

FLEXFORUM |

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FlexForum advice on getting to a future market and power system which delivers the energy and flexibility outcomes sought by households, business and communities

Households and businesses own millions of devices and appliances ('machines') that use and sometimes produce electricity. 'Flexibility' is shorthand for these machines - including electric vehicles, solar and other generation, battery storage, heating and cooling equipment - altering their production or use of electricity in response to a signal to deliver value to the owner of the flexible resource, and to the power system and economy.

FlexForum was established as an incorporated society in July 2023 to coordinate the efforts required across the electricity ecosystem to ensure market settings, capabilities and practices are being developed at pace to ensure households and businesses can experience the full benefits from enabling flexibility and accelerated electrification.¹

FlexForum brings together the people from across the electricity ecosystem who have the immediate and practical expertise needed to work out what needs to be done.

FlexForum Members want to make it easier for households, businesses and communities to maximise the value of their energy resources and their flexibility. This flexibility will help deliver an affordable and reliable operation of the electricity system and enable accelerated electrification as part of Aotearoa New Zealand's transition to a zero emissions economy.

We do three things.

- bring together a whole-of-system perspective of how 'flexible' energy resources will help deliver a sustainable, affordable and reliable electricity system
- provide expert advice based on experience and learning-by-doing. 'Learning by doing' is at the core of FlexForum efforts.
- maintain the [Flexibility Plan 1.0](#)² which was published in August 2022 to focus and coordinate efforts, monitor and provide accountability on progress.

Find out more at www.flexforum.nz

¹ FlexForum currently has 28 Members from across the electricity ecosystem including gentailers, retailers, metering services suppliers, EV charger manufacturers, energy management software firms, Transpower, distributors, advisory services firms, universities, and individuals. Our Member list is available at <https://flexforum.nz/about/>

² Flexibility Plan 1.0 at www.flexforum.nz/flexibility-plan.

Our key points

Flexible resources are central to the future electricity system and market. Flexibility is the key to unlocking a truly consumer-centric electricity market and system because the flexibility of machines in homes and businesses give those households and businesses greater agency and autonomy over their energy costs and outcomes.

Flexibility also has a critical supply-side role in ensuring a reliable and affordable electricity supply by providing a tool to efficiently respond to increasing amounts of variable electricity generation (eg, wind and solar) and the increasing pressure on transmission and distribution network infrastructure

There are four things the Electricity Authority can do to ensure the future power system is developed to integrate flexible resources into the power system and market and maximise the full benefits of flexible resources.

1. **Have a view of what good looks like** from the perspective of households, businesses and communities. We need a vision or blueprint for the future electricity system and market which provides a plausible and practical outline of the system and market settings required to deliver the everyday energy choices and outcomes available to households, businesses and communities from the future electricity system. As outlined below, FlexForum is developing a blueprint and welcome the continuing involvement of the Authority in this process.

The blueprint will make it easier to identify the assumptions which underpin the system and market settings and identify which assumptions should be revisited. The explicit and rigorous testing of assumptions is a necessary condition for developing the future power system and market.

2. **Ensure a joined up approach to effectively coordinate upgrades to both the physical operation and financial elements** of the electricity market and system. The physical system operates the way it does due to the market arrangements. Focusing solely on the physical element or the market element will result in disconnects between the two elements with adverse implications for the outcomes available to and experienced by households, businesses and communities.

More explicit coordination between regulators and regulatory work programmes is necessary to accelerate electrification and ensure a joined up approach. The blueprint of what good looks like will help to ensure joining the dots across regulators when developing future system and market settings.

3. **Use collaborative co-design approaches which leverage expertise from across the electricity ecosystem** to work out where to go next. Traditional consultation processes are slow, time-intensive and rarely get to the heart of the problem, particularly when dealing with disputed or not well understood matters.
4. **More learning-by-doing.** In a transition state - which we are now in - acting in the interests of consumers over the long term means supporting learning-by-doing, involving failures and success, and making decisions as a result of that learning. A purpose of Flexibility Plan 1.0 is to guide what learning happens and when.

FlexForum is working on things which will help work out what to do next to upgrade the market systems

With its diverse group of members, FlexForum has developed a workplan for 2024 (and beyond). Amongst other things, this workplan will deliver critical outputs that will help the Electricity Authority (as well as the wider industry) work out what to do next, in order to progress towards the future power system.

Our workplan is anchored to Flexibility Plan 1.0 which lists the steps and actions required to fully unlock the value of flexible resources for households, businesses, communities and the wider power system and economy. The Flexibility Plan includes actions which are necessary conditions for a future power system and is the only whole-of-system implementation plan currently available to coordinate the interdependent activities of the four main policy and regulatory bodies and across dozens of large and small industry players.

The FlexForum 2024 workplan focuses on priority tasks not being done by someone else. We are agnostic about who delivers the steps in the Plan. Steps are currently being delivered by various parties including: the Future Networks Forum, Electricity Authority, Commerce Commission and Electricity Engineers' Association.

The initial outputs from FlexForum's 2024 workplan are:

- A **blueprint for the future market and power system** which reflects the decision points, actions and interactions (operational and financial) of a power system and market which delivers the energy (and flexibility) outcomes that people want and need from it. The blueprint will provide a reference point for FlexForum and decision-makers across the electricity system for the features and design of a power system and market that integrates flexibility and is consumer centric.
- A list of the **existing and potential future components of how flexibility can practically deliver value to households, businesses and communities**, ie, the current and future flexibility value stack or 'show me the money'. There is no detailed whole-of-system description of the flexibility 'value stack' and the specific financial incentives underpinning the integration of flexibility into the market and system. This is a practically focused exercise looking at how flexibility would or could respond given existing signals and commercial mechanisms and the interaction between the various signals and mechanisms.
- A **schematic of the digital architecture and a list of capabilities required to enable the signals and information flows to which are needed to underpin the future market and system arrangements**. The schematic is to provide a reference point for conversations about data flows and access necessary for the future electricity system and market to deliver the outcomes that people want and need from it.
- A work plan developed on behalf of EECA listing the **actions required for flexible EV charging** to become the easy and obvious choice for EV users. The purpose is to establish a whole-of-system perspective – from car-yard to plug – about the factors which drive the choices households and businesses must make, and use this understanding to identify practical actions to enable people to make informed choices about EV chargers and charging.
- A survey of activity and **progress with delivering the steps in Flexibility Plan 1.0**. The check in will give us the state of play now, who is doing what (or not) and opportunities for targeted learning-by-doing. The survey will inform development of Flexibility Plan 2.0.

We appreciate the involvement and input from Electricity Authority staff to date and welcome continued participation in delivering these tasks.

Concluding points

Electrification involves more than pouring concrete and erecting steel. We need to develop the soft infrastructure needed to integrate and harness the potential of flexible resources. This requires starting now to upgrade the existing electricity system and market arrangements to ensure flexible resources are available to help maintain resilience and reliability, avoid overbuilding network and generation infrastructure, and to enable households and businesses to make well-informed and least regrets decisions around electrification.

This is a FlexForum perspective given its objective and purpose to support coordinated collaboration to make it easier for households, businesses and communities to maximise the value of their distributed flexibility. Individual FlexForum Members will have their own perspectives and positions.

You can contact FlexForum at info@flexforum.nz with any questions and to arrange further discussion about this response. We are very keen to collaborate and coordinate with the Electricity Authority to accelerate the policy development process by leveraging the diversity of perspective and deep expertise within FlexForum to answer questions at pace.

