

FLEXFORUM |

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To: Electricity Authority

c/o taskforce@ea.govt.nz

FlexForum advice to the Energy Competition Taskforce on 3 proposals to empower electricity consumers

[FlexForum](#) exists to support coordinated and collaborative action across the electricity ecosystem and speed up progress to make it easy and routine for households, businesses, and communities to maximise the value of their distributed and flexible resources.

We are an incorporated society with 42 Members from across the electricity ecosystem.¹ Our touchstone is [Flexibility Plan 1.0](#)² which is a list of the practical steps and actions that must be taken by the electricity ecosystem to make it easy for people to maximise the value of flexible resources and support the affordable and reliable operation of the electricity market and system.

Flexibility³ is our focus because it is central to an affordable, sustainable, reliable and consumer-centric electricity market and system.

Flexible resources owned by households, business and communities – electric vehicles (EV), EV chargers, solar, battery storage, heating and cooling equipment and energy management systems – are becoming more prevalent. Harnessing this flexibility provides an opportunity to give people greater agency and autonomy over their energy and help to ensure a reliable, resilient, sustainable and affordable power system.⁴

FlexForum has the following advice for the Electricity Competition Taskforce on the proposals to require:

- distributors to provide a rebate when people supply electricity into congested parts of the network (2A)
- large electricity retailers to offer at least one time-of-use pricing plan to all their customers (2B)
- large electricity retailers to offer at least one time-varying rate for when they buy electricity from consumers (2C)

The advice was developed through Member workshops between September and November 2024 and a further workshop in February 2025. The thinking behind this advice is detailed in FlexForum Insights: [Filling holes in the value stack will let people and their flexibility do more](#). This advice and the FlexForum Insights should be considered together.

¹ The list of FlexForum Members is available [here](#). Members include gentailers, retailers, metering services suppliers, electric vehicle charger manufacturers, energy management software firms, Transpower, distributors, solutions providers, universities, and some real people. Our discussions are joined by observers from the Electricity Authority, Ministry of Business, Innovation and Employment, Energy Efficiency and Conservation Agency, the Commerce Commission, and Utilities Disputes.

² A version 2 is being developed. Look for it in May 2025.

³ Flexibility is the modification of generation injection and consumption patterns, on an individual or aggregated level, often in reaction to an external signal, to provide a service to the owner or within the power system.

⁴ The opportunity and benefits of flexibility are flagged by a range of parties including [Transpower](#), the [Market development advisory group](#), and the [BCG Climate change in New Zealand: the future is electric report](#).

Customer propositions depend on the underlying cash signals which form the value stack

Retail products and customer propositions depend on the underlying cash signals provided by the pricing mechanisms which make up the electricity market, for example, the spot price signals electricity supply and demand, transmission and distribution pricing signal network capacity.

The key characteristic of most customer propositions available today is they offer a predictable price – whether flat or TOU rates – for a predictable response. The reasons include customer preferences and capability to be flexible, ease of implementation by both customers and retailers, and care factor. But the overarching reason is the power system has been built and operated based on predictable use patterns, which have arisen due to the predictability of household and business electricity use in aggregate.

Flexibility is less useful (and therefore less valuable) in a predictable environment. Network operators can plan and invest based on predictable network usage profiles. Retailers can calculate retail prices based on averaging electricity input costs and predictable electricity usage profiles.

The predictable environment means cash signals motivating a dependable flexible response to efficiently manage unpredictable system conditions have not been needed, and people have not been routinely offered propositions which incentivise and motivate flexibility.

Things are becoming less predictable as the energy transition changes how and when people use electricity, whilst also changing the generation fleet from highly controllable fossil fuels to more variable sources such as wind and solar. The need for more dynamic flexible responses is increasing.

This means we need cash signals which motivate a dependable flexible response.

Five holes in the value stack get in the way of people benefiting from their flexibility

We have identified five holes in the value stack caused by missing cash signals or cash signals not being translated into benefits for the flexible resource owner (ie, the customer).

Holes in the value stack are not surprising. Pricing mechanisms were designed for a world without any role for distributed flexibility, and, aside from pricing of transmission capacity, there has been no material change to pricing mechanisms and cash signals since the wholesale market was established in 1996. Pricing mechanisms continue to be designed around predictability.

But these holes in the value stack reduce the range of propositions and reduce the opportunities for people and the power system to maximise the value of their flexibility.

The **transmission capacity management** service is missing a cash signal to dependably motivate a flexible response to transmission congestion, particularly congestion caused by unpredictable events. The spot price is used as a proxy but does not accurately signal transmission constraints. For the spot price to accurately and dependably signal transmission constraints the grid owner would need to delay upgrades until it was too late.

The **distribution capacity management** is missing a cash signal to dependably motivate a flexible response to network congestion caused by unpredictable events to complement existing cash signals provided by the demand-based pricing and hot water control discount mechanisms. Some distributors are creating the required cash signals⁵. However, these efforts are prompted by uncommon local conditions and there is no guarantee that equivalent cash signals will be replicated across all networks.

⁵ Examples of cash signals being used to incentivise and motivate a flexible response are the Orion control period demand pricing and contract payments for providing non-network solutions.

Distributed flexible resources are not routinely used for **spot price risk management**, despite the aggregate resource being sufficient to create big chunks of system value if the hedge product cash signals were on the table to motivate the flexible response.⁶ Some retailers are monetising flexible responses, e.g., the Octopus Energy [Saving Sessions](#), and a range of [hot water automation retail products](#). However, these propositions and benefits are not routinely available across retailers or for all manner of flexible resources.

People with a battery or solar do not have an efficient range of choices to maximise the benefits of their **electricity generation** resources by responding to the underlying cash signal (the spot price). Some retailers⁷ offer peak and off-peak (shaped) power purchase agreements (PPA) which average the spot price (the efficient cash signal) as part of a bundled retail product (for use) and PPA (for sale) package. There are differing views within FlexForum whether separating the retail and PPA products would be commercially viable, but a possible contributing problem is people are prevented by regulatory settings from selecting the best prices for using and selling electricity.⁸

People are less able to access the benefit of providing **system ancillary services** because existing technical rules are written such that not all capable resources meet the qualification requirements. New technical rules and qualification requirements are needed.

Our advice is to deal with the root causes of the problem

The overarching problem is insufficient financial and non-financial incentives for retailers and network operators, collectively, to overcome the two types of barriers getting in the way of flexibility friendly customer propositions.

The root causes of these barriers provide the basis for potential solutions to fill the holes in the value stack. A more detailed description of the root causes is provided in the [FlexForum Insights](#).

Practical and capability-related barriers	Financial and risk-related barriers
Insufficient experience and know-how with practical use of distributed flexibility, including in procuring, deploying and using flexibility	Flexibility is not commercially attractive compared to other investment priorities even when it is the efficient solution
Integration of flexible resources into the system requires development of common market infrastructure such as communications pathways, contractual frameworks and cash signals	

Solutions to address the root causes

We think addressing the root causes will fill the holes in the value stack and lead to customer propositions which give people the option and opportunity to maximise the value of their flexible resources across all the ways that flexibility can benefit the system.

These are our suggested package of solutions to address the root causes and establish additional fit-for-purpose cash signals to dependably motivate flexible responses to unpredictable events experienced across the supply chain.

More coordinated efforts and incentives to support development of flexibility experience and capability across the value chain, particularly focusing on multi-lateral interactions. Network operators need robust evidence that flexibility can be dependable before creating a cash signal. This requires building experience and capability by getting people saying yes to flex, working with flexibility

⁶ Research and estimates to date indicate potentially material volumes of latent flexibility. A [FlexForum](#) estimate in July 2024 indicated there is between 280 and 420 MW of flexibility available at any time. An Electricity Authority [survey](#) found about 450MW of flexibility could be available, including 160MW of flexibility in household hot water systems. [Findings](#) from the Orion and Wellington Electricity Resiflex project include the potential to harness 280MW of flexibility by creating a cash signal and customer proposition.

⁷ For example, [Ecotricity](#) and [Octopus Energy](#).

⁸ People are prevented from contracting with a retailer to purchase power and a separate retailer to sell their power because the market settings assume a one-to-one customer and retailer contractual relationship. Regulatory settings get in the way of proving the commercial viability of a business model and customer propositions based on buying and selling power separately.

coordinators, equipment manufacturers and other service providers. Financial incentives are not sufficient to motivate network operators, retailers or other parts of the ecosystem to sponsor the market development process at sufficient pace, scale or scope. The Energy Efficiency and Conservation Authority Scale demand flexibility demonstration pilot project is the exact type of initiative required to deliver this solution. Complementary initiatives are:

- the Commerce Commission decisions in the 2025 DPP to provide an innovation and non-traditional solutions allowance (INTSA) and a low voltage data opex allowance
- the Electricity Authority's Power Innovation Pathway.

A coordinated workplan to fast-track development of the market infrastructure to integrate flexible resources into the system delivered jointly by regulators and electricity ecosystem. The workplan objective should be to reduce the risk and cost of expanding the stock of flexible resources available to respond to market and network conditions, by developing common, open access communication pathways, contractual and counterparty relationships and transparent, tradeable pricing of flexibility.

The workplan can draw on the [Flexibility Plan](#) which lists most of the activities and tasks to deliver this objective. Initiatives such as [FlexTalk](#) and [Resi-flex](#) have shown the way through learning by doing. More similar projects may be needed to work out how to address practical challenges which will be confronted along the way.

We expect this workplan to include most if not all the tasks required to develop a digitalised electricity system. Digitalisation will enable a wider range of flexible customer propositions by providing the capability for flexibility buyers to create and send flexible cash signals and making it easier and more routine for people to pick the proposition which suits their flexibility and preferences.

Strengthen financial and non-financial incentives for electricity retailers to develop capability and use flexibility when it is efficient:

- **develop a suite of common risk management products focused on dependable flexibility** to create efficient cash signals for responding to unpredictable events such as high spot prices and network congestion. Historically, retailers with generation mostly had adequate tools for managing price risk, even if these tools did not represent the lowest operating cost solutions. Today, extra tools, including flexibility, are needed to manage increased spot price volatility, but investments by individual retailers are in early stages and narrowly focused due to concerns about first mover penalty from a competitor eating their lunch, the relatively small scale of flexibility investments and the need to upgrade to customer management and billing systems.
- **retailers need to offer spot, shaped and fixed price variable volume retail power purchase agreements.** This relates to the Taskforce proposal to require large electricity retailers to offer at least one time-varying rate for when they buy electricity from consumers. Giving people the option to sell their power on the market (taking the spot price), agreeing to sell to someone at a fixed or shaped price, or typically both would put them on equivalent terms as large generators and would provide more opportunities for people to maximise the value of their solar and battery investments.
- **fast-track development of market infrastructure to integrate flexible resources into the system.** This solution, described above, should strengthen incentives by mitigating concerns about a first mover penalty and higher investment risks from a competitor eating my flexibility lunch. The solution is repeated to highlight the dependencies of the solutions package.

Strengthen financial and non-financial incentives for network operators to develop capability and use flexibility when it is efficient:

- **distribution and transmission network operators need to provide a cash signal(s) designed to dependably motivate a shift and shed-type flexibility** where it is needed as soon as practicable, either through the pricing structure or as a standalone contracted price. This varies the Taskforce proposal to require distributors to provide a rebate when people supply electricity into congested parts of the network. Relying on price-based flexibility is not a practicable or effective way to motivate a dependable flexible response. The fastest way to get a dependable flexible response is for network operators to offer a standalone contracted price via a flexibility exchange or platform. This approach would also avoid inefficient cross-subsidies between network users.
- **complement the financial and non-financial incentives provided through price-quality and information disclosure regulation** to strengthen incentives to use flexibility. Existing financial incentives are not sufficient to motivate network operators collectively to buy flexibility when it is efficient, or to invest in integration and developing experience with flexible resources. Although the equal treatment of capex and opex (ie, totex) strengthens financial incentives to use flexibility, opex options will never be as commercially attractive while there is no way to earn a commercial return, or grow enterprise value, from opex. In this context, the motivation to invest in and use flexibility is the result of non-financial incentives arising from uniquely local factors such as

adverse reliability impacts of not being able to build fast enough. An option for providing stronger and consistent non-financial incentives is to introduce [more granular, probabilistic and risk-informed quality standards from 2030](#).

A digitalised electricity system is needed for a wider range of flexible customer propositions

Digitalisation is needed to enable a wider range of flexible customer propositions: to easily and routinely create and provide the cash signals underpinning the flexible customer propositions; and for people to easily and routinely pick the proposition which suits their flexibility and preferences.

Cash signals targeting unpredictable conditions require capabilities that are not yet widespread across the electricity ecosystem. Developing these capabilities is a part of the Flexibility Plan and should be outlined in the suggested coordinated workplan to fast-track development of the market infrastructure.

As importantly, the benefits of more flexible customer propositions rely on people being able to easily and routinely say yes to the more flexible propositions. There is a good chance that most people are not on a suitable value maximising retail product and price due to the difficulty of getting good advice and information. This unsatisfactory and inefficient state of affairs will get worse as more complex propositions become available. A critical requirement for the benefits of filling holes in the value stack to flow through to people, they and their advisers [need better access to their own electricity information](#) and to pricing information. People who can easily and routinely get prompt and personalised advice will be more able and more likely to make informed and confident choices to invest in flexible resources and sell the right to their flexibility.

Concluding points

Harnessing the large and growing stock of latent flexibility in the hands of households and businesses is an opportunity to create value and benefits for system stability and people’s bills.

Our package of solutions is designed to take advantage of this opportunity by enabling the fit-for-purpose cash signals needed to underpin customer propositions which will give people the option and motivation to provide a dependable flexible response to unpredictable events.

The three Taskforce proposals provide a starting point but need improvements to deliver cash signals which effectively incentivise and motivate dependable flexible responses to more efficiently manage unpredictable events such as the energy shortage on 9-10 May 2024 or the transmission and distribution network failures caused by Cyclone Gabrielle.

Taskforce proposal	Improvements to more effectively and efficiently fill the hole in the value stack
<p>...to require distributors to provide a rebate when people supply electricity into congested parts of the network (2A)</p>	<p>This proposal might fill a distribution-related hole if it shifts emphasis from price-based flexibility to contracted flexibility.</p> <ul style="list-style-type: none"> • Price-based flexibility is not dependable because responding is discretionary and cannot be relied on to manage constraints. As such the proposal will not in the short to medium term avoid capex and will not deliver the expected benefits. In the longer term the new normal discretionary responses will be predictable and baked into asset planning. • Unless the cash signal comes with direct control by the distributor (eg, ripple control), not a party maximising value on behalf of the customer. Pricing which lock up the resource without paying for the privilege prevents value stacking and benefit maximisation. • Few distributors have capability to create and send temporal/locational cash signals motivating responses to unpredictable events. The likely default will be more TOU signals which are most suited to predictable conditions.
<p>...to require large electricity retailers to offer at least one time-of-use</p>	<p>This proposal does not fill any hole in the value stack because it will not create additional fit-for-purpose cash signals motivating a dependable flexible response to unpredictable conditions.</p>

Taskforce proposal	Improvements to more effectively and efficiently fill the hole in the value stack
pricing plan to all their customers (2B)	Without information about how many people are using TOU products, and the reasons/benefits, it is not possible to say regulation is required for people to have access to this type of customer proposition. We advise a focus on strengthening financial and non-financial incentives for electricity retailers to develop capability and use flexibility when it is efficient.
...to require large electricity retailers to offer at least one time-varying rate for when they buy electricity from consumers (2C)	This proposal will fill an electricity-related hole if it sets an expectation that retailers provide people the option to sell their power on the market (taking the spot price), at a shaped price, or at a flat rate.

Filling these holes in the value stack will achieve key parts of the October 2024 [Government Policy Statement on Electricity](#). Our solutions would:

- provide all buyers and sellers of electricity (including those with flexible resources) with accurate price signals to discover lowest cost electricity supply and risk management solutions, and reliability and security of supply solutions.
- make it easier for households, businesses and communities to invest in and benefit from flexible generation, storage and energy management technologies
- ensure the growing value of flexible resources – demand side response, batteries, distributed generation – are used to efficiently manage energy and capacity shortfalls.

Most importantly, filling these holes in the value stack will give people the option and opportunity to be as flexible or inflexible as they like given system conditions, their circumstances and preferences.

- people unable or not wanting to be flexible can have an option like a flat rate retail product to enable a predictable power costs
- people with lots of flexibility can have an option like a flat rate retail product, plus a spot-based retail PPA for their spare solar, plus receive a benefit from selling the right to coordinate their flexible resources for specific agreed reasons.

This advice draws on Member views and experiences to identify options to achieve the FlexForum 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 may have their own perspectives and positions.

This is a complex topic with dependencies across issue and topic siloes and no straightforward solutions. We would be happy to provide an in person briefing to Taskforce Members to assist a deeper dive into the problem, root causes and what good could look like.

You can contact FlexForum at info@flexforum.nz with any questions and to arrange a briefing and discussion about this advice.

