Incentivising flexibility with Resi-Flex

Milestones to date and 2025 roadmap

INTRODUCING RESI-FLEX

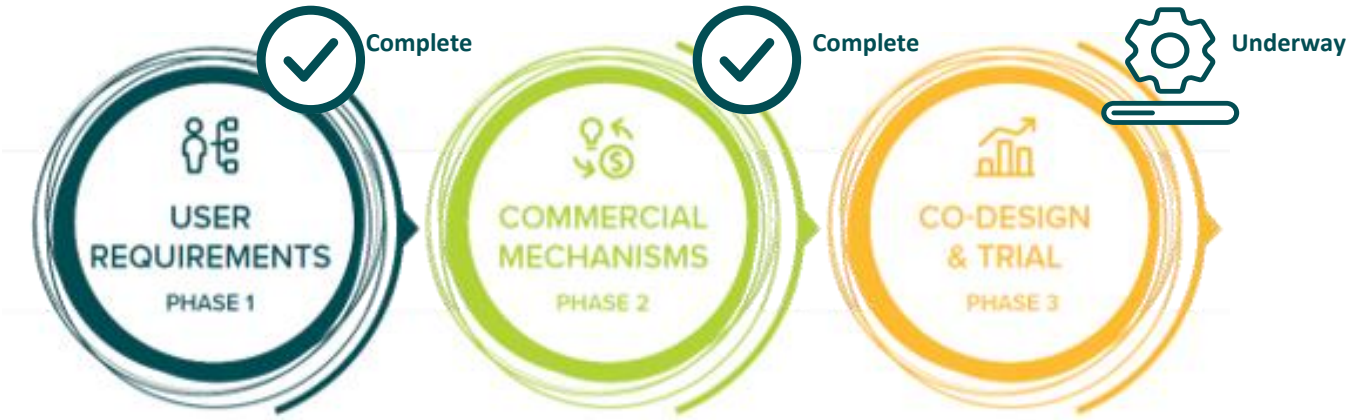
Spearheaded by Orion New Zealand Limited and Wellington Electricity, Resi-Flex explores commercial mechanisms to incentivise residential flexibility in Aotearoa New Zealand.

Residential flexibility has the potential to allow households to save on energy costs by adapting or shifting their energy consumption. By responding to system signals such as electricity prices, network demand, or renewable energy availability, households will be able to draw electricity at the lowest prices while contributing to electricity system stability.

When integrated into a whole-system approach, flexibility optimises networks and enhances operator control. It enables smoother integration of intermittent generation sources and expands capacity to support the electrification of vehicles and industrial processes.

Resi-Flex adopts a three-phase, learning-by-doing approach to understand the needs, preferences, and barriers of stakeholders across the flexibility value chain. By collaborating with Electricity Distribution Businesses (EDBs) and partners, we are exploring the potential for flexibility and identifying the commercial mechanisms that will help it to scale.

Three-phase approach



PARTNERING TO MAKE FLEXIBILITY POSSIBLE

Following a huge response to the project's Expression of Interest (EOI) release in March 2024, global flexibility leader Octopus Energy was selected as the first Resi-Flex implementation partner. Three additional partners have since joined the project, and we look forward to sharing more about this in early 2025.

The trials involve testing multiple commercial mechanisms alongside Octopus' existing managed EV charging service. We believe these trials will exhibit the cross-sector, consumer focus, shared information approach that is needed to reliably and securely transform Aotearoa New Zealand's energy system at scale.

"We aim to understand how consumers respond to commercial incentives and whether their flexibility can support efficient network investment and cost-effective decarbonisation."

Evie Trolove
Head of Customer and Market Innovation | Orion Group

THE COMMERCIAL MODELS WE ARE TESTING IN PHASE 03

Through our partner organisations, three commercial models are undergoing market testing and assessment:

	1. Managed Service	2. Procured Flexibility	3. Consumption Bands
Commercial mechanism	**Standards-led**. Retailers/ aggregators get discounted lines charges for managing their customers' flexible devices (for example hot water or EV charging), whether it is used or not.	**Market-led.** Retailer/aggregators are paid for actual load reduction (eg. consumer battery dispatch or behavioral change) during an event in comparison to a baseline.	**Price-led**. Network pricing is set at a localised level, with increasing rates for higher consumption in any given half hour. Similar to time of use, except changes are based on consumption rather than time.
Example end-customer offering	Discounted line charge for the ability to control devices to an agreed-upon standard (similar to arrangements currently in place with Ripple).	Customers with battery storage are offered favourable time-of-use rates (for both import and export) in return for allowing a degree of external control. E.g. Lincoln flexibility trial.	Yet to be implemented.
Value stacking	Aggregator shares the control of the device to co-optimise with the wholesale market and network pricing.	Aggregator uses the devices for the highest value market/ payment at any point in time.	The consumption band network pricing can be traded off with benefits provided by other markets/ payments.

OCTOPUS 'SAVING SESSIONS' TRIAL – WHAT WE HAVE ACHIEVED ALREADY

Octopus Energy's Saving Sessions incentivise customers to reduce their electricity usage during peak demand times by offering $3 for every kilowatt-hour (kWh) saved during the Resi-flex trial. Orion provides signals to Octopus when the network is likely to be constrained. Octopus then responds by issuing saving session notifications and instructing any intelligent Octopus connected devices to conserve energy. By participating, customers contribute to a more sustainable energy system while benefiting financially.

octopusenergy.nz/saving-sessions

50%
50% average reduction in customer load during Saving Sessions events

33%
One in three Octopus customers signed up to Saving Sessions trial

66%
Two out of three trial participants saved money during the trial

280MW
Demonstrated potential to provide 280 megawatts of sheddable load at a national scale

OUR PATHWAY TO COMPLETION

- **2024 Q3** – Start co-design with partners ✓
- **Q4** – Sign up customers to trials and continue co-design ✓
- **2025 Q1**
- **Q2** – Trials go-live with customers
- **Q3** – Trials end
- **Q4** – Analysis and Resi-Flex report including lessons learned and recommendations

"If we want a lower cost energy system we need to get the demand side flexing. Getting incentives in place for customers is where this starts."

Margaret Cooney
Chief Operating Officer
Octopus Energy

To find out more about Resi-Flex and other Orion innovation projects, please visit
oriongroup.co.nz/your-energy-future/innovation