A Simple Shift

Ōmokoroa electricity flexibility trial

POWERCO EECA

About the trial

Powerco, in partnership with EECA (the Energy Efficiency and Conservation Authority), is running a trial of flexible electricity use in the Ōmokoroa community during the next three years.

Ōmokoroa is one of the fastest-growing areas on Powerco's electricity network. Meeting future electricity demand through traditional infrastructure in the area would require significant investment.

Traditionally, Powerco's network has been built to supply peak demand for power – short durations during the day or year when demand for electricity is at its highest. Building our network to meet these short, intermittent peak demand periods means there is spare capacity available most of the time. The Ōmokoroa electricity flexibility trial is designed to test technology, such as residential batteries and home energy management systems (HEMS) that can shift electricity load to a different time and reduce the peak.

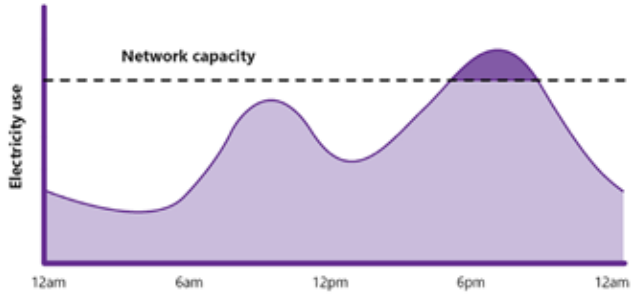
Flexible electricity use, or 'flex', can defer or even avoid building more capacity on our network to meet peak demand. That reduces cost for our customers because everyone pays for electricity infrastructure. With flex we can empower our customers to be part of the solution by using new flex technologies to help enable a more efficient and resilient electricity system.

Who is involved?

This electricity flexibility trial is a partnership between Powerco, which owns and operates the electricity network in Ōmokoroa, and EECA, which is also partnering with several other lines companies on flex trials around New Zealand and will help to fund the necessary technology for installation in homes.

Reducing peak demand with flex technology

Peak electricity demand in Ōmokoroa occurs during winter evenings. New flex technology enables households to change when electricity is used. This can reduce the winter peaks and it can shift electricity demand to off-peak times, enabling better use of existing network capacity. The flex technologies this project focuses on are heating and energy storage, particularly heat pumps, hot water cylinders, residential batteries, and possibly electric vehicle (EV) chargers and vehicle-to-grid (V2G) technology that allows two-way charging where electricity can flow from the car battery to the grid, as well as from the grid to the car battery.



Batteries and heat pumps

The trial will explore using residential batteries to manage electricity demand. Batteries can be charged from solar and the electricity network in the afternoon when there is spare capacity on the network and then discharged during peak periods.

This trial will also explore preheating Ōmokoroa homes during winter afternoons, so they are already warm when people arrive home at the end of the afternoon. Instead of turning on heat pumps, ovens and cooktops at the same time, contributing to peak demand, the house is pre-warmed, with the heat pump idle while cooking takes place. Preheating can happen automatically through heat-pump control settings and/or HEMS. The result is that people come home to a warm house while helping to reduce peak demand.

Hot water cylinders and EV charging

The trial will also include a small number of ‘smart’ hot water cylinders, hot water heat pumps and some integrated solar/battery/hot water systems. Smart control enables hot water heating to be shifted out of peak periods or briefly reduced, helping manage network capacity without affecting your hot shower.

We will also explore EV charging opportunities, including two-way charging technologies. Smart EV charging can move electricity demand to off-peak times, and two-way chargers enable EV batteries to support the network during peaks.

Making homes more comfortable, affordable and efficient

By shifting when and how electricity is used, households can help reduce peak demand and save money on their energy bills. Preheating homes and using batteries to store energy during times of spare network capacity means less reliance on expensive electricity during peak periods. Households not only enjoy lower costs from smarter energy use but can also be rewarded for managing their energy.

How the flex trial comes to life

To bring flexibility into everyday homes, a limited number of households in Ōmokoroa have the opportunity to take part in this trial. Participants can be supported to install HEMS, use their heat pumps and hot water cylinders more flexibly, or install solar and battery systems. Around 200 households will be able to get subsidies for HEMS and up to 300 households equipped with solar and battery set-ups.

Households that already have their own smart appliances, batteries or other eligible flex technology installed, can sign up for this trial as well and, by participating, be rewarded through special tariffs, rebates or performance-based payments that are put in place for the trial.

The rewards, be it special energy use tariffs, rebates, credits or other ways of recognising the participating households for changing and shifting their electricity use, depends on the flex plan of their electricity retailer or a flex service provider.

Trial incentives

So that there is enough flex technology being used in the Ōmokoroa community for the trial, a limited number of households can expect incentives to assist them install technology:

• **$4,000 towards installing a residential battery.** The battery must have capacity greater than 9kWh. Households may choose to install a larger battery, but the incentive amount will remain the same.

• **Up to $1,500 to install a home energy management system.** The HEMS should be connected to at least one household device or load, for example a heat pump, AC, hot water cylinder, or other smart appliance.

• **$500 towards a 'smart' hot water cylinder or hot water heat pump** for newly-built homes or for households considering retrofits, including hot water cylinder replacements.

Powerco will provide details on system requirements and which devices are eligible for participation on **asimpleshift.co.nz**

Rewards and automation

The rewards from changing and shifting energy use through new or existing systems will be driven by Powerco's newly introduced network assistance rate (NAR).

In addition to the standard Powerco pricing policy, a NAR applies when Powerco needs a local response, such as reducing demand or exporting energy back to the network during peak periods. A Powerco NAR focuses on specific areas and defined time frames, like certain hours, days, or month. For example, the winter months in the Ōmokoroa area.

Trial participants enrol through their retailer or a flex service provider, who may offer additional rewards or benefits on top of normal pricing by applying Powerco's NAR. Participation works best for homes with smart energy appliances or systems that can respond automatically to the NAR price signal.

While the ideal outcome is a set-and-forget approach, where automation and smart technology handle energy shifting seamlessly, customers also have the option to actively manage their own energy use. Households in Ōmokoroa can manually adjust their smart device settings to control when and how their systems respond to the NAR price signals.

Learning through the pilot

This trial allows Powerco to evaluate flex technology in real-world conditions, at scale. We're testing NAR price signals, technology, automation and customer control settings, to see how devices and customers respond. To do this, we need access to system and consumption data so we can understand what works well and what needs improving.

As with any trial, things may not always run perfectly at first. Participants are encouraged to provide feedback and let us know if any issues arise. We will also monitor device data for the duration of the trial and can troubleshoot accordingly. The real value comes from households helping us learn, improve and shape better flexibility services for the future to enhance the operation of the network and support New Zealand's electrification journey.

Please note, there will always be an opt-out option (outlined in the Q&A section).

Start and duration of the trial

We plan to begin the trial in the winter of 2026 with a smaller group of participants and grow to full capacity for the winters of 2027 and 2028.

The phased approach allows us to identify and adapt based on real-world learnings from our initial trial stages. Additionally, the first group of participating households (our early flex adopters) can act as ambassadors for the community trial and assist with recruitment for the next phase in subsequent winters.

Questions and answers

What is ‘flex’?

Demand flexibility, often shortened to ‘flex’, means using electricity at different times of the day to reduce pressure on the network during peak periods, eg heating your home earlier in the afternoon instead of when you get home, or charging a battery when demand is low and using it later.

Why is this trial happening in Ōmokoroa?

Ōmokoroa is one of the fastest-growing areas on Powerco’s network, with increasing demand for electricity especially during winter evenings. This makes it an ideal place to test whether flexible energy use can help manage peak demand and delay the need for major infrastructure upgrades.

What is this trial about?

This trial is exploring smarter ways to use electricity by shifting when it’s used, rather than always increasing network capacity by building infrastructure. By testing technologies in real homes, we want to understand how households can help reduce peak demand while staying comfortable and potentially saving on energy costs.

Have flex technologies been used elsewhere to reduce peak demand?

Yes. In New Zealand, hot water control has long served as a technology that enables shifting demand from peak. This trial aims to test a more dynamic system of flexibility beyond ‘top-down’ measures such as hot water control by lines companies or retailers. In the United States and the United Kingdom, a range of technologies are now being used, but it is still early days for flex and smart devices, such as heat pumps and batteries. We want to understand how these new technologies and approaches can work most effectively in a New Zealand setting.

Why now?

The flex technology has got to the point where we think it is ready to be used at scale. There is a lot of learning to be done by lines companies, such as Powerco, electricity retailers, flexibility service providers, installers and our customers. Powerco needs to understand how the technology can be managed as part of its overall network operations, processes and systems. The aim of this trial is to work through all the practical details of how to deploy and manage new technology in the power system for everyone’s benefit.

If all the technology exists why is this pilot needed?

What we are testing is how to get the technology and the management of the electricity network working together in a coordinated way, as well as understanding how flex technology can unlock further benefits for our customers.

What technology is included in the trial and do I need to have it already?

The trial focuses on everyday home technologies that help shift electricity use away from busy winter evening peak times. These include heat pumps, hot water systems, home batteries, home energy management systems and some smart EV charging technology.

You don’t need to already have this technology installed. You can take part if you already have eligible smart technology or if you’re open to installing it as part of the trial. To view the current list of approved systems and technology eligible for participation in the trial, visit **asimpleshift.co.nz**

How do batteries help?

Home batteries can store energy when demand is low, such as in the afternoon and can be used later during evening peak times. This helps reduce pressure on the electricity network while still giving households the energy they need.

How do heat pumps and home heating play a role?

Some participants in the trial will use smart controls to pre-heat their homes during winter afternoons so they're warm when they arrive home. This helps reduce the need to turn everything on at once during peak times without changing daily routines. The process happens automatically in the background.

What about hot water and EV charging?

Smart hot water systems can shift when water is heated without affecting shower comfort. EV charging can also be timed to happen outside of peak periods, and future two-way vehicle-to-grid (V2G) technology may allow EV batteries to support the network during times of high demand.

Do participating households have to actively engage with the smart systems?

Once the systems are installed, set up and the household is enrolled, participation is intended to be simple and low effort. The technology is designed to operate automatically in the background, responding to signals during peak periods without requiring day-to-day involvement from customers.

As this is a trial, part of the learning is understanding how well this automation works in real homes and where improvements are needed. Participants will occasionally be asked to share feedback or support troubleshooting if issues arise. Overall, the aim is that daily routines remain largely unchanged while the trial helps test and refine how flex technologies perform in practice.

The focus is on houses, why not commercial and industrial customers?

The Ōmokoroa demand flexibility trial is focused on residential households. Other EECA flex pilots are running in parallel with the Ōmokoroa trial and focus on commercial and industrial sectors.

Wifi and data flows

An important part of this demonstration is learning how flex technologies perform in real homes. To do this, we need access to data that shows how batteries, HEMS, heat pumps and hot water systems are operating, and how they respond during peak periods. This information helps Powerco understand what works well, what needs improving, and how flex can be used to keep future power costs down for everyone.

Because these smart systems rely on connectivity to operate and share data, participating households need to have a reliable wifi connection. It's important that devices remain connected throughout the trial so they can respond as intended and provide the insights needed for learning. If a home's router or wifi password changes, the device settings will need to be updated, just like other connected devices in the household.

What happens to the data, and will my privacy be protected?

Protecting participants' privacy is an important part of this trial. By enrolling in this trial, a participant will need to consent to Powerco, EECA and research partners using their data and energy consumption profiles for the purpose of this trial, in accordance with the New Zealand Privacy Act 2020. The data collected from participating homes will be anonymised, before it is disclosed by Powerco to any third party, meaning it cannot be traced back to an individual household.

The data gathered from participating households will remain valuable for analysis and learning, even if a household chooses to exit the trial before its completion or after the trial has ended. This continued use of data enables Powerco, EECA and their research partners to further understand how flexible energy systems perform and where improvements can be made. However, once the trial concludes, collecting new data from households will stop.

How long will the trial last?

The Ōmokoroa trial is scheduled to run for approximately three years, with the aim of having completed a small number of household installations and enrolments during the winter months of 2026. Progressively, we aim to grow the group of trial participants to full capacity for the winters of 2027 and 2028.

What happens when the Ōmokoroa trial finishes?

Once the Ōmokoroa trial concludes, households can keep installed equipment such as batteries or HEMS, enabling continued benefits and independent use after the trial ends. Households may still benefit from any available network assistance rates (NARs).

Can I opt-out of the trial?

In agreeing to be a participant you have, in principle, signed up for the duration of the trial, receiving incentives that could have otherwise gone to another household. We appreciate, however, that there may be a genuine reason for a participant to change their minds. It's important to know that if you change your mind for any reason before 30 September 2027, you will be required to reimburse us the full cost of your incentive.

A commitment of signing up for the trial is to fill out an exit survey so we can understand the reasons for you leaving. While we would be sad to see you go, if there's a legitimate reason and you have filled out the exit survey, we have the discretion to waive the obligation to pay back the incentive.

What happens when I sell my house during the trial period?

We would encourage the new homeowner to continue to participate in the trial and would appreciate it if you could let us know when you have sold your house and plan to move out. We can take it from there, approaching the new owner and explaining that there's still benefits to be had if they sign up for the trial.

How and when will I receive the incentive payment?

The incentives come from EECA and will be administered by Powerco and its debit card service provider. The incentive can be redeemed on the payment of the final invoice of an A Simple Shift-endorsed installer. The debit card with the correct amount will be issued together with the final invoice from the installer. This will happen immediately after the system has been inspected and is switched on (ie, proven to be working).

How and when will I receive the reward for shifting energy?

This depends on the electricity retailer or flex service provider you're signed up with. Powerco issues a network assistance rate (NAR) to a select group of retailers and providers that participate in this trial. They can choose to package the NAR pricing in different ways. It could be a rebate based on the amount of energy you managed to shift away from peak hours. Retailers/providers could also choose to reward you in other ways (ie, one lump sum, a sign-up bonus or gift, or combine it in a bundled service package). While you are required to sign up with a participating retailer/provider to participate in the trial, you can choose which one is best for you.

What are the peak hours when energy needs to be shifted?

The peak electricity use hours in Ōmokoroa that require trial participants' assistance, are during June, July, August and September, between the hours of 5pm and 8pm. This is when we need a joint effort from trial participants to shift their power use and help flatten the peak. The good thing about the smart technology in your home is that you won't need to do anything. The shifting of energy will happen automatically and in unison with other trial participants.

How does participating in the trial benefit me?

Depending on how your home is set up, you may benefit from:

- Lower electricity costs
- Incentives to install new technology
- Rewards for shifting your energy use
- More insight into how your home uses energy

Want to know more?

If you still have questions, feel free to drop us a line at **asimpleshift@powerco.co.nz**


asimpleshift
asimpleshift.co.nz

powerco.co.nz

eeca.govt.nz