program

If approved, funded and delivered, the proposed 2028–2032 program will improve reliability outcomes for customers experiencing the greatest reliability impacts.

Consistent with the targeted improvement pathway, the proposed AA6 investments focus on towns, feeders and customer locations experiencing the greatest reliability impacts.

Customer benefits include:

- Approximately 12,000 customers supplied by seven targeted rural long feeders are expected to benefit from \$54 million in network upgrades, delivering around 20% improvement in their reliability and avoiding approximately 2.7 million customer minutes of interruption.
- Approximately 2,086 customers in 12 targeted regional towns are expected to benefit from \$26 million in local resilience solutions, delivering around 45% improvement in their reliability and avoiding approximately 1.56 million customer minutes of interruption.
- Customers experiencing the poorest reliability outcomes are expected to benefit from \$13 million in alternative supply solutions, such as stand-alone power systems, delivering around 64% improvement in their reliability and avoiding approximately 284,000 customer minutes of interruption.

These investments, together with targeted maintenance activities, are expected to reduce average outage duration across the Rural Long network by an average of approximately 71 minutes and improve reliability for around 100,000 regional customers.

3.2 Indicative long-term pathway 2033–2045

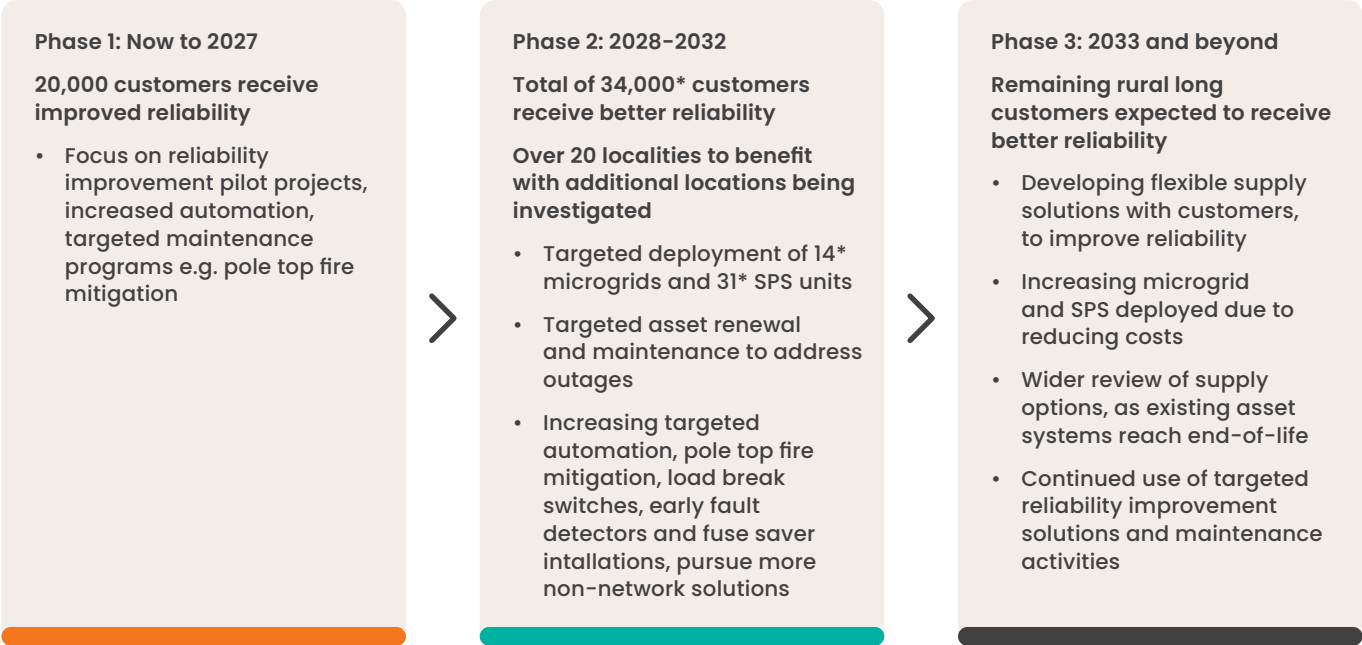
We expect targeted improvement projects may continue over future planning periods, gradually reducing as network rebuilds, microgrids and SPS become more economic and are supported through future regulatory, funding and policy decisions.

The proposed 2028–2032 investments are expected to provide a foundation for future reliability improvements through targeted investment in priority towns, feeders and customer locations. Further investment over subsequent planning phases may deliver additional reliability improvements.

The long-term pathway shown in Figure 7 is a planning trajectory rather than a fixed delivery commitment. It will continue to evolve as we monitor and analyse reliability performance, and as technology costs, asset maturity, customer expectations, delivery capability, policy settings and regulatory determinations change over time.

Based on the work to date, we consider it feasible to improve regional reliability performance through targeted investments for regional customers supplied by rural long feeders, subject to future regulatory, funding and policy decisions.

Figure 7: Regional Reliability Improvement Roadmap 2025–2045



Ongoing customer and stakeholder engagement to develop customised local solutions.

\*Targeted figures, based on recent Rural Long feeder analysis.



### 3.3 Key assumptions for long-term planning

The long-term transition pathway would be based on economic timing and future approvals. At some point it may no longer be economically viable to invest in repairing and improving the performance of certain sections of the overhead network. The most suitable option would be considered case by case, subject to customer outcomes, economics, approvals and funding.

This could include either:

- upgrading or rebuilding part of the overhead network supplemented with solutions such as HVIU/ ERGs, batteries, and connected microgrids (CMG) to provide improved reliability, or
- transition to autonomous supply<sup>2</sup> for some customers by replacing sections of the network with disconnected microgrids (DMG) and/or SPS and retiring local overhead network assets where an approved alternative supply solution is in place.

The cost of components of DMG and SPS solutions is expected to reduce over time, including solar arrays and batteries, allowing the extent of diesel back-up to reduce over time.

Diesel generation is not expected to be a preferred long-term solution, except where needed for resilience or backup during transition.

Some customers may increasingly generate at least a portion of their own electricity needs, but full energy self-sufficiency is not expected to be practical for most customers in the near term.

### 3.4 Continued focus on customers most affected by reliability issues

The reliability performance of customers may continue to improve through targeted network and non-network solutions, where customer benefits, affordability, and the relevant regulatory, funding and policy approvals support investment.

This will be supported by the ERA's regulatory review process, which tests the prudence and efficiency of proposed investments on behalf of stakeholders, including regional customers.

<sup>2</sup> Autonomous supply is where the customer receives supply without connection through the main network; not all areas of the regional network will be suitable on economic grounds for transition to an autonomous supply.



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