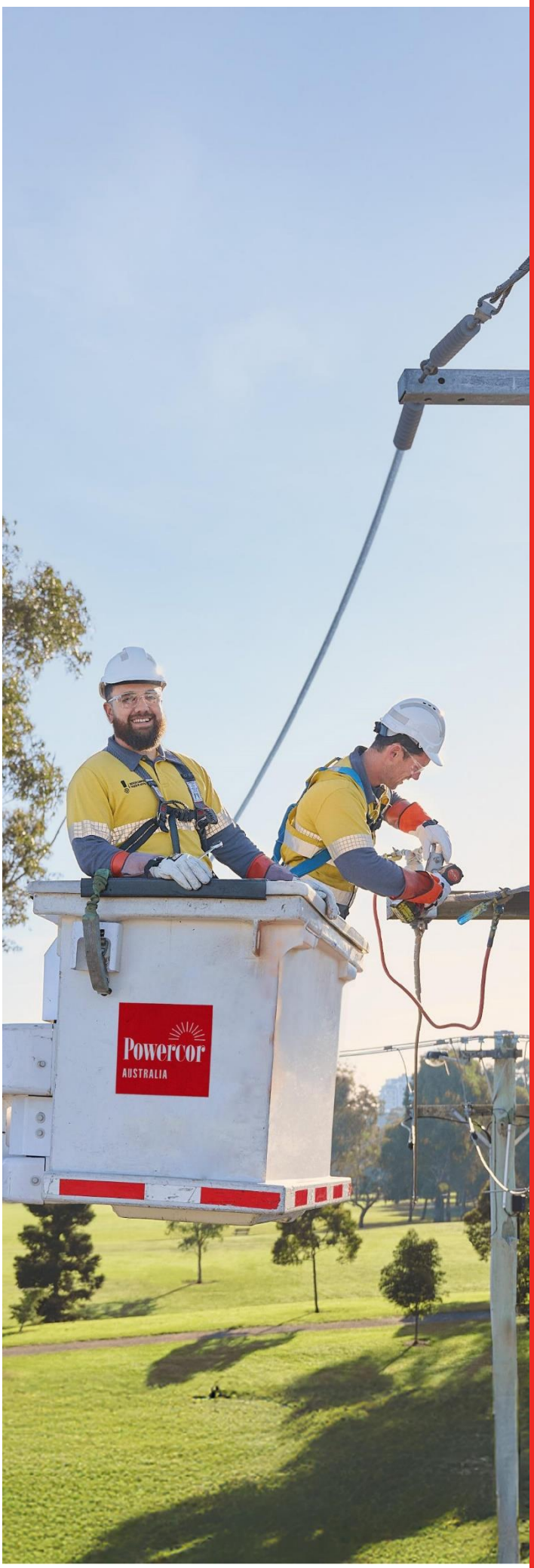

Powercor
AUSTRALIA

INNOVATION

INNOVATION ALLOWANCE

PAL RRP BUS 3.9.01 - PUBLIC
2026–31 REVISED PROPOSAL

Table of contents

1. Overview

Innovation is critical for the future of electricity distribution networks. The energy system is rapidly transitioning to a decarbonised and decentralised model, while customer expectations and climate risks continue to rise. Without dedicated funding, distributors are limited to the current regulatory framework, which can increase long-term costs and slow progress toward net-zero. An innovation allowance provides a pathway to trial new technologies and approaches that deliver long-term value for customers.

This business case addendum outlines our response to the AER's draft decision on our proposed innovation allowance and presents key updates made since our original proposal. It should be read in conjunction with our original business case and revised forecast model.[1] [2]

In our regulatory proposal, we proposed an innovation allowance to address gaps in the current regulatory framework and enable trials that deliver long-term customer benefits. The allowance was designed with safeguards such as a use-it-or-lose-it mechanism and a true-up for unspent funds; and was initially forecast for the first two years of the 2026–31 period with a reduced forecast for the following years to reflect the inherent uncertainty with innovation.

Customers strongly supported this approach, emphasising collaboration, transparency and equity. Based on this engagement, we identified four focus areas (assisting the energy transition, improving customer experience, developing sustainable networks and building network resilience) and put forward a suite of 16 innovation projects.

While the AER acknowledged the importance of innovation and stakeholder support for our program, its draft decision significantly reduced our proposed expenditure and limited funding to the first two years of the 2026–31 regulatory period. The AER requested further detail on projects across the full period, including cost build-ups, input assumptions, quantified benefits and raised concerns about alignment with its ex-ante innovation criteria.

In response, we have:

- provided additional information on each of our proposed initiatives and how they meet the AER's innovation criteria and expenditure objectives
- expanded our forecast initiatives for the full five-year regulatory period
- provided a complete governance framework, developed in collaboration with the Customer Advisory Panel (CAP), to ensure transparency and prioritisation of customer benefits.

These updates have reduced our proposed expenditure for our innovation program compared to our original proposal but are still above the AER's draft decision.

Our revised forecast for our innovation allowance is presented in table 1.

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1 PAL BUS 10.01 – Innovation allowance, January 2025
2 PAL RRP MOD 3.9.01 – Innovation allowance cost-benefit analysis, December 2025

TABLE 1 REVISED PROPOSAL: INNOVATION ALLOWANCE ($M, 2026)

CATEGORY	REGULATORY PROPOSAL	DRAFT DECISION	REVISED PROPOSAL
Capital expenditure	12.0	2.3	6.4
Operating expenditure	8.0	1.8	4.3
TOTAL	**20.0**	**4.1**	**10.7**

Note: Excludes real escalation

2. Background

This section provides an overview of our innovation allowance, including what we put forward in our original proposal and the AER's draft decision.

2.1 Our regulatory proposal

In our regulatory proposal, we highlighted that the electricity system was undergoing a rapid transformation toward a decarbonised and decentralised model, driven by customer adoption of solar, batteries, EVs and electrification of industries. We noted that innovation was critical to manage this complexity, reduce long-term costs and meet evolving customer expectations.

However, we identified that the existing regulatory framework provided only narrow and short-term incentives for innovation, leaving a gap for projects that deliver long-term customer benefits.

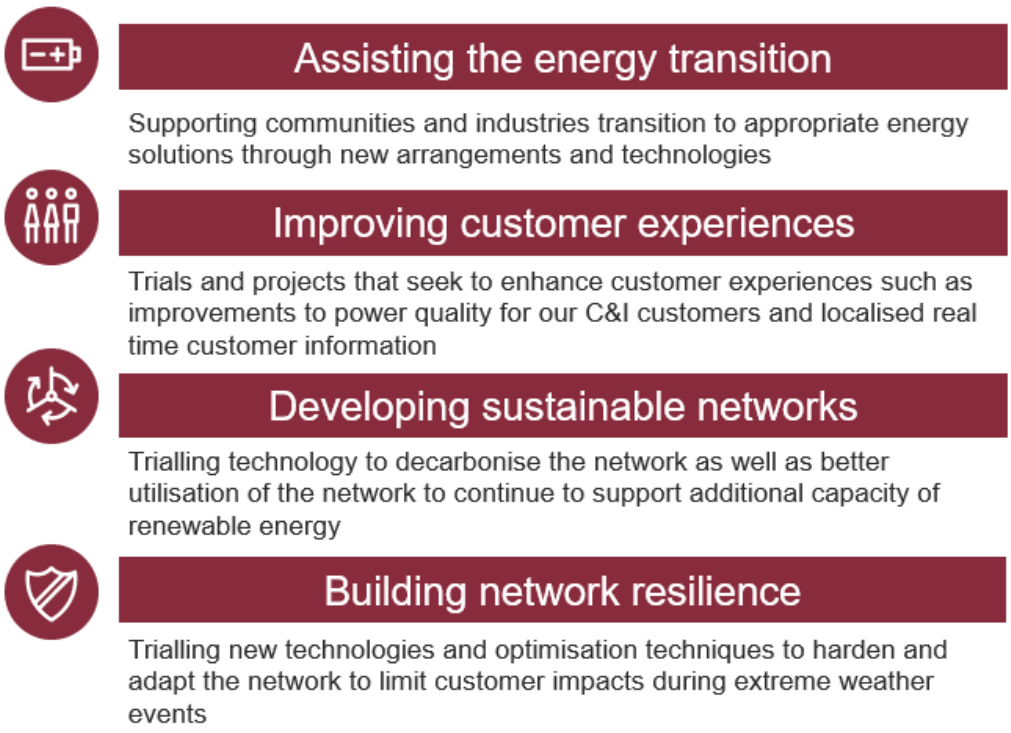
To address this, we proposed an innovation allowance with the following structure:

- funding based on projects forecast for the first two years of the regulatory period due to the difficult of forecasting innovation up to seven years in advance
- a use-it-or-lose-it mechanism to ensure any unspent funding was returned to customers
- exclusion from EBSS and CESS to avoid distorting incentives
- a true-up mechanism to return unspent funds in the following regulatory period.
- 10 per cent self-funding component for all projects.

Through our engagement program, customers strongly supported the inclusion of an innovation allowance and emphasised:

- the need for collaboration with other DNSPs, councils and research bodies.
- accountability and visibility of outcomes.
- targeted innovation for regional and vulnerable customers
- support for our four priority areas of innovation (outlined in figure 1 below).

FIGURE 1 INNOVATION ALLOWANCE FOCUS AREAS



In our regulatory proposal, we put forward a total of 16 innovation projects across these four focus areas. These 16 projects were what we considered we could reasonably forecast for the initial two years of the 2026–31 regulatory period. For the remaining years, we applied a reduced expenditure forecast to reflect the inherent uncertainty of predicting innovation projects over a longer horizon. This approach was aligned with the short project lifecycles (less than two years) of innovation projects and allowed for additional flexibility to pivot as technologies evolved over the period.

2.2 AER's draft determination

The AER has created an extensive list of criteria that must be met before a project can be considered for innovation funding.[3] In making its draft decision, the AER recognised:

- the importance of innovation investment in supporting the energy transition and protecting customers
- that there is a need for trials and pilots to test and explore new ideas, concepts and technology before committing to implementation of solutions and rolling these into business-as-usual activities
- our customer engagement on innovation-related expenditure.

The AER accepted our forecast for the following five projects, noting it aligned with the criteria for innovation projects:

- supporting hard-to-abate industries in their electrification transition

[3] AER, Attachment 2 - Capital expenditure - Draft decision - CitiPower distribution determination 2026-31, September 2025, pp. 54-57

- EV load product trial
- supporting sensitive customers with new technologies
- portable protection systems
- smart cable guard.

However, the AER did not accept the remainder of our proposed innovation projects and allowed a substitute estimate which was materially lower than our proposed forecast (as shown previously in table 1). The AER considered a number of our projects did not satisfy the innovation criteria, in particular that it did not consider many of our proposed projects to be ‘innovative’.

The AER also noted that:

- it did not provide expenditure for the final three years of the regulatory period as it required more information on the innovation projects across this timeframe
- it would not exclude our innovation expenditure from the capital expenditure sharing scheme (CESS) and efficiency benefit sharing scheme (EBSS).

3. Revised proposal

The AER's draft decision acknowledges the importance of innovation investment, and that there is stakeholder support for an innovation allowance as demonstrated through our customer engagement program. The alternative forecast in the draft decision was applied with encouragement from the AER to provide additional supporting information on cost build ups of projects across the entirety of the 2026–31 regulatory period.

In response, we have updated our innovation program with additional project details to address each of the concerns raised by the AER, specific to the assessment criteria outlined in the draft decision.[4] This has resulted in the removal of several projects that the AER deemed to not align with the assessment criteria, and the addition of projects that are better aligned. We have retained the 10 per cent self-funding component for each project.

We maintain that some of the AER's requirements around innovation expenditure are not consistent with innovation in practice. Specifically, requirements:

- that every innovation project expected to be undertaken during the regulatory period be set out in the regulatory proposal, and
- that for each project detailed cost build ups and input assumptions along with quantified benefits and efficiencies are provided.

However, in response to the draft decision, we have undertaken additional efforts to provide the details of a full suite of innovation projects for the entire 2026–31 regulatory period.

The key changes in our revised proposal are that:

- detail specific to the assessment criteria for each project has been outlined
- we are providing cost build ups of projects across the full 2026-2031 regulatory period, with new projects added and reviewed by our CAP
- the complete governance framework for the innovation allowance has been developed in collaboration with our CAP.

Our innovation allowance focus areas will be maintained as described in figure 1, as these focus areas have been created and tested in collaboration with customers and stakeholders.

[4] AER, Attachment 2 - Capital expenditure - Draft decision - CitiPower distribution determination 2026-31, September 2025, pp. 54-57

3.1 Response to AER draft determination

Table 2 highlights our response to the key issues raised by the AER around our innovation allowance.

TABLE 2 OUR RESPONSE TO THE AER'S DRAFT DECISION

AER'S DRAFT DECISION	HOW WE ARE RESPONDING
Application of the ex-ante innovation criteria	
Project detail to be provided across the full 2026–31 regulatory reset period	Our project list for the regulatory period has been updated with detail across the entire regulatory period. This includes the provision of additional detail for projects in our regulatory proposal, and the inclusion of new projects across the period.
Alignment with the provided assessment criteria, including clarifying the innovative nature of each project as opposed to BAU activities	Each project has been compared and justified against the assessment criteria provided in the draft decision. This includes detailing the exhaustion of all alternative funding mechanisms prior to allocation of the innovation allowance. In this process of alignment, we have removed several projects from our proposal in line with feedback provided by the AER (including trialling sustainable fleet options and resilience-based innovation projects).
Specific focus on transparency of the innovation proposals to ensure net benefits for consumers	We engaged with our Customer Advisory Panel (CAP) to enhance and finalise our innovation governance framework. This framework will facilitate the prioritisation of innovation projects with respect to customer needs and potential benefits.
Provide a full suite of innovation projects for the entire regulatory period	
Cost build ups to be provided for all projects and reconciled to the proposed expenditure forecast across the entire regulatory period	A complete project list has been applied (see section 6 and the corresponding cost benefit analyses).[5] This includes ensuring projects are estimated at an appropriate scale for an innovation trial, and that projects have been proposed across all years of the 2026–31 regulatory reset period.

[5] PAL RRP MOD 3.9.01– Innovation allowance cost-benefit analysis, December 2025

3.2 Revised project list

Table 3 summarises the full revised list of projects that have been developed to better align with the AER's assessment criteria.

TABLE 3 REVISED LIST OF INNOVATION PROJECTS ($M, 2026)

PROJECT	CAPEX	OPEX	TOTAL
FOCUS AREA 1: ASSISTING THE ENERGY TRANSITION			
Supporting hard to abate industries in their electrification transition *(amending)*	0.4	0.8	1.1
Behavioural price signals trial *(previously dynamic tariffs trial)*	1.1	0.4	1.5
Regional electrification trials *(previously electrifying farming trials)*	0.6	0.6	1.3
EV load product trial *(accepted AER draft decision)*	0.0	0.2	0.2
VPP integration with hot water load control *(new project)*	0.5	0.1	0.5
FOCUS AREA 2: IMPROVING CUSTOMER EXPERIENCES			
Supporting sensitive customers with new technologies *(accepted AER draft decision)*	0.6	0.3	0.9
Portable protection systems *(accepted AER draft decision)*	0.6	0.2	0.8
Smart cable guard *(accepted AER draft decision)*	0.2	0.1	0.3
Community energy fund *(new project)*	1.3	1.8	3.1
FOCUS AREA 3: DEVELOPING SUSTAINABLE NETWORKS			
Long duration storage technology trials *(new project)*	0.6	0.1	0.7
Inverter-based load modelling *(new project)*	0.8	0.1	0.9
FOCUS AREA 4: BUILDING NETWORK RESILIENCE			
Enabling grid-forming in networks *(new project)*	0.5	0.2	0.6
TOTAL	**7.2**	**4.8**	**11.9**
TOTAL LESS 10% SELF-FUNDING	**6.4**	**4.3**	**10.7**

Note: Totals may not exactly match due to rounding

3.3 Project delivery

The projects will be staggered across the five-year period, with a goal to capture learnings as soon as possible within the period to allow for scaling where applicable within the regulatory period. The project timeline is shown in table 4.

TABLE 4 PROJECT DELIVERY PLAN

PROJECTS	FY27	FY28	FY29	FY30	FY31
FOCUS AREA 1: ASSISTING THE ENERGY TRANSITION					
Supporting hard to abate industries	TRIAL				
Behavioural price signals trial	TRIAL		SCALE		
Regional electrification trials	TRIAL				
EV load product trial	TRIAL		SCALE		
VPP integration with hot water load control		TRIAL		SCALE	
FOCUS AREA 2: IMPROVING CUSTOMER EXPERIENCES					
Supporting sensitive customers with new technologies	TRIAL		SCALE		
Portable protection systems	TRIAL		SCALE		
Smart cable guard	TRIAL		SCALE		
Community energy fund	TRIAL				
FOCUS AREA 3: DEVELOPING SUSTAINABLE NETWORKS					
Long duration storage technologies			TRIAL		SCALE
Inverter-based load modelling				TRIAL	
FOCUS AREA 4: BUILDING NETWORK RESILIENCE					
Enabling grid-forming in networks			TRIAL		

4. Alignment with expenditure objectives

4.1 How our focus areas address our expenditure objectives

Our regulatory proposal outlined 4 key innovation focus areas that were informed through our engagement program. In this addendum, we have refined the projects under each focus area and outlined the alignment with our expenditure objectives.

4.1.1 Focus area 1: Assisting the energy transition

There is an increasing need to support communities and industries during the energy transition. Customers are becoming more dependent on electricity, and we must ensure our network is equipped to support customers through this change. It is important to consider the appropriate energy solutions for customers via new technologies, arrangements and processes whilst ensuring our network have the capabilities to support this. Trialling innovative technologies will assist the integration and utilisation of CER connected to our network. This will ensure that customers are able to get the most value from their assets and utilise our network safely and efficiently. Supporting customer energy solutions will also contribute to reducing greenhouse gas emissions.

4.1.2 Focus area 2: Improving customer experiences

As the journey towards net-zero continues customers are becoming increasingly dependent on or network. We need to ensure that we are considering how we will best address customers' needs and expectations during this rapid change and ensure they are receiving the most ideal experience. It is important to address how we can continuously to improve customer experience when they are interacting with our services. As a result, we must consider innovative ways to improve our customer service to effectively meet and respond to the changes in customer needs and expectation. This involves trialling new innovative technologies and capabilities related to our network, whilst ensuring this aligns with our network planning and operations.

4.1.3 Focus area 3: Developing sustainable networks

Emission reductions have become an objective in the National Electricity Rules as well as being a desired preference by our stakeholders, increasing the need for networks to decarbonise. Networks are assisted in decarbonisation process by improving the performance of renewable energy sources and technologies to better utilise the network and support grid stability and additional capacity, as well as reducing our own sources of greenhouse gas emissions.

4.1.4 Focus area 4: Building network resilience

As the climate continues to change, we can expect more frequent and severe weather events such as fires, floods and storms. This is likely to lead to increasingly poor outcomes for customers due to the associated outages linked to these events. Innovation related to building a resilient network gives us the opportunity to explore, experiment and understand the limitations and barriers of our network when exposed to extreme weather conditions.

4.1.5 Project alignment with expenditure objectives

While our innovation focus areas provide strategic direction for innovation projects, each project has a distinct alignment with our expenditure objectives as set out in the National Electricity Rules (NER). Table 5 summarises the identified need and expenditure objective alignment for each project.

TABLE 5 SUMMARY OF PROJECT ALIGNMENT WITH EXPENDITURE OBJECTIVES

PROJECT	EXPENDITURE OBJECTIVE
FOCUS AREA 1: ASSISTING THE ENERGY TRANSITION	
Supporting hard to abate industries	Reduce carbon emissions of hard-to-abate customers, contributing to achieving emissions reduction targets. Relevant NER clauses: 6.5.7(a)(2), 6.5.7(a)(3)(ii), 6.5.6(a)(5), 6.5.6(a)(1), 6.5.6(a)(4), S5.1.2
Behavioural price signals trial	Enable customers to respond to real-time price signals, improving demand flexibility, reducing peak demand, and supporting integration of renewable energy. Relevant NER clauses: 6.5.7(a)(1), 6.5.7(a)(3)(iii), 6.5.7(a)(5), 6.5.6(a)(3), 6.5.6(a)(4)
Regional electrification trials	Reduce carbon emissions of farming and regional customers, contributing to achieving emissions reduction targets. Relevant NER clauses: 6.5.7(a)(1), 6.5.7(a)(5), 6.5.6(a)(2), 6.5.6(a)(3), S5.1.2
EV load product trial	Increase network utilisation and optimise system planning, improve customer reliability. Relevant NER clauses: 6.5.7(a)(1), 6.5.7(a)(3)(iii), 6.5.7(a)(5), 6.5.6(a)(3), 6.5.6(a)(4)
VPP integration with hot water load control	Improve demand flexibility and optimise network and customer outcomes. Relevant NER clauses: 6.5.7(a)(1), 6.5.7(a)(3)(iii), 6.5.7(a)(5), 6.5.7(c)(1)(i), 6.5.6(a)(1)
FOCUS AREA 2: IMPROVING CUSTOMER EXPERIENCES	
Supporting sensitive customers with new technologies	Improve customer experience with regards to voltage performance and maintain compliance with system standards. Relevant NER clauses: S5.1, S5.1.2, 6.5.6(a)(3), 6.5.7(a)(3)(iii)
Portable protection systems	Reduce time off supply for customers at risk of outages due to extreme weather events or other outage events, improving reliability and security of supply. Relevant NER clauses: 6.5.7(a)(3), 6.5.7(a)(3)(iii), 6.5.6(a)(3), S5.1.2

Smart cable guard	Avoiding augmentation by predicting areas of the network at greatest risk of a fault due to cable failure, maintaining reliability and safety. Relevant NER clauses: 6.5.7(a)(3), 6.5.7(a)(3)(iii), 6.5.6(a)(3), S5.1.2
Community energy fund	Reduce carbon emissions of customers at risk of vulnerable circumstances, contributing to achieving emissions reduction targets. Improve customer reliability experience. Relevant NER clauses: 6.5.7(a)(3)(iii), 6.5.7(a)(5), 6.5.6(a)(5), 6.5.6(a)(3)
FOCUS AREA 3: DEVELOPING SUSTAINABLE NETWORKS	
Long duration storage technology trials	Enable renewable integration and improve system resilience through longer-duration storage. Relevant NER clauses: 6.5.7(a)(1), 6.5.7(a)(3)(iii), 6.5.7(a)(5), 6.5.7(c)(1)(i), 6.5.6(a)(1)
Inverter-based load modelling	Maintain reliability and power quality as new inverter-based loads connect to the network. Relevant NER clauses: 6.5.7(a)(1), 6.5.7(a)(3)(iii), 6.5.6(a)(2), S5.1.2
FOCUS AREA 4: BUILDING RESILIENT NETWORKS	
Enabling grid-forming in networks	Maintain system security and reliability as renewable penetration increases. Relevant NER clauses: 6.5.7(a)(3)(iii), 6.5.7(a)(5), 6.5.7(c)(1)(i), 6.5.6(a)(2)

4.2 Limited funding pathways for customer focussed innovation

The AER has recognised a requirement for innovation investment. In our regulatory proposal, we outlined that in the absence of regulated funding, there are limited pathways for distribution networks to fund innovation focused on delivering long-term customer benefits. Without an explicit source of funding, it is likely that only known solutions will be deployed (given the higher risks of deploying un-tested and un-proven technology at scale) to meet network problems and constraints, which may cost customers more in the long-term.

The innovation allowance is unique to any other external funding sources or AER incentives as:

- the demand management innovation allowance mechanism (DMIAM) is narrow in scope and small in scale, and unable to fund the innovation required beyond small scale demand management projects.
- existing schemes such as the Capital Expenditure Sharing Scheme (CESS) and Efficiency Benefit Sharing Scheme (EBSS) incentive cost efficiencies however are not able to fund innovation projects aiming to improve service performance or customer value. They may in fact inhibit innovation expenditure as DNSPs seek to avoid scheme penalties from the expenditure, even though the innovation benefits may occur at a future point or across multiple regulatory periods
- external funding, such as from government grants, may have prohibitively slow processes and there is uncertainty as to whether funding will be received for a specific project (which limits structured planning). This results in an ad-hoc approach to innovation. We will continue to pursue external funding where applicable, and all innovation projects will be assessed against available funding avenues before proceeding to the innovation allowance governing committee.
- while there is a regulatory sandbox that is designed for testing innovative solutions, this is not in itself a funding mechanism. The regulatory sandbox provides an environment in which innovative projects may be tested without requiring regulatory change, however, does not overcome the hurdle of the upfront capital requirements to deliver an innovative project.

There is a need within the regulatory framework to better incentivise and remove innovation barriers more broadly, where such innovation can provide long-term value to customers.

5. Innovation allowance governance framework

To ensure transparency in our processes we are proposing an innovation framework that establishes insights from our customers, and priorities the program accordingly through an independent innovation committee.

5.1 Purpose of the innovation allowance

The purpose of this framework is to ensure that innovation projects are selected and prioritised based on their potential to deliver long-term customer value, through our 4 focus areas:

1. Assisting the energy transition. As customers are becoming more dependent on electricity, we must ensure our network is equipped to support customers through this change. The allowance will support customers electrification understanding allowing them to maximise their CER and associated electrification decisions.
2. Improving customer experience. As the journey towards net-zero continues customers are becoming increasingly dependent on or network. We need to ensure that we are considering how we will best address customers' needs and expectations ensuring they are receiving the most ideal experience. This allowance focuses on delivering improved customer experience allowing them to make more informed decisions.
3. Developing sustainable networks. Emission reductions have become an objective in the National Electricity Rules as well as being a desired preference by our stakeholders. This fund develops a sustainable network, addressing customer concerns on reducing greenhouse gas emissions and noise pollution.
4. Building network resilience. Innovation related to building a resilient network gives us the opportunity to explore, experiment and understand the limitations and barriers of our network when exposed to extreme weather conditions. Reducing the impact to customers and communities, particularly those that are in rural and regional areas.

5.2 Purpose of the innovation allowance committee

We are committed to establishing a diverse innovation committee to provide independent oversight to our innovation expenditure. The committee will provide a forum for the network to collaborate with consumers in deciding the future direction of the network, ensuring we are investing in projects that will deliver clear customer benefits. The committee puts in place formal arrangements to give customers a role in deciding our innovation investment program providing greater choice and control, things that customers expect from a network of the future.

Our committee will bring a diverse range of stakeholders together, creating collaboration across the industry, helping minimise the scope for overlaps in innovation expenditure and facilitating collaboration and knowledge sharing – outcomes that will help maximise the potential customer benefit from each of our initiatives.

5.3 Guiding principles

The guiding principles of our Innovation allowance/ committee are aligned with our focus areas. The overarching principle of the innovation allowance is to promote the National Electricity Objectives (NEO), with an emphasis on the long-term benefit of consumers, across multiple regulatory periods,

rather than just short-term benefits. Each project must support at least one of the objectives of the NEO (price, quality, safety, reliability, security, and emissions reduction),or promoting the long-term interests of consumers with respect to improving network and community resilience.

The innovation allowance is targeted at achieving the following outcomes:

- supporting long-term affordability
- enabling flexibility markets
- enabling CER uptake, integration and utilisation
- supporting emissions reduction and net zero targets
- increasing network utilisation
- supporting equity across vulnerable and worst-served customers.

The innovation committee will be responsible for ensuring that projects are prioritised in accordance with the guiding principles and targeted outcomes, with a focus on customer-centred outcomes. Customer commitments [when finalised] may also be used to guide the customer focus of the innovation program.

5.4 Project selection criteria

For projects to be delivered under the innovation allowance, they must meet the following criteria, as assessed by the innovation committee:

- be aligned with our focus areas and targeted outcomes
- solve a unique problem
- deliver clear benefits for customers (with respect to the National Electricity Market and resilience)
- represent a real innovative approach (which does not represent business as usual activities or duplicate DMIAM funded projects)
- be scalable (appropriately sized for a pilot/ trial, and can be replicated and expanded if success is demonstrated)
- include a robust risk management plan, addressing potential challenges and uncertainties
- contribute to the industry knowledge pool, with lessons learnt (of both project successes and failures) shared to facilitate further innovation across the NEM (and beyond).

The innovation committee may review the project selection criteria upon commencement. Any changes must be agreed by both the committee and us before final approval.

5.5 Business responsibilities

The internal innovation team is responsible for identifying, developing and managing innovation projects. This includes the preparation of business cases and presentations to inform the innovation committee's prioritisation of projects.

The executive management team of Regulation and Electricity Networks (EN) are responsible for oversight, strategic direction, and ensuring project alignment with regulatory requirements and the broader network program of works.

5.6 Innovation allowance committee

The innovation allowance committee will be comprised of a diverse membership of expert advisors, including network, customer, and industry representatives.

The committee will be established upon commencement of the 2026–31 regulatory period, with membership selected in agreement by us and the Customer Advisory Panel (CAP).

5.6.1 Scope/remit

The committee will be responsible for review and oversight of the innovation allowance selection process, including the phases of ideate, testing, and closing the loop. Projects must be aligned with the focus areas and meet the project selection criteria.

5.6.2 Resource requirements

We will provide the committee with pre-read materials, including business cases with costs, benefits, and options analysis for consideration. We will provide supplementary material upon request, as required to empower the committee to make informed decisions when prioritising projects.

5.6.3 Innovation committee membership

Our innovation committee will comprise 5-7 members, to be selected upon commencement of the 2026–31 regulatory period. The members and chair will be decided by us.

- **Industry Representatives:** Experts in energy systems, engineering, and emerging technologies to assess feasibility and scalability of potential projects. This may include academics, or representatives from relevant government departments.
- **Customer Representatives:** Ensure alignment with customer needs and public expectations, including at least one member from the CAP.
- **Network Representatives:** Members of the internal innovation team and senior executives responsible for delivering projects and maximizing customer benefits. Members of other networks may bring insights and learnings, maximising knowledge sharing during the ideation, testing, and delivery phases of innovation projects.

5.6.4 Roles and responsibilities

The committee will be responsible for review and oversight of the innovation fund allowance, including project prioritisation, testing alternative options, ensuring projects meet the selection criteria, and contributing to closing the loop.

Committee members

The committee is expected to actively participate in project selection, including the provision of advice, expertise, and insights from their relevant experience and professional networks.

While it is our responsibility to publish knowledge sharing reports on our website, the committee is also responsible for ensuring that lessons learnt are shared transparently and meaningfully within the industry and broader public, to maximise project benefits. The committee's role in this knowledge sharing will be delivered via a committee review section in each project's knowledge sharing report, and an end of year review across the program of innovation allowance projects.

The chair

The chair of the committee is responsible for facilitating meetings, ensuring all views are heard, and a consensus is reached. The chair is also ultimately responsible for the committee's section of the knowledge sharing reports.

5.6.5 Operation of the committee

The committee will meet at least four times per year, either online, or at our head office. The initial session of each year will consider the scope of projects, and review the operation, process, and projects of the previous year. Following meetings will assess projects for prioritisation and selection, scrutinise the costs, benefits, approach, and assumptions of projects presented. The committee is responsible for ensuring that selected projects meet the selection criteria and are aligned with the focus areas and targeted outcomes.

It is our responsibility to prepare and present projects for selection to the committee. However, committee members may propose other projects for consideration.

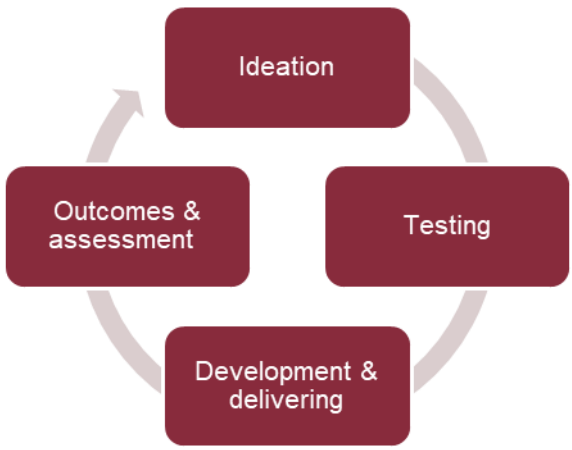
While we retain final decision powers, the Innovation Committee must express a majority support for a project for funding from the innovation allowance to be released.

Meeting minutes will be validated and published on our website. Committee members may request additional information and follow-up questions.

5.7 Innovation framework

The operation of the innovation allowance follows a structured process. This section outlines the four key stages: Ideation, Testing, Development & delivery, and Outcomes & assessment, as depicted in figure 2.

FIGURE 2 KEY STAGES OF THE INNOVATION FRAMEWORK



5.7.1 Ideation

The Ideation stage is the starting point for identifying and shaping potential innovation projects. It involves exploring new ideas for trials by identifying market opportunities that can deliver medium to long-term benefits for customers. This process results in a long list of candidate projects, some of which may be scaled into larger pilot programs based on their potential and alignment with strategic priorities. All projects considered under this framework are intended to have a short lifecycle, with a maximum duration of two years.

Generating ideas for innovation projects is our responsibility. Committee members are welcome to propose additional initiatives for our consideration. We will look for gaps and opportunities in the electricity distribution market. We will collaborate with customers to come up with ideas. Engaging with customers through the CAP and social media platforms. The innovation committee members may propose projects for the committee's consideration. These ideas must align with the selection criteria outlined in section 5.4 and recognise existing operational challenges, considering emerging technologies and concepts, and drawing insights from industry trends, policy developments, and experiences of peer organisations. All proposed projects must clearly define their expected customer benefits to support consistent and objective evaluation.

Once collected, ideas will be reviewed and assessed to determine their readiness for further development and potential progression through the innovation framework.

5.7.2 Testing

Shortlisted candidate projects are reviewed by the Innovation Committee, to test the prudency and efficiency of investment decision. Ideas will be tested against our standardised project selection criteria (section 5.4). The evaluation criteria will consider the degree of alignment with internal priorities and what the current market alternatives are. It will also identify assumptions risks, and mitigation strategies.

Projects will be approved in this stage. A benefits assessment will be included that incorporates both a quantitative and qualitative view of customer benefits, compared to the cost to deliver the project. We retain final decision powers over projects chosen for development.

5.7.3 Development & delivering

Once projects are approved, they move into the development and delivery phase, where they are refined, planned, and implemented. Key activities in this stage include:

- refining the project concept and scope to align with business needs and customer outcomes
- reviewing business benefit against detailed cost assessment
- establishing a project delivery plan, which includes clear milestones and designated 'fail fast' points. These fail fast points allow for structured decision-making throughout the project lifecycle, enabling early exit or pivoting if risks increase or expected benefits decrease
- collaborating across teams and seeking further internal endorsement, where necessary.

Projects will be assigned to relevant business units and an internal working group will be established to manage the implementation and operation.

5.7.4 Outcomes & assessment

Throughout and after implementation, projects will be monitored and assessed to ensure they are delivering against expected outcomes. This includes:

- tracking outcomes and performance
- capturing any additional or unforeseen customer benefits
- reviewing risks and assumptions.

Progress and performance will be reported to the Innovation Committee and/or customer at defined intervals. The Committee may also provide input during delivery, particularly if adjustments or early termination are being considered.

At the established points of assessment, projects will be checked for the appropriate next steps and pathways forward—whether to scale, modify, embed into business-as-usual (BAU), or discontinue the initiative.

In line with the two-year innovation cycle, a mid-term review of the overall program will be conducted in 2028. This review will consolidate lessons learned across all projects and inform improvements at both project and program levels.

5.7.5 Meaningful engagement

The IAP2 public participation spectrum will be used to ensure transparency of engagement. Each step of the process will be considered against the five categories of the IAP2 spectrum. We anticipate that the following participation levels will be achieved at each stage of the innovation process:

- **Ideation**; collaborate and empower. Committee members will partner with us to consider innovative projects for selection. Committee members will be empowered to suggest projects for consideration, further research and testing.
- **Testing & development**; collaborate: Committee members will review, scrutinise, and prioritise projects for selection, in collaboration with us.
- **Delivery**; inform and consult. We will be ultimately responsible for the delivery and operation of innovation fund trials and pilots undertaken. We will provide regular updates on project progress and seek feedback from the committee as appropriate throughout the project delivery.
- **Outcomes and assessment**; consult and collaborate. The committee will publish an independent report on the process, learnings, and outcomes of the project, once complete. This will facilitate knowledge sharing, lessons learnt, and transparency of both process and outcomes.

6. Updated project details

The AER's draft decision acknowledges the importance of innovation investment and that there is stakeholder support for an innovation allowance as demonstrated through our customer engagement program. The alternative forecast in the draft decision was applied with encouragement from the AER for further supporting information to be provided on projects addressing the AER's assessment criteria.

In response, we have updated our regulatory proposal with additional project details to address each of the concerns raised by the AER, specific to the assessment criteria outlined in the draft decision. This has resulted in the removal of several projects that were deemed to not align with the assessment criteria and the addition of 5 new projects that are better aligned. Table 6 sets out our revised forecast expenditure for the 2026–31 period.

TABLE 6 REVISED FORECAST EXPENDITURE ($M, 2026)

	FY27	FY28	FY29	FY30	FY31	TOTAL
Capital expenditure	1.9	2.1	1.4	0.9	0.8	7.2
Operating expenditure	1.2	1.3	0.9	0.7	0.7	4.8
TOTAL	**3.1**	**3.4**	**2.3**	**1.7**	**1.5**	**11.9**
TOTAL LESS 10% SELF-FUNDING	**2.8**	**3.0**	**2.0**	**1.5**	**1.3**	**10.7**

We have also set out our project delivery plan in table 4, illustrating how each initiative progresses from trial to scale, addressing the AER's requirements for a pathway to BAU, with more detail for each project provided in the sections below.

6.1 Supporting hard to abate industries in their electrification transition

In its draft decision, the AER accepted our initiative to support hard-to-abate industries in their electrification transition We are proposing to expand this from the originally planned two-year scope to the full five-year regulatory period. This project will explore opportunities to assist local communities and industries in replacing carbon-intensive technologies with electrified alternatives. Our focus will include testing emerging technologies such as carbon heat blocks and industrial scale batteries and providing tailored advice on system integration to manage both network and customer impacts.

This trial could have the potential to accelerate Victoria's decarbonisation goals, reduce reliance on fossil fuels and enable industries to adopt solutions that are both technically and economically viable.

6.1.1 Delivering genuine innovation

Victoria's strong policy push for electrification, combined with our network's coverage of diverse industrial sectors and high renewable penetration, creates a unique opportunity to lead this transition.

Our existing smart meter infrastructure and experience with DER integration position us to manage the complexity of industrial electrification effectively.

This pilot seeks to deliver:

- Practical demonstrations of electrification solutions for hard-to-abate processes, such as industrial heating and thermal applications.
- Integration of new technologies (e.g., carbon heat blocks, large-scale batteries) into existing industrial operations.
- Advisory frameworks for network impact management and customer decision-making.

Victorian-specific circumstances make this project uniquely suited to our networks:

- High penetration of renewable generation in regional Victoria creates opportunities for industries to electrify using low-emission energy.
- Existing smart meter infrastructure enables granular monitoring of industrial load profiles and electrification impacts.
- Our networks serve diverse industrial sectors—from food processing to manufacturing—where electrification pathways are complex and require tailored solutions.

This is not business-as-usual. Electrification of hard-to-abate sectors is largely untested and the business case for these technologies remains uncertain, justifying a structured trial approach.

6.1.2 Alignment with expenditure objectives

This project would support the following NER clauses:

- Clause 6.5.7(a)(2) – Capex Objective: Comply with regulatory obligations. Electrification of industrial loads requires compliance with new technical standards and safety obligations.
- Clause 6.5.7(a)(3)(ii) – Capex Objective: Maintain security of supply. Integration of large industrial loads demands proactive planning to maintain system security.
- Clause 6.5.6(a)(5) – Opex Objective: Contribute to emissions reduction targets. Electrifying hard-to-abate sectors directly supports Victoria's decarbonisation goals.
- Clause 6.5.6(a)(1) – Opex Objective: Meet or manage expected demand for standard control services. Trials and advisory frameworks help manage increased electrification loads.
- Clause 6.5.6(a)(4) – Opex Objective: Maintain safety of the distribution system. Testing new technologies under controlled conditions ensures safe integration.
- Schedule 5.1.2 – System Standards: Voltage and frequency performance obligations. Industrial electrification impacts voltage stability and fault levels, requiring compliance.

This trial could have the potential to enable industries to transition without compromising reliability or affordability and defer network augmentation costs.

6.1.3 Existing incentives and support mechanisms have been exhausted

We have assessed alternative funding sources:

- DMIS: The Demand Management Incentive Scheme (DMIS) is designed to encourage demand-side initiatives that defer network augmentation. This does not cover technology trials for industrial electrification. Its focus is on short-term demand-side initiatives, not multi-year electrification pathways.

- DMIAM: The Demand Management Innovation Allowance Mechanism (DMIAM) supports small-scale demand management innovation projects. However, it does not extend to industrial-scale electrification trials or advisory frameworks for network integration.
- Government grants: Limited in scope and insufficient for multi-year, multi-technology trials. Approval processes are slow and uncertain, making structured planning difficult.
- Industry-led programs: Typically focused on single-technology pilots without considering network integration or compliance with technical standards.

Innovation funding is therefore the most appropriate mechanism to deliver this initiative.

6.1.4 Right sized for a trial with a pathway to BAU

The project is designed to manage implementation risks and deliver actionable insights:

- Technology Risk: Testing carbon heat blocks and batteries under real industrial conditions.
- Integration Risk: Assessing network impacts of large, electrified loads and developing mitigation strategies.
- Customer Adoption Risk: Understanding barriers and enablers for industry participation.

The pilot will run over a period of 5 years, with the following key phases:

- Phase 1 (Year 1-2): Technology selection, stakeholder engagement, initial pilots.
- Phase 2 (Year 3-4): Expanded trials across a couple of industrial sites, network impact analysis.
- Phase 3 (Year 5): Evaluation, development of BAU frameworks, and transition planning.

Success criteria include technology performance, customer adoption and modelling network impact.

6.1.5 Stakeholder endorsed

We anticipate the following benefits to our consumers:

- Tailored support for electrification decisions, reducing uncertainty and cost.
- Access to tested technologies and integration advice.
- Long-term savings through improved energy efficiency and reduced reliance on fossil fuels.

Through consultation, we have defined the following integrated use cases:

- Electrification of industrial heating and thermal processes using carbon heat blocks
- Integration of large-scale batteries for load management
- Advisory frameworks for network impact management
- Electrification pathways for food processing, manufacturing and other hard-to-abate sectors.

We presented this project to our Customer Advisory Panel (CAP) during engagement workshops, outlining objectives, benefits and alignment with customer priorities. CAP members strongly supported the initiative, emphasising its role in accelerating Victoria's decarbonisation. They endorsed structured trials to reduce uncertainty and avoid ad-hoc approaches and welcomed the independent governance model to ensure transparency and prioritisation of customer benefits. CAP feedback confirmed this project aligns with their expectations for innovation funding – delivering long-term value and supporting an equitable energy transition.

6.2 Behavioural price signals trial

In its draft decision, the AER rejected our dynamic tariffs trial project. We consider this trial critical for driving innovation in tariff design and customer engagement and in response, we have updated the trial's scope and clarified key details that align with the AER's criteria to assess innovation projects.

We have since renamed this to behavioural price signals trial, we are proposing this trial to explore how near real-time pricing signals can influence customer energy use and support network efficiency, with a focus on diverse customer groups and location-specific pricing. The trial will target retailer virtual power plants for residential customers with flexible loads (e.g., hot water systems, batteries, EV chargers) and large CER customers such as large BESS, electro-thermal energy storage or EV charging stations, ensuring insights across different usage profiles. We would explore with VicGrid whether they could provide dynamic transmission pricing to us at one of our transmission connection points so that we could pass these dynamic transmission charges on to a large CER customer.

Unlike traditional critical peak pricing models that provide day-ahead notifications, our trial introduces progressively shorter price signals, starting with 4-hour intervals and moving toward 5-minute pricing. This will be enabled through an API-based communication platform integrated with retailers and aggregators and supported by a mini billing system to validate processes before full-scale implementation.

This trial could have the potential to transform how retailers / large CER customers can provide localised load management and facilitates better integration of CER by providing an opportunity to reduce network charges and upfront connection costs.

6.2.1 Delivering genuine innovation

Behavioural price signals represent a significant departure from business-as-usual. Current tariff structures are static or semi-dynamic, offering limited responsiveness to network constraints. Our trial introduces real-time variability, creating incentives for customers to shift load based on actual network conditions.

Key innovation elements of this pilot:

- Granularity: A real-time dynamic pricing model that evolves from 4-hour signals to 5-minute intervals.
- Integration: Development of a mini billing system to validate processes before full-scale integration.
- Technology Enablement: API-driven architecture to support retailer and large customer participation.

This is not a BAU activity. The business case is unproven at scale and customer behavioural response to 5-minute pricing remains uncertain, justifying a controlled pilot phase.

6.2.2 Alignment with expenditure objectives

This project would support the following NER clauses:

- Clause 6.5.7(a)(1) – Capex Objective: Meet or manage expected demand for standard control services. Price signals will help manage peak demand and defer costly augmentation.
- Clause 6.5.7(a)(3)(iii) – Capex Objective: Maintain the quality, reliability, and security of supply of standard control services. Behavioural price signals will reduce network stress during peak periods, improving reliability and security without requiring immediate augmentation.

- Clause 6.5.7(a)(5) – Capex Objective: Contribute to the achievement of emissions reduction targets. By enabling customers to respond to real-time price signals, the trial supports greater integration of renewable energy and demand flexibility, reducing reliance on carbon-intensive generation.
- Clause 6.5.6(a)(3) – Opex Objective: Maintain the quality, reliability, and security of supply of standard control services. Operational expenditure will ensure systems and processes for dynamic pricing are tested and validated to maintain service standards.
- Clause 6.5.6(a)(4) – Opex Objective: Maintain the safety of the distribution system through controlled demand response. Real-time pricing signals will incentivize load shifting in a way that avoids unsafe network conditions during critical demand periods.

This trial could have the potential manage expected demand for standard control services, defer costly network augmentation and improve system efficiency. It would also ensure compliance with regulatory obligations on tariff reform and consumer protections, while delivering long-term benefits to customers.

6.2.3 Existing incentives and support mechanisms have been exhausted

We have explored alternative funding pathways:

- DMIS: While our trial may deliver some augmentation deferral benefits, this is not its primary purpose. The core focus of this initiative is on real-time price signals and testing customer responsiveness, which goes beyond the scope of DMIS. Any delayed augmentation benefits are secondary outcomes, not the primary driver of this trial.
- DMIAM: The DMIAM's scope is narrow and does not extend to price signal design or market integration trials. Our project aims to understand customer behavioural responses to granular price signals and enable integration with retailers and large CER customers– objectives that fall outside DMIAM's remit.
- Government grants and regulatory sandboxing: While these mechanisms can support innovation, they are insufficient for the scale and technology development required for real-time pricing integration. Grants often involve lengthy approval processes and uncertainty, limiting structured planning. Regulatory sandboxing provides flexibility for testing but does not offer funding.
- Retailer-led programs: Existing retailer programs focus on static or critical peak pricing and lack the infrastructure for 5-minute dynamic signals. They do not address the network-level integration and customer engagement objectives of this trial.

Innovation funding is therefore the most appropriate mechanism to enable this trial.

6.2.4 Right sized for a trial with a pathway to BAU

The trial is scoped to ensure prudent expenditure while delivering meaningful insights. We have deliberately designed this as a controlled pilot to address implementation risks before full-scale deployment, including:

- System Integration: Testing API functionality with retailers and aggregators to ensure reliable real-time communication.
- Billing Accuracy: Validating the mini billing system before integrating with our enterprise billing platform.
- Customer Response Uncertainty: Measuring behavioural response to pricing signals at different intervals before committing to BAU.

The pilot will run over a period of 3 years, with the following key phases:

- Phase 1 (Year 1): 4-hour price signals, API integration and mini billing system validation.
- Phase 2 (Year 2): Transition to 5-minute pricing, expanded device integration (batteries, EV chargers).
- Phase 3 (Year 3): Evaluation and BAU transition planning.

Success criteria include customer engagement, system performance, billing accuracy and network impact analysis.

6.2.5 Stakeholder endorsed

We anticipate the following benefits to our participating consumers:

- Opportunity to reduce energy bills by responding to real-time price signals.
- Greater control over energy usage and improved understanding of appliance flexibility.
- Enhanced ability to integrate renewable energy and participate in emerging energy markets.

Through consultation, we have defined the following integrated use cases:

- Retail VPP Device Control: Price signals enable automated dispatch of home batteries and controlled loads (e.g., hot water systems).
- EV Charging Stations: Price signals encourage off-peak charging, reducing grid stress and supporting state EV adoption goals.
- Large-Scale Batteries: Optimised charging/discharging aligned with network conditions.
- Industrial electro-thermal energy storage: Flexible operation of electric heating.

We presented the behavioural price signals trial to our CAP as part of our engagement program. CAP members supported this initiative, recognising its potential to improve affordability, empower customers with greater control over energy use and enable better integration of renewable energy. They specifically recommended including a broader range of customer groups such as residential customers with flexible loads, small businesses, and industrial cohorts to ensure the trial reflects diverse usage profiles. They also endorsed the location-specific approach targeting areas with high DER penetration, regional communities and urban EV adoption. CAP feedback highlighted the importance of structured trials to reduce uncertainty and ensure transparent governance, confirming this project aligns with their expectations for innovation funding and long-term customer benefits.

6.3 Regional electrification trial

In its draft decision, the AER did not accept our proposed electrifying farming trial, citing insufficient detail on the innovative nature of the initiative and its alignment with the assessment criteria. This project is essential to support regional industries in the energy transition, and we have detailed its scope in accordance with the AER's assessment criteria.

We have since renamed this to regional electrification trial, we are expanding this from the original two-year scope to the full five-year regulatory period. Initially focused solely on farming, this program will now include dairy, food processing and manufacturing, reflecting the broader electrification opportunities across regional Victoria. The initiative will involve research and trials to identify pinch points for electrification in these sectors and develop solutions that enable adoption at scale while managing network impacts.

This trial could have the potential to accelerate emissions reduction in regional parts of our network, improve energy efficiency and create new equitable pathways for regional businesses to participate in Victoria's clean energy transition.

6.3.1 Delivering genuine innovation

This pilot seeks to deliver:

- Research into electrification pinch points for farming, dairy, food processing and manufacturing.
- Trials of new technologies and solutions, such as electric irrigation systems, electric pumps, grain drying equipment and on-site battery storage.
- Integration strategies to manage network impacts of large electrified loads.

Unique circumstances for our networks:

- Agricultural footprint: Our network serves some of Victoria's most agriculture-intensive regions, including Western Victoria and Gippsland. We alone cover over 60% of Victoria's land area, with thousands of farming customers connected to our network.
- High renewable penetration in regional Victoria creates opportunities for low-emission electrification.
- Near-universal smart meter coverage enables granular monitoring of load profiles and electrification impacts.
- Our networks support diverse regional industries, making us uniquely positioned to trial solutions across multiple sectors.

Electrification of farming and regional industries is largely untested at scale, and the business case for these technologies remains uncertain, justifying a structured trial approach.

6.3.2 Alignment with expenditure objectives

This project would support the following NER clauses:

- Clause 6.5.7(a)(1) – Capex Objective: Meet or manage expected demand for standard control services. Electrification of farming and regional industries will significantly increase demand.
- Clause 6.5.7(a)(5) – Capex Objective: Contribute to emissions reduction targets. Electrification of agriculture reduces reliance on fossil fuels.
- Clause 6.5.6(a)(2) – Opex Objective: Comply with regulatory obligations. Operational expenditure ensures compliance with evolving electrification standards.
- Clause 6.5.6(a)(3) – Opex Objective: Maintain reliability and security of supply. Ensures the trial prevents adverse impacts on voltage stability and power quality.
- Schedule 5.1.2 – Voltage performance obligations. The trial would help manage voltage fluctuations from large electrified loads.

This trial could have the potential to defer network augmentation costs, improve system efficiency, and enable regional industries to transition without compromising reliability or affordability.

6.3.3 Existing incentives and support mechanisms have been exhausted

We have assessed alternative funding sources:

- DMIS: Does not fund electrification trials for agriculture or regional industries. Its scope is limited to demand-side initiatives for augmentation deferral.
- DMIAM: While it supports small-scale demand management innovation, it does not cover multi-sector electrification trials or integration strategies for large rural loads.
- Government grants: Often targeted at single technologies and involve lengthy approval processes, limiting structured planning for multi-year programs.
- Industry-led programs: Focused on technology deployment without addressing network impacts or compliance obligations.

Innovation funding is therefore the most appropriate mechanism to deliver this initiative.

6.3.4 Right sized for a trial with a pathway to BAU

The project is designed to manage implementation risks and deliver actionable insights:

- Technology Risk: Testing electrification solutions under real farming and industrial conditions.
- Integration Risk: Assessing network impacts of large electrified loads and developing mitigation strategies.
- Customer Adoption Risk: Understanding barriers and enablers for participation.

The pilot will run over a period of 5 years, with the following key phases:

- Phase 1 (Years 1-2): Research, stakeholder engagement, initial pilots in farming.
- Phase 2 (Years 3-4): Expanded trials across dairy, food processing, and manufacturing.
- Phase 3 (Year 5): Evaluation, development of BAU frameworks, and transition planning.

Success criteria include technology performance, customer adoption, network impact, and cost-benefit analysis.

6.3.5 Stakeholder endorsed

Benefits to our consumers:

- Clear pathways for electrification tailored to specific agricultural and industrial needs.
- Access to tested technologies and integration advice.
- Long-term savings through improved energy efficiency and reduced reliance on fossil fuels.

Integrated Use Cases:

- Electrification of irrigation systems and farm machinery.
- Dairy processing facilities transitioning to electric heating and cooling.
- Food manufacturing adopting electric drying and thermal technologies.
- Regional storage solutions to support flexible load management.

Our CAP endorsed this initiative, recognising its role in enabling equitable transition opportunities for regional communities. CAP feedback highlighted the importance of structured trials to reduce uncertainty and ensure transparent governance, confirming this project aligns with their expectations for innovation funding and long-term customer benefits.

6.4 VPP integration with hot water load control

We are proposing a trial to understand how our network can co-optimise hot water load control and distributed Virtual Power Plant (VPP) resources to support customer and network outcomes by working with at least one retailer. Victoria has unique arrangements with active use of controlled hot water load by distribution networks, enabled via smart meter infrastructure. Integrating this with retail VPP and electric vehicle (EV) offerings will expand flexibility resources available to support customers, networks and the wholesale market.

6.4.1 Delivering genuine innovation

This trial is innovative and unique from other hot water load shifting and VPP trials since it combines these fleets of resources in the context of Victoria's unique arrangements. In other jurisdictions, retailers are seeking to do this on behalf of customers, while in Victoria, the capabilities enabled by near-universal smart meter coverage present opportunities for load shifting that us and Victorian distributors have historically delivered. Funding to support holistic, integrated trials should form part of the AER's approach to supporting innovation projects to avoid single use-case challenges emerging or failing to capture broader strategic and innovative customer, network and market outcomes.

The pilot seeks to deliver:

- Integration of controlled hot water loads with VPP resources, leveraging smart meter infrastructure for real-time coordination.
- Development of co-optimisation strategies that align customer, network and market outcomes.
- Testing interoperability between distribution-controlled loads, retailer VPP platforms and EV charging systems.
- Knowledge sharing to inform future flexibility programs and tariff design.

Unique circumstances to our network:

- Victoria's near-universal smart meter coverage enables granular control and monitoring of hot water loads and distributed resources.
- Our network has experience trialling hot water load shifting for minimum demand management and solar soaking, providing a strong foundation for this integrated approach.
- The Federal Government's Cheaper Home Batteries Program has accelerated deployment of residential batteries and has already seen over 100,000 residential batteries deployed across Australia since its commencement, creating an imperative to optimise outcomes for this growing fleet of distributed resources.[6]

6.4.2 Alignment with expenditure objectives

This project would support the following NER clauses:

- Clause 6.5.7(a)(1) – Capex Objective: Meet or manage expected demand for standard control services. Coordinating hot water loads and VPP resources will help manage peak and minimum demand efficiently.

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6 DCCEEW, *100,000 Cheaper Home Batteries now powering outer suburbs and regional communities*, accessed 20 November 2025: https://minister.dcceew.gov.au/bowen/media-releases/100000-cheaper-home-batteries-now-powering-outer-suburbs-and-regional-communities

- Clause 6.5.7(a)(3)(iii) – Capex Objective: Maintain reliability and security of supply. Integrated control strategies will reduce network stress during critical periods.
- Clause 6.5.7(a)(5) – Capex Objective: Contribute to emissions reduction targets. Enabling greater integration of renewable energy and distributed resources reduces reliance on carbon-intensive generation.
- Clause 6.5.7(c)(1)(i) – Capex Objective: Achieve prudent and cost-efficient solutions. Trialling integrated flexibility solutions before large-scale deployment ensures cost efficiency.
- Clause 6.5.6(a)(1) – Opex Objective: Meet or manage expected demand for standard control services. Operational expenditure supports coordination of flexible loads and VPP resources.

6.4.3 Existing incentives and support mechanisms have been exhausted

We have assessed alternative funding sources:

- DMIS: Not relevant as this project does not primarily target augmentation deferral.
- DMIAM: Given the limited funding in DMIAM, its projects need to focus on ideas close to both commercial and technical viability in the relevant regulatory period. These trials are more uncertain and longer term focused.
- Government grants: ARENA's programs have shifted focus to national-scale technology innovation (e.g., hydrogen, ultra-low-cost solar) and commercialisation, making them unsuitable for a DNSP-specific integration trial.
- The Cheaper Home Batteries Program accelerates battery deployment but does not fund holistic trials to integrate these resources.
- Industry-led programs: Retailer programs focus on single-use cases and lack the infrastructure for coordinated network-level integration.

Innovation funding is therefore the most appropriate mechanism to deliver this initiative.

6.4.4 Right sized for a trial with a pathway to BAU

The project is designed to manage implementation risks and deliver actionable insights:

- Technology risk: Testing interoperability between controlled loads, VPP platforms and EV charging systems.
- Integration risk: Assessing network impacts and operational requirements for co-optimisation strategies.
- Customer adoption risk: Understanding behavioural responses and participation barriers.

The pilot will run over a period of 2 years, with the following key phases:

- Phase 1 (Month 1-8) Design integration protocols and API specifications; initial testing with controlled hot water loads.
- Phase 2 (Month 8-20): Expand trials to include VPP resources and EV charging systems; validate performance under different network conditions.
- Phase 3 (Month 20-24): Evaluation, knowledge sharing and development of BAU frameworks.

Success criteria:

- Verified interoperability between controlled loads, VPP platforms and EV systems.

- Demonstrated network and customer benefits from co-optimisation strategies.
- Knowledge sharing reports published for industry and stakeholders.
- Insights to feed into the design and implementation of future residential battery funding mechanisms.

6.4.5 Stakeholder endorsed

Benefits to our customers:

- Opportunity to reduce energy bills through optimised use of hot water loads and distributed resources.
- Greater control over energy usage and improved integration of renewable energy.
- Enhanced ability to participate in emerging flexibility markets.

Potential use cases:

- Automated dispatch of home batteries and controlled loads during low-price periods.
- EV charging aligned with network and market signals to reduce grid stress.
- Coordinated operation of community and large-scale batteries for system support.

Our CAP endorsed this initiative, recognising its potential to improve affordability, empower customers with greater control over energy use and enable better integration of renewable energy. CAP feedback highlighted the importance of structured trials to reduce uncertainty and ensure transparent governance, confirming this project aligns with their expectations for innovation funding and long-term customer benefits.

6.5 Community energy fund

The community energy fund was originally included as part of our Customer Assistance Package.[7] This fund was not included in the AER's alternative estimate, with the feedback that this appeared duplicative of similar initiatives already provided for or supported by other existing programs and bodies from time to time. In response we recommend including this initiative as an innovation allowance project, to optimise resources and ensure a consistent approach to governance processes for initiatives that deliver the greatest impact for customers. There are no other projects that would be considered a duplicate within the innovation fund or other areas of the proposal. The aim of this fund is to support communities in pursuing innovative projects, focussing on partnerships with organisations to maximise the reach and benefits available from the projects. By incorporating the community energy fund within our innovation allowance this fund will be governed through the innovation allowance governance committee, providing assurance that projects will be unique and ensure this is not duplicative of existing programs or initiatives.

Enabling the Fund through engagement

To establish potential initiatives for funding, we will facilitate an engagement program with industry, advocates, universities and experts within organisations who focus on supporting customer agency or developing products and services that support customers in vulnerable circumstances. This may include, but is not limited to, energy retailers and the State Electricity Commission of Victoria (SECV).

This program is designed to:

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[7] PAL BUS 9.02 – Customer assistance package, January 2025

- present insights on vulnerable customers across our network and understanding of their needs
- facilitate an ideation and prioritisation program to generate ideas and prioritise those of highest impact
- prioritised ideas must also align with our organisation's unique role and position in the energy system.

Examples of potential programs include:

- renewable energy solutions (e.g., solar PV for community facilities)
- energy efficiency upgrades (e.g., LED retrofits, appliance replacement programs)
- energy resilience measures (e.g., backup power for emergency sites, community batteries)
- inclusive access to clean energy technologies
- community capacity-building for managing local energy solutions
- energy equity initiatives (e.g. energy solutions for support customers who are worst served)

For further details on our unique role in addressing vulnerability refer to the customer vulnerability strategy attachment.[8]

Further engagement with customers at risk of vulnerable circumstances

Following our regulatory proposal submission we have engaged with customers at risk of vulnerable circumstances and developed a Customer Vulnerability Strategy. A key finding of this consultation was that there is an opportunity for distributors to play a clearer role in supporting those at-risk of vulnerability, and in mitigating risk factors. Electricity distributors may be viewed as a 'neutral' party (in contrast to retailers), with an opportunity for initiatives and messaging from distributors to build comprehension and create better outcomes for those facing hardships.

Governance of initiatives

Prioritised initiatives that meet mapped criteria will be presented to the innovation allowance governance committee to assess impact and potential for the initiatives to be funded as a program.

6.5.1 Delivering genuine innovation

Distribution networks have a unique role in addressing vulnerability, through a combination of the organisations' skills and services, relationships, independence, physical presence, knowledge and data we capture. These specific aspects directly relate to supporting the risk factors of vulnerability that includes financial, psychological, informational, community and impacts resulting from the energy transition. This community energy fund is innovative as:

1. the process of the community energy fund being co-designed and prioritised with experts and stakeholders
2. funding is directed only to initiatives that provide clear, measurable benefits to customers in vulnerable circumstances not being left behind in the energy transition.

6.5.2 Alignment with expenditure objectives

This project would support the following NER clauses:

[8] PAL RRP ATT 4.05 – Customer vulnerability strategy, December 2025

- Clause 6.5.7(a)(3)(iii) – Capex Objective: Maintain quality, reliability, and security of supply. Community-led energy solutions improve reliability for vulnerable customers.
- Clause 6.5.7(a)(5) – Capex Objective: Contribute to emissions reduction targets. Funding initiatives like community batteries and renewable solutions supports decarbonisation.
- Clause 6.5.6(a)(5) – Opex Objective: Contribute to emissions reduction targets. Operational expenditure enables programs that reduce carbon emissions for vulnerable customers.
- Clause 6.5.6(a)(3) – Opex Objective: Maintain reliability and security of supply. Initiative improves resilience for customers at risk of outages.

6.5.3 Existing incentives and support mechanisms have been exhausted

We have assessed alternative funding sources:

- DMIS: Not suitable as it only caters for demand management-specific projects, not community-led energy equity initiatives.
- DMIAM: Does not extend to programs designed to support vulnerable customers or community-driven innovation.
- Government grants: May be suitable as a co-funding mechanism, but community groups often face challenges raising sufficient capital to access these grants. Innovation funding would fill this gap that communities face, unlocking access and enabling greater benefits through the combined funding.
- Industry-led programs: Not suitable due to trust and independence concerns from community members regarding other industry participants, such as retailers.

Innovation funding is therefore the most appropriate mechanism to deliver this initiative.

6.5.4 Right sized for a trial with a pathway to BAU

The size of the community energy fund was tested with customer representatives and our CAP. Feedback throughout these sessions was that the fund would need to be of a sufficient scale to enable community lead innovation, with the original size of the fund being rejected as it was deemed insufficient. We have remained conservative in our sizing of the fund, to allow us to assess and confirm the benefits to customers and communities before implementing at a wider scale.

6.5.5 Stakeholder endorsed

As detailed in our Customer Assistance Package attachment in our original proposal submission, an equitable energy transition was identified as important early in our customer engagement journey. [9] Customers wanted to ensure equal access to future technologies including renewables. This theme continued to resonate with a growing number of customers citing financial and residential barriers to their participation in the energy transition, with these customers expressing a fear of being 'left behind'. Customers sighted upfront costs as the biggest challenge to uptake, with customers suggesting subsidised costs to lower-income houses as an option to make the technology more broadly available.

Community energy projects were seen as a key solution to create an equitable outcome for customers in vulnerable circumstances, unable to participate in the transition, with customers noting the significant cost barriers to implementing these projects.

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[9] PAL BUS 10.01 – Innovation allowance, January 2025

6.6 Long duration storage technology trials

We are proposing a trial to assess alternative storage technologies beyond lithium-ion solutions, focusing on technologies that offer potential for longer-duration storage to better support non-network solutions in future but that are uneconomic or untested at present. The project will include feasibility assessment, collaboration with research or industry partners and deployment of a small trial unit or units on our network. This initiative responds to the growing need for diverse storage solutions to meet a dynamic and changing Victorian energy transition and the high cost of long duration storage at present.

6.6.1 Delivering genuine innovation

Distribution-connected batteries deployed to date have been focused on only two to four-hour duration using lithium-ion chemical storage solutions. Longer-duration, non-lithium and non-chemical energy storage technologies have not been tested by distributors as they are not currently a commercial or economic solution to address network constraints. This trial would focus on how alternative storage technologies could be used and integrated into our networks to optimise network capacity or reliability and deliver value to our customers.

Longer-duration storage is needed to better support electrification and greater levels of distributed renewable generation. The CSIRO's 2023 Renewable Energy Storage Roadmap highlights the need for a range of storage solutions beyond those commercially available today and notes the potential for longer-duration storage to reduce emissions, supply remote communities and enable renewable integration.[10]

The pilot seeks to deliver:

- Feasibility assessment of non-lithium long duration storage technologies such as vanadium redox or zinc bromine flow batteries, sodium-ion, adiabatic compressed air storage, and thermal storage solutions
- Deployment of a small trial unit or units on our network to validate performance and capability under real-world conditions
- Collaboration with universities and research partners to leverage technical expertise, deliver outcomes and share learnings
- Knowledge sharing on performance capability, operational requirements, optimal use cases and community perspectives for emerging technologies.

Unique circumstances to our network:

- Our network's large geographic footprint, high renewable penetration and dynamic load shifts between maximum and minimum demand create opportunities for longer-duration storage to manage constraints in future
- Near-universal smart meter coverage enables granular monitoring of storage performance and network impacts
- Our experience with previous lithium-ion battery trials positions us to lead innovation in alternative storage technologies.

[10] CSIRO, Renewable Energy Storage Roadmap, March 2023

6.6.2 Alignment with expenditure objectives

This project would support the following NER clauses:

- Clause 6.5.7(a)(1) – Capex Objective: Meet or manage expected demand for standard control services. Longer-duration storage will help manage peak and minimum demand efficiently.
- Clause 6.5.7(a)(3)(iii) – Capex Objective: Maintain reliability and security of supply. Storage solutions will provide backup power and improve system resilience by supporting voltage stability and system strength.
- Clause 6.5.7(a)(5) – Capex Objective: Contribute to emissions reduction targets. Enabling renewable integration and reducing reliance on carbon-intensive generation.
- Clause 6.5.7(c)(1)(i) – Capex Objective: Achieve prudent and cost-efficient solutions. Trialling emerging technologies before large-scale deployment ensures cost efficiency.
- Clause 6.5.6(a)(1) – Opex objective: Meet or manage expected demand for standard control services. Operational expenditure ensures monitoring and control systems for alternative storage technologies.

6.6.3 Existing incentives and support mechanisms have been exhausted

We have assessed alternative funding sources:

- DMIS: Cannot fund this trial as the technologies are more expensive than commercially available alternatives and are unable to target augmentation deferral at an economic level at present.
- DMIAM: Given the limited funding in DMIAM, its projects need to focus on ideas close to both commercial and technical viability in the relevant regulatory period. These trials are more uncertain and longer term focused.
- Government grants: Historically focused on lithium-ion storage; momentum for distributed storage grants is likely to significantly reduce in the next regulatory period. Previous ARENA funding supported lithium-ion storage trials but did not extend to alternative technologies. ARENA also require a minimum of 50:50 funding and our networks do not have suitable funding to support that model on a material network need without detracting from other works
- Industry-led programs: Limited to commercially proven or close to commercial technologies; do not support trials of emerging storage solutions.

Innovation funding is therefore the most appropriate mechanism to deliver this initiative.

6.6.4 Right sized for a trial with a pathway to BAU

The project is designed to manage implementation risks and deliver actionable insights:

- Technology risk: Testing performance of non-lithium storage technologies under real-world conditions.
- Integration risk: Assessing network impacts and operational requirements for alternative storage solutions.
- Customer adoption risk: Understanding community perspectives and acceptance of new technologies.

The pilot will run over a period of 1 year, with the following key phases:

- Phase 1 (Month 1-3): Feasibility assessment and site selection.

- Phase 2 (Month 4-9): Deployment of a small trial unit or units and performance monitoring.
- Phase 3 (Month 9-12): Evaluation, knowledge sharing and development of BAU use cases.

This is analogous to previous approaches used by United Energy when it previously trialled a pole-top battery solution before seeking ARENA funding for an expanded fleet of pole-top batteries to be deployed.[11]

Success criteria:

- Technology performance validated under operational conditions.
- Insights into optimal use cases and integration strategies.
- Knowledge sharing reports published for industry and stakeholders.

6.6.5 Stakeholder endorsed

Benefits to our customers:

- Improved reliability and resilience through longer-duration storage.
- Greater integration of renewable energy, reducing emissions and costs.
- Enhanced system flexibility to support electrification and CER uptake.

Potential use cases:

- Local renewable generation enablement at different voltage levels.
- Minimum demand management and solar soaking.
- Standby power for critical sites and emerging microgrid or stand-alone power system applications.

Our CAP endorsed this initiative, recognising its role in enabling renewable integration and improving resilience for regional communities. CAP feedback highlighted the importance of structured trials to reduce uncertainty and ensure transparent governance, confirming this project aligns with their expectations for innovation funding and long-term customer benefits.

6.7 Inverter-based load modelling

We are proposing a trial to assess the impact of increasing penetrations of inverter-based loads (IBLs) on distribution networks. These loads range from household consumer electronics to emerging technologies such as EV charging infrastructure, as well as commercial and industrial electrification applications. Their rapid growth in recent years and significant forecast increase for the upcoming regulatory period necessitates detailed modelling to understand aggregate performance, customer impacts and network implications under both steady-state conditions and in response to system disturbances. This initiative is essential to future-proof network operations, inform network planning, guide the development of connection standards and enable more flexible and resilient networks.

6.7.1 Delivering genuine innovation

The growing penetration of IBLs presents a significant challenge for distribution networks. Unlike traditional loads, these power electronic devices exhibit diverse and often unpredictable behaviours due to variations in software implementations. Many low-cost consumer-grade devices also fail to fully comply with Australian operational standards despite being widely available. The aggregate behaviour

[11] ARENA, Final Knowledge Sharing Report – United Energy Low Voltage Battery Trial, May 2025

of these loads is poorly understood, and without deeper insights, could lead to voltage stability issues, unexpected fault responses and other power quality impacts for customers at the distribution level.

This trial is innovative because:

- AEMO have continued to seek improvement to load models for the interconnected transmission system since 2022.[12] This work has only extended to the transmission-distribution interface and focuses mainly on broad systems stability impacts, rather than the more granular distribution level.
- This project is analogous to the extensive research, modelling and trials that accompanied the introduction of significant levels of inverter-based generation in distribution networks.

The pilot seeks to deliver:

- Detailed modelling and simulation of aggregate IBL behaviour under various conditions, including reactive power response, fault response and voltage stability.
- Network and load characterisation at the distribution level to understand performance impacts on customers and the network.
- Staged field trial with high-speed monitoring equipment to validate modelling assumptions.
- Knowledge sharing to inform future connection standards and operational strategies.

Unique circumstances to our network:

- Our network is ideal for this trial given the Victorian Government's focus on gas transition and electrification, especially in key growth areas for new residential and commercial development.
- Near-universal smart meter coverage enables granular monitoring of load profiles and network impacts.
- Our network supports diverse regional and urban areas, providing a range of operating conditions for testing.

6.7.2 Alignment with expenditure objectives

This project would support the following NER clauses:

- Clause 6.5.7(a)(1) – Capex Objective: Meet or manage expected demand for standard control services. Understanding IBL impacts ensures we can manage growing demand from large industrial loads and EV hubs.
- Clause 6.5.7(a)(3)(iii) – Capex Objective: Maintain reliability and security of supply. Proactive modelling and trials will prevent reliability issues caused by fast-switching loads.
- Clause 6.5.6(a)(2) – Opex Objective: Comply with regulatory obligations. Supports development of connection standards for emerging load types.
- Schedule 5.1.2 – System Standards: Maintain voltage and frequency performance obligations. Trial would help manage voltage fluctuations and harmonics from large inverter-based loads.

[12] AEMO, *Power system model development*, accessed 26 November 2025: https://www.aemo.com.au/initiatives/major-programs/nem-distributed-energy-resources-der-program/managing-distributed-energy-resources-in-operations/power-system-model-development

6.7.3 Existing incentives and support mechanisms have been exhausted

This project is proactive and unrelated to current incentive schemes that prioritise near-term reliability and/or efficiency outcomes. It would form a key input into broader system thinking and allow for the proactive identification of issues and challenges with rapid growth of these new loads forecast to be connected over 2026–31 regulatory period. We have assessed alternative funding sources:

- DMIS: Not relevant as this project does not primarily target augmentation deferral.
- DMIAM: Not relevant as is this project does not target demand management and is more focused on network operations with increasing levels of inverter connected loads of all types
- Government grants: ARENA and similar programs have focused on renewable integration and battery trials, not on inverter-based load modelling and network operational impacts. Our project does not fit into any of the current funding areas.
- Industry-led programs: No industry-led forums exist with mechanisms to fund this work.

Innovation funding is therefore the most appropriate mechanism to deliver this initiative.

6.7.4 Right sized for a trial with a pathway to BAU

Without support it is unlikely this trial would proceed and would represent a missed opportunity to consider emerging issues proactively, rather than in a reactionary context.

The project is designed to manage implementation risks and deliver actionable insights:

- Technology risk: Understanding behaviour of increasing penetration of IBLs under real-world conditions and use cases.
- Integration risk: Assessing network impacts and operational requirements for these changing load types.
- Customer impact risk: Ensuring reliability and power quality for customers in our network.

The pilot will run over a period of 2 years, with the following key phases:

- Phase 1 (Month 1-6): Stakeholder engagement, site selection and initial modelling.
- Phase 2 (Month 6-18): Simulation and staged field tests with high-speed monitoring equipment.
- Phase 3 (Month 18-24): Evaluation, knowledge sharing and development of BAU frameworks.

Success criteria:

- Accurate modelling processes defined and validated against field data.
- Identification of improved planning strategies and connection standards.
- Knowledge sharing reports published for industry and stakeholders.

6.7.5 Stakeholder endorsed

Benefits to our customers:

- Improved reliability and power quality as new load types connect to the network.
- Reduced risk of delays and cost overruns for large industrial and commercial projects.
- Enhanced ability to integrate emerging technologies without compromising service standards.

Potential use cases:

- Future network planning, operations and connections standards
- Improved EV charging integration.
- Future industrial facilities adopting advanced power electronic technologies.

Our CAP endorsed this initiative, recognising its importance in proactively addressing emerging challenges and enabling efficient integration of new technologies. CAP feedback highlighted the need for structured trials to reduce uncertainty and ensure transparent governance, confirming this project aligns with their expectations for innovation funding and long-term customer benefits.

6.8 Enabling grid-forming in networks

We are proposing a trial to assess integration and operation of grid-forming resources in our networks to promote increased resilience, reliability and stability. This project will seek to define ways for distributed energy resources (DER) to switch from operation in grid-following to grid-forming modes and explore potential for islanded operation of portions of our rural networks that may have lower levels of reliability or be at risk of adverse resilience events.

This initiative responds to the growing opportunity for distribution networks to access grid-forming capability from emerging technologies to support system security and reliability.

6.8.1 Delivering genuine innovation

Grid-forming technology represents a fundamental shift in how power systems operate. Traditionally both small- and large-scale renewable energy needed to disconnect from the network during a significant disturbance. However, this misses the opportunity to both support the network during disturbances, and island areas of network where renewable energy and storage may otherwise have been able to maintain supply to customers for periods of time. While there has been some focus on grid-forming resources connected to transmission networks for system strength provision alone, this is a relatively new topic for distribution businesses where added resilience benefits exist. It is not only innovative but necessary to inform future network development.

This trial is innovative because:

- Distribution-connected resources have historically only operated in grid-following mode. Testing grid-forming capabilities, specifically with a focus on resilience at the distribution level is not business-as-usual and has not been widely tested or implemented.
- Traditional distribution network operating protocols are based on all generation tripping during significant disturbances. New operating protocols are required to ensure we can keep field staff safe if areas of network island to maintain supply during disturbances and resynchronise with the main grid after outages.
- AEMO's Engineering Roadmap FY26 Priority Actions report highlights the need to understand and prepare for integrating grid-forming resources into the National Electricity Market (NEM). [13] This project will complement AEMO's work by focusing on distribution-level impacts and opportunities.

The pilot seeks to deliver:

- Development and validation of field protocols for grid-forming operation and islanding.
- Controlled trials to explore islanding potential for rural areas at risk of adverse resilience events.

[13] AEMO, Engineering Roadmap FY2026 Priority Actions, July 2025

- Operational strategies for resilience during high DER penetration and system disturbances.
- Knowledge sharing to inform industry standards and future regulatory frameworks.

Unique circumstances to our network:

- Our network hosts a large and growing fleet of distributed batteries and renewable generation, making them ideal networks to trial grid-forming integration.
- Our network spans both densely populated urban areas and remote regions, providing diverse operating conditions for testing.
- Near-universal smart meter coverage enables granular monitoring of system performance during trials.

6.8.2 Alignment with expenditure objectives

This project would support the following NER clauses:

- Clause 6.5.7(a)(3)(iii) – Capex Objective: Maintain reliability and security of supply. Testing grid-forming capabilities ensures improved network performance and reliability alongside options for system stability support.
- Clause 6.5.7(a)(5) – Capex Objective: Contribute to emissions reduction targets. Enabling grid-forming operation supports continuous operation of renewable energy and reduces reliance on fossil fuels.
- Clause 6.5.7(c)(1)(i) – Capex Objective: Achieve prudent and cost-efficient solutions. Trialling grid-forming technology before large-scale deployment ensures cost efficiency and reduces risk.
- Clause 6.5.6(a)(2) – Opex Objective: Comply with regulatory obligations. Operational expenditure ensures compliance with emerging standards for grid-forming resources.

6.8.3 Existing incentives and support mechanisms have been exhausted

We have assessed alternative funding sources:

- DMIS: Not applicable as this project does not primarily target augmentation deferral.
- DMIAM: Scope is too narrow – this project does not relate to demand management and is focused on system security and operational strategies rather than short term demand management innovation.
- Government grants: ARENA has historically funded large scale battery trials for system strength provision. However, ARENA also requires a minimum of 50:50 funding, a suitable funding mechanism to support their model on a material network need without detracting from current work does not currently exist.
- Industry-led programs: Project development relies on commercial viability, and no single project can support development of the operational frameworks needed by DNSPs to allow for grid-forming resources to island.

Innovation funding is therefore the most appropriate mechanism to deliver this initiative.

6.8.4 Right sized for a trial with a pathway to BAU

The project is designed to manage implementation risks and deliver actionable insights:

- Technology risk: Testing grid-forming functionality under real-world conditions.

- Integration risk: Assessing operations protocols needed to ensure field resource can operate safety.
- Network Resilience: Understanding how grid-forming resources can respond during disturbances to both support networks and island from or re-synchronise with the rest of the network.

The pilot will run over a period of 2 years, with the following key phases:

- Phase 1A (Month 1-6): Capability assessment and scenario development.
- Phase 1B (Month 1-6): Parallel with Phase 1A. Field resource engagement, ESV engagement, protocol development and training.
- Phase 2 (Month 6-18): Controlled trials of grid-forming operation under different network conditions.
- Phase 3 (Month 18-24): Evaluation, knowledge sharing and development of BAU frameworks.

Success criteria:

- Verified capability to improve network support, alongside islanding and re-synchronisation of grid-forming resources while maintaining supply to customers.
- Operational strategies developed for transitioning between modes.
- Knowledge sharing reports published for industry and regulators.

6.8.5 Stakeholder endorsed

In its 2024 Integrated System Plan, AEMO noted consumers should be confident that the NEM's mix of technologies will keep electricity supply.[14] It explicitly noted that the system security services provided by traditional coal, gas and hydro generators will need to be replaced as the overall energy systems transitions to greater levels of renewable generation, for example from grid-connected batteries with advanced inverter technology.

Benefits to our customers:

- Improved system security and reliability as renewable penetration increases.
- Reduced risk of outages during disturbances.
- Greater integration of renewable energy, supporting emissions reduction targets.

Potential use cases:

- Distribution-connected batteries providing system strength and inertia.
- Coordinated response to frequency disturbances at the distribution level.
- Enhanced resilience during outages or system restart scenarios.

Our CAP endorsed this initiative, recognising its importance in preparing networks for the future energy system. CAP feedback highlighted the need for proactive trials to maintain reliability and security as the generation mix evolves, confirming this project aligns with their expectations for innovation funding and long-term customer benefits.

[14] AEMO, Integrated System Plan for the National Electricity Market, June 2024

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