



Innovation and Non-Traditional Solutions Allowance Application: Flexible Farm Energy

Commerce Commission

2 April 2026



Contents

1.	Summary of Powerco allowance and INTSA applications	3
2.	Introduction	4
2.1	Purpose of this report	4
2.2	INTSA requirements	4
2.3	Powerco’s commitment to innovation and customer outcomes in our vision to Grow to zero	4
2.4	Rural energy use is set for a major transformation	5
3.	Project information: Flexible Farm Energy	6
3.1	Project purpose and steps to achieve the purpose	6
3.2	The outputs and consumer benefits	6
3.3	Eligibility criteria	8
3.4	Project phases and forecast costs	9
3.5	SAIDI and SAIFI	11
3.6	Parties to this project and collaboration	11
4.	Preparing this application and meeting schedule 5.3 requirements	11
4.1	Addressing the Schedule 5.3 criteria	11
4.2	Reporting on completed projects and sharing learnings	11
5.	Conclusion	12
	Appendix 1 – Check of application against Schedule 5.3 requirements	13

1. Summary of Powerco allowance and INTSA applications

A summary of the proposed recovery in this application is provided in Table 1, along with a cumulative allowance recovery through the DPP4 period. Powerco's Innovation and Non-Traditional Solutions Allowance (INTSA) allowance limit is \$20.1 million with 25% of that for collaborative projects only.

Table 1 Recovery proposal capex and opex

	Description	Purpose	FY27 recovery proposal		FY28 recovery proposal	
			Capex	Opex	Capex	Opex
Flexible farm energy	Powerco will engage with rural energy consumers and service providers to this community, to understand the impact of major changes foreseen to energy consumption patterns in rural areas	Using this information, we will develop appropriate responses to maximise the longer-term benefit from the electricity network to rural communities, involving non-traditional solutions		\$385,000		\$290,000
Recovery in this application					\$506,250*	
Allowance recovery previously approved – Powerco					\$105,000	
Allowance recovery previously approved – collaborative					\$280,000	
Applications currently under consideration					\$265,000	
Remaining allowance – Powerco (should current applications be approved)					\$14,463,750	
Remaining allowance – collaborative (should current applications be approved)					\$4,480,000	
Total allowance					\$20,100,000	

* This application is for 75% of the anticipated phase 2 and phase 3 project costs.

2. Introduction

2.1 Purpose of this report

This is Powerco Limited's ("Powerco", "we") application for the innovation and non-traditional solutions allowance (INTSA), for projects planned for FY27. This report collates the information required for the Commerce Commission (the Commission) to be satisfied that the projects meet the requirements for recovery of the allowance for FY27.

This application covers the following projects/programmes for FY27 - 28:

- **Flexible Farm Energy**

We are happy to discuss any aspects of this application with the Commission. The first point of contact for this application is Irene Clarke Policy Manager, [REDACTED]. No parts of this application are confidential, and we will publish this report in full.

2.2 INTSA requirements

Under the Default Price-Quality Path Determination, Electricity Distribution Businesses (EDBs) may make an application to the Commerce Commission (the Commission) for approval of recovery of the allowance under Schedule 5.3 of the Determination¹. This report is guided by the requirements in Schedule 5.3. We have provided an assessment against Schedule 5.3 in Appendix 1.

The proposed project is innovative/non-traditional in that it will lay the foundation for new, potentially novel, responses to the major changes we're starting to see in the rural network we serve. Conventional network solutions and cost recovery mechanisms will no longer be economically sustainable as distributed generation solutions are more widely adopted, with substantially changing energy use patterns. We seek to not only understand the potential extent of these changes, but also how emerging service offers from third parties to rural consumers will impact this. From this information, we will develop new, customer-focused solutions to help ensure optimal customer value and the long-term sustainability of rural electricity networks.

The full Powerco allowance available under Schedule 5.3 is \$20.1 million (with 25% for collaborative projects only). A breakdown of our allowance is provided in section 1.

2.3 Powerco's commitment to innovation and customer outcomes in our vision to Grow to zero

Where and when energy is consumed is changing. As sectors decarbonise, we anticipate increasing peaks in demand driven by the uptake of, for example, data centres, electric vehicles (EVs) and industrial electrification, potentially offset by decreasing peaks from increasing distributed energy resources. These shifts will require a more flexible and resilient network, capable of accommodating new demand profiles, bidirectional energy flows and high variability in generation. It will also require new, innovative solutions to best meet the emerging challenges and maintain energy affordability.

To support this transition, we are investing in:

- New customer offers and solutions, aiming for win-win outcomes

¹ Determination: [SBFINAL5D-Electricity-Distribution-Services-Default-Price-Quality-Path-Determination-2025-5B20245D-20-November-2024.pdf](#)

INTSA application

Flexible farm energy



- Modernised network architecture to integrate and optimise new energy technologies.
- Smart grid solutions that enhance visibility, forecasting, and real-time network management.
- Targeted capacity upgrades to support increasing electrification where needed.
- Enabling flexible energy use, including demand response and local energy trading.

2.4 Rural energy use is set for a major transformation

Dairy farm scale photovoltaic (PV) uptake is accelerating quickly as a price tipping point has been reached compared to grid-supply.

Vendors indicate that falling prices for commercial battery energy storage systems (BESS) mean PV-plus-battery systems can now economically provide several hours of load coverage at a cost comparable to grid supply. . These factors, along with trends in electric utility vehicle prices, smart-charging, vehicle-to-grid (V2G) capability and electric tractors, suggest a major shift in farm-related electricity consumption, which only accelerate in the medium term.

Future farm electricity consumption volumes could:

1. Reduce (as farmers focus on behind the meter energy management)
2. Grow (with farm electrification) and/or
3. Have significant variability or herding (as farmers engage with markets or other value drivers).

Each path would have distinct, significant impacts on the network, including varying physical infrastructure future investment needs, appropriate DSO (Distribution System Operator) services and a changed network pricing/revenue model. An emergent ecosystem of external service providers (including aggregators and equipment suppliers) will also shape what farmers do.

In response to this emerging, highly uncertain future, Powerco is seeking to undertake an innovative project focused on identifying, and harnessing, flexible energy solutions for farmers. The Flexible Farm Energy project seeks to understand and validate how Powerco, and other electricity distribution businesses (EDBs) in New Zealand can optimally operate rural networks in this changing landscape. The project will investigate how both farmers and service providers may react to increasing consumer energy resources (CERs) and a changing rural energy landscape. Through that understanding, the project will develop and test optimal future network and non-network energy solutions for farmers or farming communities, and the role that service providers may play in these solutions. The focus will be on delivering cost-effective customer outcomes that will continue to provide value for them, or their local communities, from being connected to the grid even as they shift to high levels of self-consumption. It will also look at the likely changes this will require in our operating model.

The timing of this project is important because rural CER investment appears to be in a phase of rapid acceleration. Acting ahead of this shift is essential to ensure optimal customer outcomes before long-term investment decisions occur.²

² This project, as opposed to many of our other flexibility services trials, does not have network capacity issues at its core. For now, our rural networks generally have more than adequate capacity, so peak lopping has limited value. Instead, the focus will be on how we could continue to sustainably operate the network, support community energy sharing, improve reliability and tailor future networks for lower consumption but demand peaks remaining largely as is, albeit more intermittently.

3. Project information: Flexible Farm Energy

3.1 Project purpose and steps to achieve the purpose

Flexible Farm Energy is a project whereby Powerco seeks to engage with rural energy consumers (initially with a focus on Taranaki dairy farmers) and service providers to this community, to understand the impact of major changes foreseen to energy consumption patterns in rural areas. Using this information, we will develop appropriate responses to maximise the longer-term benefit from the electricity network to rural communities, involving non-traditional solutions. Phases 2 and 3 of this project will span two financial years. Phase 1 (scoping) was completed in FY26.

The Flexible Farm Energy project will investigate how both farmers and service providers may react to increasing consumer energy resources (CERs) and a changing rural energy landscape. Through that understanding, the project will develop and test optimal future network and non-network energy solutions for farmers or farming communities, and the role that service providers may play in these solutions.

The desired project outcome is to deliver cost-effective rural customer outcomes that will continue to provide value for them and their local communities from being connected to the grid, even as they shift to high levels of self-consumption. It will also look at any changes required in our operating model.

This application seeks approval for the costs forecast for phases 2 and 3 of the project (FY27-28). We are not seeking to recover costs for phase 1 that was completed in FY26.

Phase 1 of the project was the initial environmental scan of solutions already being provided to or adopted by rural consumers and confirmed the value in proceeding and highlighted the need to engage directly with farmers and third parties

Phase 2 of this project seeks to gain insight into possible farmer behaviour(s) to understand their plans and different types of service offers they are seeing. Insights on future scenarios gained through phase 2 will be used to develop optimal long-term consumer energy outcomes, by understanding how it could create, transfer, vary or reduce value for consumer segments. It will also inform how Powerco's future services to the sector should evolve, impacts to existing network use and future network/non-network options. Potential new optimal energy solutions, (most likely a mix of network and non-network solutions) for different farming scenarios will be developed from these insights.

Informed by this, **phase 3** of the project will identify and test the best solutions. We plan to transparently and competitively select one or more service provider(s) of emergent services to the sector, who will validate the services, pricing, service payments, information flows, commercial "packaging" and other value drivers for farmers owning distributed resources. Powerco's role in enabling service providers to drive or participate in these processes will become clearer through this.

3.2 The outputs and consumer benefits

While a first for us, this work is not a pilot. Instead, it is seeking a 'go-to-market' strategy, to validate where new energy products, services and network/non-network solutions are market fit and ready to be operationalised.

"Services" validated will be ones with a pathway to scale into the market, with Powerco's activity designed to support said scaling so that (subject to the business case/ tollgate review), there are sustainable solutions to

INTSA application

Flexible farm energy



deliver customer outcomes that continue to have value into the future, as the traditional value-proposition for lines services in these areas change.

3.2.1 Outputs and timing

Table 2 Project phases and outputs

Activity	Timing	Output
Phase 1: Market scan to inform project scope	Completed (not part of INTSA application)	<ul style="list-style-type: none"> • Desk-top environmental scan of solutions already being provided to or adopted by rural consumers • Report from project consultant
Phase 2: Direct engagement with rural consumers and service providers to the sector	April 2026 – June 2026	<ul style="list-style-type: none"> • Surveys preparation and distribution • Physical engagements with individuals, at rural community events and with suppliers • Detailed analysis of changing energy consumption patterns where CERs have already been adopted • Synthesis of available information into the development of future energy scenarios and the potential impact on costs and service levels • Identification of potential customer-focused solutions to optimise ongoing network value to consumers with and without CER • Report on conclusions and case/scope for proceeding (or not) with phase 3
Phase 3: Product development and implementation	July 2026 – June 2027	<ul style="list-style-type: none"> • Identification of best candidate solutions • Detailed design and solutions development • Vendor selection (for external offers) • Solution implementation and integration • (Internal) pricing and process adaptation

3.2.2 Consumer benefits

The project will validate how, with growing levels of CERs, Powerco can most efficiently operate the (specifically rural) network to reduce long term network costs to consumers. With the objective of improving consumer benefit, the project will test potential options such as:

- Developing schemes for rural consumers wishing to share excess generation capacity directly into their local communities, or of community energy storage schemes
- Using CERs to improve network power quality e.g. volt-var. This may reduce losses
- Using CERs to improve reliability e.g. restore more ICPs with back feeds where consumer generation/injection or flexible demand can provide more capacity. End of line locations could also benefit from islanding
- Using flexible connections so consumers can electrify or host more distributed generation (DG) but with lower network connection upgrade costs
- Guiding network renewal investments to optimal network solutions (like-for-like renewal may no longer be suitable)
- Where appropriate, using flexibility to reduce peaks and defer network projects
- Providing information, lines services, pricing, incentives or other services that make it attractive to use the network (rather than consumers needing to spend more money optimising behind the meter use) such that retained or new volumes improve utilisation and reduce the relative (per kWh) costs for all consumers.

3.2.3 Anticipated learnings

The project will be at the cutting edge of validating how we best operate networks in the emerging world of material rural CERs by working with a key segment driving New Zealand's economy (dairy farmers). The project will inform how Powerco can respond quickly to market shifts, to ensure that the network can continue to provide valuable services to our wide consumer base. It will build on Powerco's multi-year support to the understanding of, and support for, on farm energy capability of farmers (e.g. Taranaki Catchment Communities (TCC) work).

Specific anticipated learnings include:

- Understanding emerging service offers to the farming community and how this is influencing energy use patterns
- Understanding farmer's plans and appetite for increased CER uptake and how this is influencing energy use patterns
- How an EDB can best respond to the changing rural electricity use landscape to help ensure long-term network value is retained for customers while also providing economically sustainable network outcomes
- How CER can be integrated into existing rural networks to maximise local community benefit – focusing on energy sharing and improved network resilience
- How to provide equitable outcomes that would ensure energy affordability to customers not able to apply CERs.

3.3 Eligibility criteria

3.3.1 Relates to the supply of electricity distribution services

This project relates directly to the supply of electricity lines services to rural communities (focusing on dairy farming). If successful, the project will enable Powerco to optimally design and deliver efficient, affordable and reliable delivery of electricity (including conveyance of locally injected electricity) into the future across rural lines services.

3.3.2 Promotes the Part 4 Purpose of the Act

The project has a core purpose of ensuring the long-term ongoing value for rural consumers of being connected to the electricity network services, while also addressing the long-term economic sustainability of the network.

Looking at current consumption patterns, we foresee that continuing with traditional network solutions in these regions will not be commercially sustainable in the medium to longer term. A sustainable future will require highly efficient delivery of electricity to a mix of customers with or without CERs – involving substantially changed network and non-network services.

3.3.3 Unlikely financial benefit / sufficiently uncertain benefits

In the face of materially changing rural energy consumption patterns, we foresee that it is unlikely to remain economically feasible to continue with conventional build and operation of networks in the medium to longer term. This clearly suggests the need to investigate innovative network solutions which, all else being equal, will reduce the need for capital investment in rural networks. Improved understanding about these customer needs and solutions is the essence of this proposed project, with a focus on longer-term sustainability for these rural customers, rather than a financial benefit.

INTSA application

Flexible farm energy



This project, if successfully concluded, will result in non-traditional solutions that would not be conventional investment. As such it will not provide direct financial benefit to Powerco in the short term. The customer engagement and solutions to be tested are an area where the outcomes are sufficiently uncertain, both in terms of the likely direction of customer insights, possible solutions and how Powerco could best meet the needs of these customers.

While we recognise the importance of considering the long-term sustainability of our business, we have multiple shorter-term priorities competing for resources. Projects like the one proposed in this application, with a longer-term focus, and uncertainty in both customer outcomes and optimal solutions, will not be prioritised over ones with direct and known benefits. As such, if there is no external support such as that offered through INTSA, this project will not proceed. Access to INTSA allowance will ensure that we can enlist the necessary consulting resources for the work.

3.4 Project phases and forecast costs

The forecast costs of the project for each disclosure year are outlined below. All costs are GST exclusive.

Table 3 Forecast costs

	Cost for output year 1 (FY27)	Cost for output year 2 (FY28)	Cost for output year 3 (FY29)	Cost for output DPP year 5
Phase 1	No cost recovery in FY27 or FY28			
Phase 2	\$115,000	\$0	\$0	\$0
Phase 3	\$270,000	\$290,000	\$0	\$0
Financial year total	\$385,000	\$290,000		
Total cost of phase 2 and 3	\$675,000			
Total INTSA drawdown	\$506,250			

While the project is unlikely to proceed absent INTSA funding, we're applying for a 75% proportion of total cost of phase 2 and phase 3. This reflects our view that there is business-as-usual benefit to be gained from an improved understanding of customer and supplier intentions even if not directed at developing new customer solutions.

The breakdown of the cost estimates for the phases is provided in Table 4.

Phase 2 expenditure reflects the engagement of specific industry consultancy with strong primary understanding of the Taranaki dairy farm sector. The capabilities and experience are benchmarked against internal consultant rate card and quotes for required hours of each phase reviewed against internal assessment and historical reference points.

Bottom-up engagement plan detailing methodology and delivery costs has provided firm figures of costs to ensure farmer engagement and vendor engagement aligns to internal standards and industry best practice.

INTSA application

Flexible farm energy



Table 4 Cost breakdown

	External cost	Internal cost
Phase 1: Consulting fees Project management	\$9,000	\$3,000
Subtotal (not seeking INTSA allowance for this exploratory work)	\$12,000	
Phase 2: Consulting fees and segment engagement Project management and administration	\$100,000	\$15,000
Subtotal	\$115,000	
Phase 3: Customer incentives Vendor search and solution codesign Integration, contracting Project management and administration	\$310,000 \$130,000 \$55,000	\$65,000
Subtotal	\$560,000	
Total Project Estimate	\$687,000	

Phase 3 Product development and implementation comprise of three components. The final combination of elements of Phase 3 is influenced by the understanding gained of Phase 2, solution options, vendor maturity and customer variables.

a) Customer Incentives

The customer incentives component is informed by several reference points supported by assumptions, data and other available similar studies i.e. Resiflex, and firmed up from internal and external experience. The key factors driving the budget estimate are.

- Number of farmers
- Value to farmers
- Duration of value to farmers
- Availability of DER
- Network value

Feasible scenarios have been used to develop ranges for each factor, with likelihood and confidence ratings used to narrow ranges to create highly probable estimates.

b) Vendor engagement and solution codesign

This engagement heavy phase will require internal and external resources. Expenditure has been based around the forecast hours required and benchmarked external rates. Internal costs have been estimated from past activity of similar scope.

c) Integration, contracting

Costs cover technical design and integration of solutions and validation while leveraging existing capabilities to avoid new platform costs. Focus will be on operational management of services and modelling.

d) Project management and administration

Relationship and contract management requirements of Phase 3 will be managed by internal Powerco team for the multi-year life of the project and include monitoring and final reports.

Phase 3 budget will be managed to ensure value and project outcomes can be achieved.

Project management and administration costs include our internal cost for managing the overall project, internal costs for legal, information systems (IS), privacy and cyber-security review support. Further IS costs will be incurred as part of the integration activity, but that is provided for in the relevant line item.

3.5 SAIDI and SAIFI

In delivering this project, we are not anticipating any SAIDI and SAIFI values to be excluded under Schedule 3.1 or Schedule 3.2.

3.6 Parties to this project and collaboration

Phases 1 and 2, being largely discovery phases, are not collaborative projects.

However, we foresee that Phase 3 will be of value to multiple EDBs as well as external service providers and we are currently seeking collaboration partners for that phase. We will update the Commission if this becomes a collaborative project.

4. Preparing this application and meeting schedule 5.3 requirements

4.1 Addressing the Schedule 5.3 criteria

In Appendix 1, we have outlined the criteria for the innovation allowance in Schedule 5.3. The table summarises how each criterion is met, and/or where in this application the relevant information can be found. We are satisfied that all the criteria have been addressed.

4.2 Reporting on completed projects and sharing learnings

The Commission has emphasised the focus of the innovation allowance to encourage projects that will benefit NZ Inc, and reporting on the projects and sharing learnings with other EDBs is an important part of the process. Should this application be successful, Powerco anticipates the following activities to share learnings:

- Prepare report as required by Schedule 5.3 (14). The report will be made available on our website
- Share updates on our application, key findings and related reports on our website and social media channels
- Present an overview of the projects and key learnings to a suitable ENA or EEA or other industry forum to raise awareness amongst all EDBs, and to seek partners for phase 3. For example, an ENA Future Networks Forum meeting.

5. Conclusion

Powerco has an active strategy to ready ourselves for the changes in the energy sector ahead. An underlying direction for our Strategy is to drive innovation, with Powerco taking an active role in identifying and testing non-traditional solutions and new technology. This will not only be an integral part of operating our future network, but it will also provide optimal longer-term outcomes for our customers. In our focus on connecting communities and best outcomes for customers, the non-traditional solution being tested through this application, demonstrates our Customer Commitments³.

The project proposed in this application directly supports our strategy. It also has the primary goal of maximising long-term value to the important rural (dairy farming) segment of our customer base.

³ Information on Powerco's Customer Commitments: [Customer Commitments](#)

Appendix 1 – Check of application against Schedule 5.3 requirements

Table 5 Innovation project allowance criteria and how the requirement is met

Schedule 5.3 requirement	How the requirement is met
(2) A non-exempt EDB may at any point prior to six months before the end of the DPP regulatory period submit an INTSA proposal to the Commission.	This application is made before the stated deadline
(3) If a non-exempt EDB proposes to work together with 1 or more other EDBs to carry out the project or programme in an INTSA proposal, each non-exempt EDB carrying out the project or programme that proposes to recover any of the forecast costs from the non-exempt EDB's innovation and non-traditional solutions allowance must submit an INTSA proposal.	Refer section 3.6. This phase of the project is not a collaborative project.
(4) An INTSA proposal must set out the following:	
(a) the purpose of the project or programme in the INTSA proposal, and the steps that the non-exempt EDB intends to take to achieve that purpose if the Commission approves the INTSA proposal	Refer section 3.1
(b) the INTSA outputs and expected benefits of the project or programme for consumers	Refer section 3.2
(c) the date by which the non-exempt EDB expects all of the INTSA outputs for the project or programme to have been delivered	Refer section 3.2
(d) the forecast costs of the project or programme for each disclosure year up to the date by which the non-exempt EDB expects all of the INTSA outputs to have been delivered	Refer section 3.4
(e) the proportion of the forecast costs of the project or programme that the non-exempt EDB seeks to recover from the non-exempt EDB's innovation and non-traditional solutions allowance (e.g., 75% of the forecast costs of the project or programme)	Refer section 3.4
(f) an estimate of any anticipated SAIDI INTSA values or SAIFI INTSA values that the non-exempt EDB expects to exclude under Schedule 3.1 or 3.2	Refer section 3.5
(g) the cause or causes of the interruptions for the SAIDI INTSA values and SAIFI INTSA values referred to in subparagraph (f)	Refer section 3.5
(h) any steps that the non-exempt EDB has taken, or proposes to take, to reduce the likelihood or impact on consumers of any interruptions referred to in subparagraph (f)	Refer section 3.5
(i) whether the non-exempt EDB intends to work together with 1 or more other EDBs to carry out the project or programme in the INTSA proposal and, if so, how it intends to work together with the other EDBs	Refer section 3.6
(j) sufficient information to enable the Commission to decide under paragraph (7) whether the project or programme meets the eligibility criteria under paragraph (6)	Refer section 3.3 (and remainder of application)

<p>(14) Within 50 working days of the delivery of all of the INTSA outputs for the project or programme in a non-exempt EDB's INTSA proposal that the Commission has approved under paragraph (7), the non-exempt EDB must submit a closeout report to the Commission</p>	<p>We will deliver a report within 50 days of completion of outputs. We do / do not request an extension to the time for submitting a close-out report, but reserve the option of making this request at a later time. Refer section 4.2.</p>
<p>(19) Subject to paragraph (20), the limit on the innovation and non-traditional solutions allowance for each non-exempt EDB for the DPP regulatory period is specified in Table 5.1</p>	<p>Refer section 1</p>
<p>(21) Where a non-exempt EDB considers that it has a right to confidentiality in any information that it provides to the Commission under this Schedule and the non-exempt EDB does not waive the right, the non-exempt EDB must— (a) include that information in an appendix; and (b) clearly mark the information as confidential.</p>	<p>This application does not contain any confidential information</p>

