December 2025

Demand flexibility:

Exploring consumer understanding and perceptions of demand flexibility.

Research conducted by Verian

EECA ENERGY EFFICIENCY & CONSERVATION AUTHORITY
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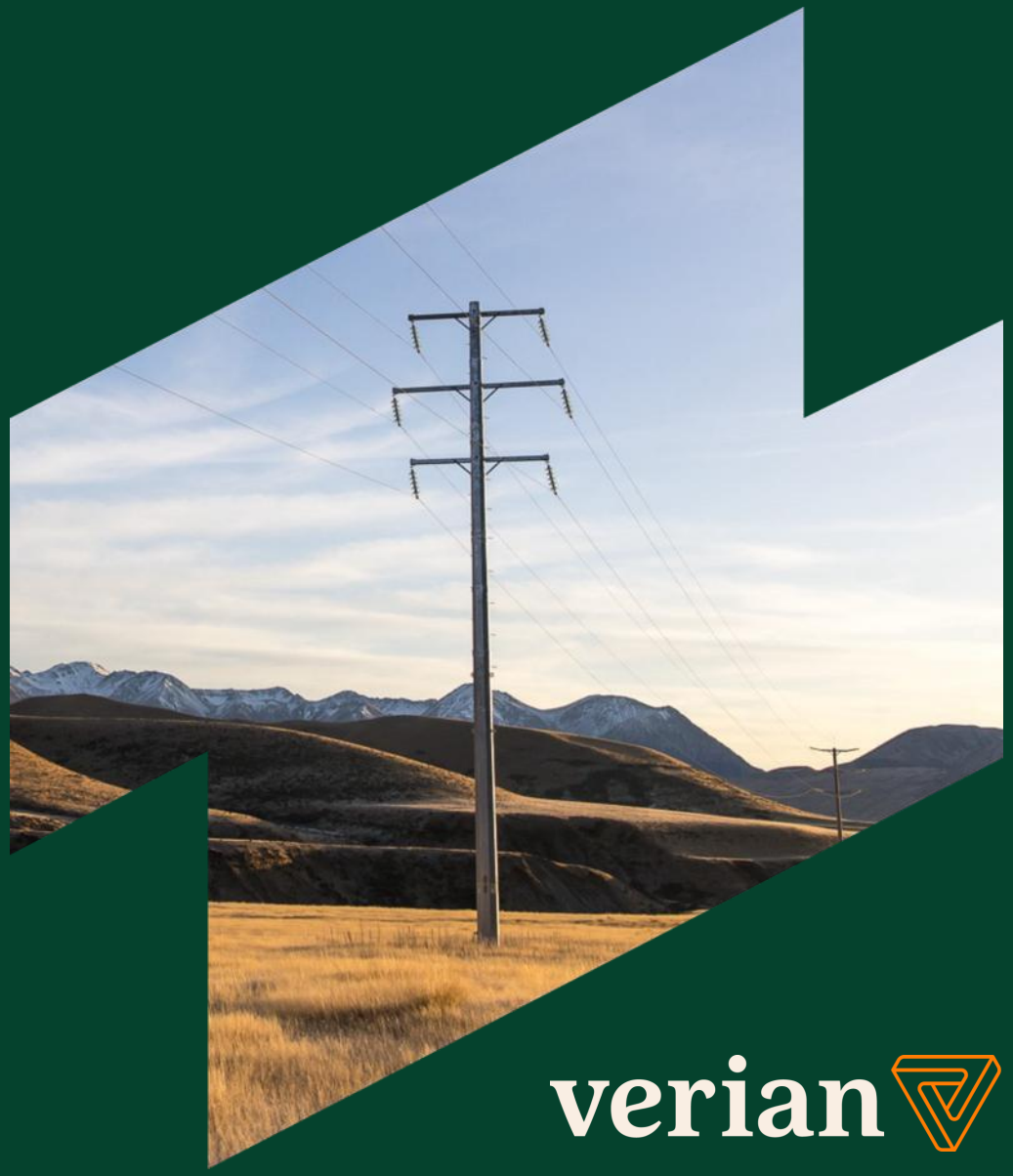

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The research challenge

To explore…

consumer understanding and perceptions on the concept of demand flexibility, identifying how these vary across demographic groups, and what language is most easily understood and resonant.

So that we can identify…

the optimal approach for communicating the concept to the public, what objections and questions they may have, and what the optimal way to manage these will be.

Enabling EECA to…

shape the language that is used on the website, in interviews and what suggestions are made to electricity lines companies, retailers and other partners when it comes to the language they use with their customers.

Research methodology in summary

Target audience – Consumers representing a broad geographic and demographic spread of New Zealanders. Groups set up to allow comparison between demographic groups (see box to the right).

Fieldwork dates – 5th December 2025 – 10th December 2025.

Method – 60 minute online focus groups.

Sample size
n= 32
8 groups, 4 participants per group

Sample composition

Group	Group size
Renters	4
Homeowners	4
Low income (household income <$70,000)	4
Māori	4
Pasifika	4
Asian	4
EV owners	4
Solar owners	4
Total sample	32

Across all groups, the sample included a mix of genders, geographies and ethnicities (except the ethnicity specific groups)

Executive summary

Executive summary

1
The core concept doesn't feel radically new.

The core take away for most consumers is that the concept of demand flexibility is focused on shifting energy use to take advantage of favourable pricing.

The descriptions provided are easy to understand and do not feel like radically new concepts.

The key communications issues focus more on the 'why' and 'how' than the understanding of the 'what'.

2
Consumers do not tend to think about grid capacity.

Most consumers have not previously considered grid capacity and the infrastructure that surrounds it.

Similarly, most believe that off-peak pricing is primarily a marketing and profit maximisation strategy used by power companies and do not connect to grid capacity.

When prompted to think about grid capacity, this can create more favourable associations with off-peak pricing.

3
Scepticism about power companies impacts attitudes.

Although they were not the subject of focus group discussions, consumers often focused their concerns on the role of power companies.

There is a prevailing mis-trust of power companies and lack of faith that they will allow consumers to make meaningful savings.

Consumers are particularly concerned about the idea of power companies having control of their energy use.

4
Saving money and retaining control are critical to motivate participation.

To feel motivated to participate, consumers need to believe that participation will enable them to make meaningful savings on their bills.

To feel comfortable with participation, consumers need reassurance that they will retain the agency to use power when they need to.

Consumers are concerned that inability to participate could force them to accept significant disadvantages and penalties.

5
Consumers struggle to see opportunities to shift power use.

When consumers reflect on the underlying principle of shifting energy use to reduce pressure on the grid and save money, they see it as a good idea that they support in principle.

However, when they think practically about their life and the times that they use energy, they struggle to see many opportunities to shift away from peak times due to their work and family commitments.

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Current attitudes and behaviours towards power shifting.

The concept of off-peak energy pricing is familiar but engagement, uptake and proactive use of these plans is variable.

The idea of shifting power usage to take advantage of better pricing does not feel like a novel idea.

Almost all consumers have a general awareness of the concept of peak vs off-peak power pricing, free hours of power or free power days.

However, the proportion of consumers that have these plans and make use of them is relatively low.

Many consumers in our sample were unsure whether their power plan offered any sort of off-peak pricing or what times might count as peak or off-peak.

Even amongst those who do have the relevant plans and know which days/times offer cheaper power, the use of these incentives is variable.

Life gets in the way and the incentives are often not strong enough to motivate people to make major changes to their routine when inconvenient.

Price incentives do drive behaviour, but current price gaps are perceived to be insufficient.

Amongst those who have relevant plans and are aware of the details of their plan, this does appear to have a noticeable impact on some behaviours, some of the time (often laundry and dishwasher use).

However, both users and non-users of plans with price differentials agree that more significant the price incentives would motivate increased engagement with these types of plans and more widespread, consistent behaviour change.

> “Some months you use a lot more power than what you thought you were going to use. And other months you don't use as much. So, it’s hard to see if it’s having an impact [the free hour of power]. It would need to be a significant saving to actually make it a regime that you stuck to.”

> “I do try to make things revolve around 9-12. But I still have to use what I need to outside of those hours. Because if it's hot or cold, the heat pump has to go on. If for some reason I have to do laundry, then I've got to, I can't choose. I try to fit it in like I say, but sometimes you just can't.”

Most consumers do not connect off-peak or free power plans with grid capacity...

...instead seeing this primarily as a marketing strategy of power companies.

Most consumers believe that the off-peak power plans and 'free hours of power' are offered primarily as a way to attract new customers.

Relatively few consumers in our sample connected these plans to grid capacity.

When pushed to think about why these days/times were selected by power companies, most guessed that it would have something to do with when the power was cheapest for companies to generate or supply.

Across the sample, the general assumption that these plans were primarily designed to maximise profit for power companies.

EV owners and solar owners were exceptions here, they were more likely to connect the idea of off-peak pricing with grid capacity. Although there was often still an assumption that plans were primarily designed to maximise profit rather than minimise grid strain.

> "the way I see it is that it's all set to maximise profits. It's not set in a way that that maximises savings."

> "It's just an incentive to sign up."

> "I think it's competition and then trying to win customers across but. They're quite clever in what they do. They'll get it back in a higher daily rate, or sometimes the day prices go up to offset the night."

> "I think it's more of a marketing thing for them."

> "I think it is just power companies wanting more money."

> "I'm with Frank, so I only pay for the kilowatt and the daily charge. These other plans are designed to be confusing with extra charges. If that other company is going to charge me a line charge, it's like why would I want to pay any extra when I currently just pay two charges rather than all these different categories of charges."

There is a common belief that off-peak plans are designed to make it hard for consumers to actually save a meaningful amount of money.

Consumers suspect that plans are designed to make it hard to save

Many consumers believe that power companies design their off-peak plans or ‘free power’ plans to make it hard for the consumer to ‘win’.

They believe that high fixed costs, line charges and elevated peak time pricing are used to enable the power companies to make back the money that they are losing with the cheaper or free power at off-peak times.

EV owners are more analytical

They have often researched power plans in detail and done their own calculations to work out exactly how best to ‘game’ their power plan so that they don’t lose out with fixed charges, line fees and elevated peak pricing.

EV owners tend to have a detailed understanding of when to charge their vehicle to ensure they maximise value of the plan.

They also tend to have a much better understanding of when they might need to switch or shop around to ensure they are still on the optimal plan.

Despite their analysis, they often feel that power companies make it hard to maximise savings with their off-peak plans.

> “They make it very hard to understand when it's easier to use cheaper power. And I would like to see some kind of uniformity come in. Where the companies all have to do the same thing. This is our peak. This is our off-peak. This is our night. It would be so much easier for those of us that spend a lot of time on spreadsheets trying to figure out the cheapest power company.”

> “I've got a BYD at home and there's this Facebook group where people are calculating the rates for different power companies. So I use that group and my own research to work out the best rates and when to charge my car.”

> “I think we’re all very savvy users and we're probably all heavy users because we're all EV owners here. So yeah, if you work this system, you can get it back.
>
> But I don't think most people care enough or have enough time to work the system to game it and get a good deal, so I'm sure the companies win overall, otherwise they wouldn't be doing it.”

Initial reactions to the term: ‘demand flexibility’.

Demand flexibility is intuitively associated with energy pricing and time of use, but does also carry some negative associations.

In the context of home energy, most have an instinctive understanding of what demand flexibility could mean.

Although most consumers have not encountered the term ‘demand flexibility’ before, many could intuitively grasp that it was likely to have something to do with energy pricing and time of use.

It is important to note that most participants also felt that if demand flexibility was used without the context of home energy, then it would feel much more abstract and that they would be unlikely to connect it to their home energy use.

> “I reckon it sounds like you having the flexibility to adapt your own habits to maybe using power when it's off peak and perhaps a little bit cheaper if there's variable pricing.”
>
> “I think it means that there's a cheaper rate at certain times, just depending on the demand.”
>
> “I think it’s to do with the price changing depending on demand. Like how many people are using it or the amount of usage.”

However, the term does also carry some negative associations with the idea of ‘variable pricing’.

A number of consumers made an automatic connection to the idea of ‘variable pricing’ or ‘dynamic pricing’ strategies (e.g. hotel pricing, or uber surge pricing).

These strategies are seen negatively, as a way for companies to hike prices and maximise profits when demand is high.

With this context, a number of participants voiced concern that demand flexibility might mean that they have even less certainty over their energy bills, with more price fluctuation, less control over power costs, and risk of random unaffordable bills.

> “My assumption is that it's got something to do with variable pricing. The more people use it, price goes up, people don't use it, price goes down.
>
> I like consistent pricing. I like to know every month that it's going to be roughly this amount. I've had other things where I've paid like X amount and then it's been like five times the amount another time for some weird reason and it's thrown me for a loop, so I hope that’s not what this about.”

The word ‘demand’ in particular can carry negative associations.

Not consumer centric

- It feels like a power company term, rooted in the business world with links to profit seeking.
- Demand feels like it looks at power use from the power company’s perspective (how much demand they are receiving) not the customers (how much electricity they need).

> “If I was an electricity or energy company, I would like demand flexibility, but that's when I think as the company. It's not something that customers want.”

Feels like business jargon

- Several participants connected with the idea of ‘supply and demand’ which feels like a business concept that is not relevant to consumers who just want to pay a fair price for their energy.

> “With those words, it sort of indicates something strict, rigid, something routine to be kept up with.”
>
> “Demand is a bit of a table thumping word, isn't it?”

Demand can feel like a harsh, forceful word

- A few participants made connections to the idea of being ‘demanding’ or ‘making demands’ which are quite harsh, forceful ideas.

> “I think there is something to do with a sense of supply and demand. They're buying the power wholesale and then selling it on to us with their profit margin.”

Exploring what demand flexibility means in plain English.

Focus group process.

Participants were shown two plain English explanations of demand flexibility, the second explanation had more detail and was shown only after the group had reviewed and discussed the first, simpler description.

Explanation 1

What is demand flexibility?

Demand flexibility is when households shift some of their electricity use to times when power is cheaper, cleaner, or more plentiful.

Instead of using appliances only at peak times (like early evening), people can delay or adjust certain activities (such as running a dishwasher, charging an EV, or heating water), so they use electricity when the grid is under less pressure, saving themselves money as well.

This adjustment in the time when power is used can be done either manually or automatically.

Explanation 2

Additional detail on demand flexibility

Sometimes people in New Zealand use more electricity than the network of poles and wires can supply all at once. This is most common in the mornings and evenings, especially in winter. At other times, people use much less power.

Smoothing out this spiky pattern could lower power bills.

We wouldn't need to spend so much money on building new poles and wires if people shifted some of their electricity use away from the busiest times.

Shifting when you use some of your electricity could also mean using more power during the middle of the day, when there is more solar and wind power available (two of the cheapest sources of power). Or it could mean using more of your power overnight, when fewer other people are using electricity and there is plenty of room to use more.

Setting some of your appliances or other electric items to operate or charge outside of peak times should make power cheaper for you and everyone else.

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This adjustment in the time when power is used can be done either manually or automatically.

Overall, this description was clear and was not perceived to be a particularly new or challenging concept. Most consumers immediately associated it with the way in which people already shift their power use to make use of off-peak power prices.

Consumers want more clarity around when peak vs off-peak times are in order to better think about the feasibility of participating in something like this. Consumers think that consistency of timing is important to make adoption feasible.

Across the focus groups, the most frequent spontaneous discussion focused on the perceived impracticalities of participating in a meaningful way.

Many participants suggested that, although this sounded good in theory, when they thought about their day-today life it would be difficult to shift much of their power use.

They felt that the vast majority of their appliance use was dictated by work and family commitments.

They wanted to see more examples of power uses that were relevant to them and easy to shift “I can see how this would be good for people with EVs but most of us can’t afford them”.

All consumers are attracted to the idea of saving money. However, consumers want to see potential magnitude of saving before forming an opinion on this concept.

- People carry their perceptions from today’s currently available off-peak plans in which the savings are perceived to be relatively modest.
- People bring their scepticism about power companies not wanting consumers to save money.
- Those in small homes without families feel that their energy is so low that there is limited opportunity for saving.

The term ‘automatically’ is eye-catching. For many, this feels like the most new or interesting concept presented in this statement. Participants often wanted to learn more about what this meant and how it would work.

Explanation 2

Additional detail on demand flexibility

Sometimes people in New Zealand use more electricity than the network of poles and wires can supply all at once. This is most common in the mornings and evenings, especially in winter. At other times, people use much less power.

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Setting some of your appliances or other electric items to operate or charge outside of peak times should make power cheaper for you and everyone else.

The second description did not fundamentally change people's understanding or attitudes towards the concept. However, it did introduce some new concepts that stimulated additional discussion.

This is often the first time that participants connect the idea of demand flexibility with grid capacity.

'The network of poles and wires' is an intuitive and practical way to talk about what grid capacity means and what the implications of being over capacity could mean. For many, this was helpful context to move away from the idea that off-peak pricing is just a power company marketing strategy.

As a follow up, a small number of participants questioned whether there were also any challenges with electricity generation as they had heard media coverage about low hydro-electric lake levels and reduced capacity from gas/coal fired power stations. They wondered if this was relevant and why it wasn't covered here.

Across the groups, but particularly amongst the lower income earners and renters, there was a feeling that this was a power company problem not a consumer problem. And they were concerned that the demand flexibility concept was just a way for power companies to push their problems back onto the consumer.

Many participants wanted to understand how this would translate to lower bills for consumers. Scepticism often stemmed from a belief that power companies do not want to enable lower power bills.

Many consumers, particularly the lower income earners, felt that these ideas sounded good but were not relevant to them. They connected these ideas to expensive appliances and expensive EVs.

Across demographic groups, we didn’t observe any major differences in comprehension and response to the plain English definitions.

The small nuanced differences that were observed are as follows:

EV and solar owners can see more obvious use cases, other groups would like more examples.

EV and solar users could intuitively see ways in which they could take advantage of demand flexibility.

Other demographic groups were more likely to focus on the practical difficulties of shifting their energy use. Most struggled to identify any obvious or easy appliances that could be shifted. They wanted to see more examples that were relevant and possible for ‘normal working families’.

E.g. “Charging an EV is irrelevant”, “I don’t think I can change my hot water heating”, “Sometimes you just have to use the dishwasher”

> “So EV car charging, cheaper rates always at night. That's fine. It's much harder to do your washing at night.”

Solar owners had better big picture understanding than other demographic groups

All the solar owners in our sample had a much better understanding of the concept of grid capacity and implications for home energy use and pricing.

EV owners were also a bit further along this curve. But across all other groups, most participants had not previously considered grid capacity or that NZ could be at risk of being over capacity.

Solar owners were more likely to see this as a general national issue, with other groups seeing this more as a power company problem.

Solar owners were more likely to be drawn to environmental benefits with other groups focused primarily on cost savings.

> “My husband is still keen to get a few more solar panels and probably change the inverter, get another battery. Because obviously the future projections are looking quite high in terms of electricity usage in NZ.”

Exploring what participation in demand flexibility could look like.

Focus group process.

Participants were shown three scenarios for how consumers could participate in demand flexibility. The discussion explored comprehension, questions, concerns and attractiveness of each scenario.

What could participation in demand flexibility look like?

1. Manually shifting consumption to take advantage of pricing

- A household delays running the washing machine or dishwasher until after 9pm when off-peak rates apply.
- Someone charges their electric vehicle overnight instead of during the early evening peak.
- A family pre-heats or pre-cools their home earlier in the day when electricity is cheaper, reducing heater/AC use at peak times.

2. Smart device automation and coordination

- A smart EV charger automatically adjusts charging to times when electricity is cheapest or most renewable.
- A hot-water heat pump runs when rooftop solar production is high, storing energy as hot water for later use.
- A home energy management system coordinates heat pumps, batteries, and appliances so they avoid running simultaneously during peak periods.
- A smart thermostat pre-heats the house when demand is low, reducing heater use during expensive peak hours.
- Having an electronic system controlling your electric appliances so they automatically switch on and off to save you money by operating at the cheapest times of day.

3. Prompts/control from power providers

- A household opts into a demand-flexibility programme where the provider can briefly pause or lower EV charging or hot-water heating during peak events.
- Giving your electricity supplier the ability to lower your energy use when the network is in danger of getting overloaded, in return for a lower power bill.

Overall, there was greatest comfort with manual shifting. The automation elements of scenario 2 and 3 were attractive but concerns about costs and control created hesitancy.

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Generally, this was the least controversial scenario. Most consumers felt that this was very similar to what they see today with off-peak power plans.

The level of automation and individual control offered by this scenario was attractive. However, there was a perception that only wealthy people would be able to afford the required equipment.

This was the most controversial, stimulating a lot of conversations about control, lack of trust and power company conflict of interest.

Consumers feel that savings must be meaningful and achievable to be motivated to fully participate in scenario 1.

Overall, this was not seen to be a particularly challenging, controversial or novel concept, and most were comfortable with the idea.

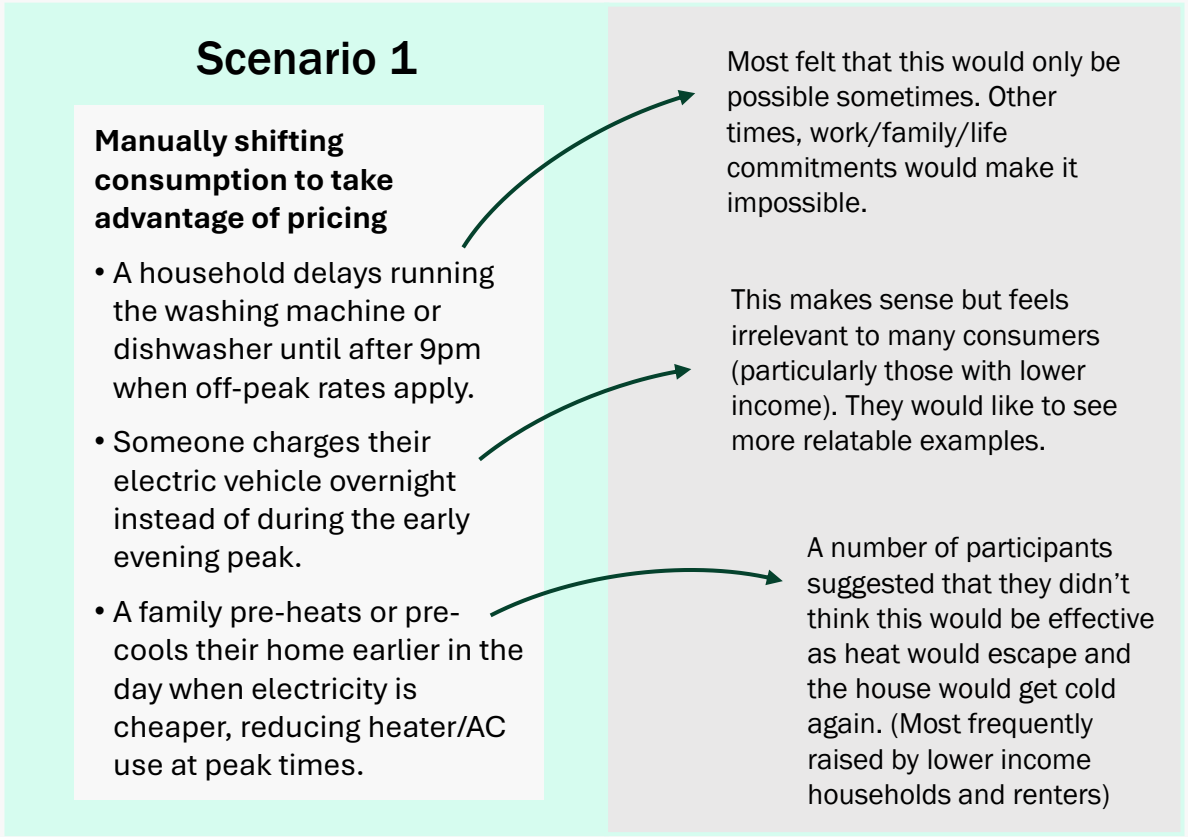
Most of the discussion focused on two issues:

- **Savings must be meaningful:** Consumers feel that this needs attractive off-peak prices and power plans that offered genuine, meaningful savings (i.e. off-peak savings not being offset by high fixed charges and excessive peak prices)
- **Practicalities are a barrier:** Many people struggle to see many opportunities in their home for shifting their appliance and power use. Many consumers feel constrained by busy work and family schedules. They would value more practical and relatable examples (e.g. EV charging makes sense but isn't relatable for a majority of consumers).

For many consumers, scepticism about power companies impacted attitudes:

More broadly, there is some scepticism and caution about the way power companies will deliver something like this. There is a belief that they will need to make back the money consumers save in another way.

This creates some concern about hidden charges, or more worryingly, increased peak pricing meaning that those who are unable to shift their energy use are penalised and end up paying for the savings that other New Zealanders are making.



Although automation is attractive, the examples and language used to describe scenario 2 make it sound expensive and complicated.

Most of the discussion focused on the issue of cost of smart technology, but this is supported by three additional issues:

- **Cost:** There was an assumption that this would require purchasing expensive appliances and equipment. Amongst lower income participants, this was a major barrier. For higher income participants, the discussion focused more on if savings would deliver return on investment. More generally, there was a reluctance to replace 'perfectly good' appliances just to save a little power.
- **Equity and access:** Those with less disposable income worried that only wealthier homeowners could benefit, leaving others behind and widening inequality.
- **Complexity:** A few, particularly older consumers, found the idea of setting up and managing smart systems and appliances daunting.
- **Fire safety concerns:** A small number of participants raised concerns about the safety of running appliances while unattended.

As discussions progress, questions emerge about how truly automated a system like this could be:

Initially, consumers were drawn to what they saw as a 'set and forget' solution to saving power. However, as discussions progressed, consumers reflected more on the unpredictable nature of their appliance use. This led to questions about how well a system could account for this. And whether, ultimately, it would end up becoming an expensive tech-enabled manual system that would just lead to frustrating situations with power not being immediately available when needed.

Scenario 2

Smart device automation and coordination

- A smart EV charger automatically adjusts charging to times when electricity is cheapest or most renewable.
- A hot-water heat pump runs when rooftop solar production is high, storing energy as hot water for later use.
- A home energy management system coordinates heat pumps, batteries, and appliances so they avoid running simultaneously during peak periods.
- A smart thermostat pre-heats the house when demand is low, reducing heater use during expensive peak hours.
- Having an electronic system controlling your electric appliances so they automatically switch on and off to save you money by operating at the cheapest times of day.

Most EV owners had concerns about needing to drive urgently and having no battery because the smart charger had decided not to charge.

Consumers felt that simultaneous appliance use was unavoidable. In order to run their house and look after their family it was usually necessary to run many appliances at once.

There was some concern about control here, people feel uncomfortable about handing control of appliances to a system. Worrying that this may block them from getting things done.

In scenario 3, the idea of allowing power companies to control power is a concern for many consumers.

This was the most controversial concept presented during the focus groups. The discussion was often dominated by concerns about control and mis-trust of energy companies.

Consumers see a number of issues with ceding control to power companies:

- **Inconvenience:** People feel that their lives are unpredictable and often require a lot of energy at peak times. They don't want to be forced to do things at inconvenient times.
- **Safety:** A few participants had health issues that were supported by devices, they were concerned that this scenario could lead to a situation when an important device was unusable at an important moment.
- **Reliability:** Many were concerned that if the system faced any reliability problems or faults, it could lead to a power outage or an excessively high bill.
- **Customer service:** When thinking about the practicalities, a few participants imagined frustrating situations if something went wrong. E.g. being left on hold for hours just so they could start cooking their dinner.

On the other hand, a smaller number of consumers were more open to the concept and felt that if administered appropriately this could be a good, low-cost way to enable less wealthy people to achieving the benefits seen in scenario 2.

Re-positioning as 'default settings' with simple override:

If the language of control is removed and the concept is re-positioned as opting in for your 'default setting' to be cheaper power, but with a simple and effective override function, consumers are more open to a scenario that resembles scenario 3.

Scenario 3

Prompts/control from power providers

- A household opts into a demand-flexibility programme where the provider can briefly pause or lower EV charging or hot-water heating during peak events.
- Giving your electricity supplier the ability to lower your energy use when the network is in danger of getting overloaded, in return for a lower power bill.

Most EV owners were concerned about giving power companies the ability to slow or stop charging. They would be concerned about the car not charging as expected and then being unusable when needed.

Most EV and solar owners have concerns about giving power companies 'access to their systems'. They would be concerned about the grid drawing from their batteries without permission. A few mentioned concerns that energy companies pushing and pulling energy could damage batteries or other components.

We saw some variety in the attitudes and issues raised by different demographic groups in response to the participation scenarios (1/2)

Low income

- The idea of saving money was very appealing to this group, with the practicalities of manual shifting often the key issue. This group was more open to some sort of power company control, as the idea of automation to save money without investment in smart equipment was appealing.
- The low income group were most likely to focus on the challenges of making changes alongside a busy life. They were also least likely to see obvious examples of appliances where use could be shifted.
- The low income group included some single person, small households. These participants were more likely to feel that their energy use was so low that the concept felt irrelevant.

> “I just live in a one-person single unit room. And I just don't think there's much I could do to have any realistic impact.”

Renters

- Renters were more likely to point out the issues created by a landlord–tenant dynamic.
- Most would be reluctant to invest in smart technology or smart appliances for their rental accommodation. And even if they were, there was some hesitancy about whether some technology would require landlord approval.
- Similarly, for scenario 3, renters were likely to imagine issues around the landlord needing to agree to installation of specific power meters.
- Renters were also likely to raise the dynamics of shared living and the challenges of differing schedules and priorities, making it difficult to shift household power use.

> “If it's a government scheme or a company scheme and they cover the cost and as a renter we’d need the government to say, oh, it's not the kind of thing a landlord can argue about.”

Māori, Pasifika, Asian

- Despite probing for linguistic or cultural differences in these groups, we did not observe anything significantly different to other groups.
- Any differences observed in these groups were more attributable to other demographic features such as income and home ownership.
- Across these groups, our sample skewed slightly towards lower income. As a result, there was significant focus on the potential for meaningful savings – as we saw in the low income group.
- Within the Māori group we saw particularly strong focus on concerns about agency and control. But this theme replicated across most other groups, so we cannot attribute any significance to this.

> “If they only save 5 or 10 bucks, people might just go ‘not worth it’. To sell it, you've got to give an idea of if they are actually saving anything.”

We saw some variety in the attitudes and issues raised by different demographic groups in response to the participation scenarios (2/2)

Homeowners

- The attitudes in our homeowners groups were diverse, and carried similar themes to those identified across other groups.
- Despite this, we did observe that homeowners were often more likely to be engaged with the detail of their power plan than the lower income or renter groups.
- Within this group, we did also observe a greater level of scepticism towards power companies and the role they might be playing in managing demand flexibility.
- This group had the strongest negative reaction to power company control of their power, feeling that it is important that they retain control of power in their own home.

> “If they’re trying to control my power, they're going to come with pitchforks to get me switched over and I'll fight them to the death about it.”

EV owners

- Owning an EV makes people considerably more aware of their power plans, the availability of off-peak rates and when the best time to use energy is. Owning an EV appears to be a starting point for becoming more energy conscious and interested in smart or energy efficient devices.
- EV charging dominates thinking about how demand flexibility would be implemented. So EV owners are looking for more detail on the practicalities related to charging their EV.
- EV owners’ major concern with automation or power company control is that they may not be able to rely on their car being fully charged when needed. There is considerable reluctance to cede control of EV charging.

> “I just don't think the savings would be enough. Let's say I need to go to an unexpected meeting and I need my EV to be charged but they haven’t charged it fully. It's probably not worth the trouble.”

Solar owners

- Solar owners were most likely to look across all three scenarios and see nothing new at all.
- Participants in this group felt that everything listed was already something they had considered, and that shifting energy use based on generation was a normal part of life.
- Solar owners were generally less sceptical about the underlying intentions of power companies and more likely to contextualise the discussion in the bigger picture of energy in New Zealand.
- Despite this, solar owners were also likely to be cautious about power company control. But unlike other groups this was usually based on technical concerns related to protecting their high cost equipment.

> “We did have a OCCP protocol on our EV charger, the charger did a software update and the whole system fell over. And the car and charger blew each other up. So we haven’t gone back to that.”
>
> “There was an energy company that wanted to have some control over our app for the battery and then sort of dictate what time was ideal to be charging. But we didn’t want them going into our system and making changes that could affect our battery.”

What would motivate participation?

Saving money is the central motivator across demographic groups.

Saving money with simple actions is key for motivation.

For broad participation, the saving needs to feel more meaningful, and easier to understand than the savings offered by today's off-peak power plans.

Firstly, these plans can be perceived as confusing, and importantly the real savings are often seen to be marginal when line charges and elevated peak rates are factored in.

> "I think that saving money what is such a common commodity is the biggest selling point."

Scepticism about power companies could harm motivation.

The role of the energy companies in a system like this has the potential to be a force for scepticism and reduced motivation to participate.

The underlying motivations of the energy companies are not seen to line up with consumers desire to save.

This is particularly relevant if savings are seen to be marginal and the system is seen to be working in the interests of the power companies.

> "The companies think people are gullible enough to think they're saving money because they have the words 'save' or 'flexible' on there. But it's not that we get to have the flexibility, we've been dictated by the electric company, they get the flexibility."

Contextualising with grid capacity provides a reasonable 'why'.

Understanding broader grid capacity issues and positioning demand flexibility as a national issue rather than a power company issue can be helpful to contextualise the concept and move focus away from the power companies.

Most have never previously considered grid capacity, or it's link with power prices.

It helps to provide a bigger 'why' that moves away from the profit motives of power companies.

If communicating this point, caution is needed to avoid people seeing this as a power company problem being pushed onto consumers. Or creating fear about energy supply 'running out'.

> "I hadn't thought about it [grid capacity] before. But I do find it compelling. The feasibility [of changing my usage] is a different thing. But it does make me want to try."

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Exploring alternatives to the term ‘demand flexibility’.

Focus group process.

Participants were shown a series of terms that relate to demand flexibility, they were asked to discuss their understanding of the words, their associations, whether they were perceived positively or negatively, and any questions or concerns that they provoked.

- Demand flexibility
- Demand response
- Smart homes
- Intelligent devices
- Intelligent electrification
- Flexible energy use
- Smart appliances
- Smart grid
- Consumer energy resources
- Demand response
- Demand-side response
- Off peak power use
- Smart energy
- Smart energy communities
- Distributed flexibility
- Demand management
- Optimising electricity consumption
- Grid optimisation

Simple, energy focused language that focuses on the consumer is preferred.

‘Smart technology’ sounds expensive and like a buzzword

For most participants, words that reference smart or intelligent technology are viewed negatively:

- Sounds expensive or for wealthy people only.
- Sounds like something for tech enthusiasts.
- Can feel like overused or meaningless buzzwords.

Words / phrases that carried this sentiment:

- Smart homes
- Intelligent devices
- Intelligent electrification
- Smart appliances
- Smart grid
- Smart energy

‘Demand’ focused words sound like power company language

When language feels too business centric or focused on demand, it feels like it is focused on power company needs rather than consumer needs.

A few participants suggested that ‘demand’ felt like a harsh word and associated it with being ‘told what to do’.

Words / phrases that carried this sentiment:

- Demand flexibility
- Demand response
- Distributed flexibility
- Demand response
- Demand-side response
- Demand management

Words that talk from the consumer perspective are empowering

The terms that attracted most positive sentiment were perceived to be clear, descriptive, plain English terms that are focused on what the consumer can do, not what the ‘system’ or ‘power company’ wants.

Words that allude to flexibility, choice and control were seen as empowering and positive, suggesting consumer choice and benefit.

Words / phrases that carried this sentiment:

- Flexible energy use
- off-peak power use
- Optimising electricity consumption

‘Community’ can shift the focus away from power companies.

Although the term ‘smart energy communities’ did not resonate universally, several participants gravitated positively towards the sentiment.

The word community helped them to think about electricity as a national resource that we need to share. Shifting the focus away from the business-customer relationship with power companies.

Words / phrases that carried this sentiment:

- Smart energy communities

In the words of the participants...

‘Smart technology’ sounds expensive and like a buzzword

“If I was to look at smart home or intelligent devices, first things that come in my head is I’m going to have to spend some money to make my house a smart home .”

“Smart grid almost sounds like some old American ad or something. And we actually just get ripped off. That's what it kind of gives me.”

“These terms like smart homes or intelligent devices, they imply that your house has to be smarter or more intelligent in order to benefit. I think flexible energy use is a better way of putting it that can involve everyone.”

“Smart homes is giving me bad vibes, not liking that.”

‘Demand’ focused words sound like power company language

“Probably anything that says like demand would make me think that’s for the power company not me.”

“Demands a bit of a table thumping word, isn't it? And we don't like having tables thumped in front of us.”

“Terms like demand response, I don't really think that describes it well. I feel like it says ‘we are controlling the behaviour’.”

“I don't like demand because I don't like being told what to do”

Words that talk from the consumer perspective are empowering

“Off-peak power use is quick, sharp, snappy. I know exactly what it is. I don't need to be like, what's that? What does that mean?”

“Smart appliances refer to my appliances being smart, grid optimization - that's not my job. I don't do that. The power company does it. I want words that tell me that I'm really good at saving energy, that I'm the smart one, not the appliance.”

“I think flexible energy use and off-peak power use best describe what we're just talking about. Those two are clear to me because they say what this really is and its language that speaks from the users point of view.”

‘Community’ can shift the focus away from power companies.

“If you're wanting to convey a problem of how many New Zealanders use heaps of power, then smart energy communities would be good, because then you're like thinking about everyone as a whole, not just yourself and your family.”

“I quite like the idea of smart energy communities, whether that’s within your local community or like a family community or different things like that. I think that's quite an appealing title or concept”

Consumers suggest focusing on language that focuses on the consumer, and their motivations for control and saving.

Most participants felt that none of the examples listed on the showcard were quite right…

…but they were often unable to come up with a better alternative…

…instead they encouraged focus on language that makes it clear that:

- The consumer is in control
- Participation will enable savings.
- The concept relates to home energy

Suggestions included:

- ‘Energy saving flexibility’
- ‘Power flexibility’

> “Things needs to be aimed from the customer's perspective. Like customers don't care about grid maintenance and costs and stuff like that. They care: does this save me money?”

> “We need words that are descriptive of what we're trying to describe and not using complicated words. Like what is intelligent electrification? It just sounds like buzzwords.”

> “I quite liked flexible energy use because t's about how the choices that you make and the flexibility that you have as the consumer in response to the different pricings.”

> “I’d be telling people that this concept is about them having the control to switch their home to a low energy state while they’re not there or they don’t need it. And that will make your bill smaller and potentially put less stress on our power lines, so we don’t have to keep building more, and more power stations and that sort of thing.”

Summary and implications for communications.

Most of the communication needs apply broadly across demographic groups.

Practical examples are needed to make the concept feel tangible and do-able.	Care is needed to make this feel relevant to a broad cross section of the population who are likely to get hung up on the fact that they don't think there is much scope to shift their energy use. There is a risk that this is seen as something for wealthy, EV owning people only. A range of practical and achievable actions are needed to make this feel tangible. Shifting the timing of hot water heating is something that consumers naturally gravitate towards as a simple action.
Simple language that implies control and puts the consumer in the centre of the picture is likely to be most resonant.	Language choices that position the concept from the consumer's perspective (e.g. talking about 'energy' not 'demand'), emphasise choice and control (e.g. flexibility), and highlight the goals and benefits (e.g. saving) are likely to be most compelling. Language that focuses too much on the idea of 'smart technology' can be alienating for a broader audience. And language that sounds too business centric or focused on the needs of power companies can create a degree of scepticism about the motives of the concept. Loss of control is the major fear amongst consumers. Care is needed when describing demand flexibility to ensure that consumers feel in control (e.g. 'default settings with the ability to override' will land better than 'opting-in to allow the power company to control your energy use')
The way power companies are positioned (or not) in the messaging will be important.	Most consumers automatically connect the idea of demand flexibility with power companies. Unless the narrative is framed positively, there is a risk that people feel a degree of scepticism about the motivates of power companies. It appears that broader contextualisation around grid capacity and the future of New Zealand can help to re-frame the focus away from power companies. Likewise, messaging that implies that government is 'enforcing rules that make power companies change for the good of the consumer and the future of New Zealand' is likely to make people more open minded to any changes they see from their power companies.
The opportunity for savings is the core motivator for participation.	Across all demographic groups, the core motivation for participating in demand flexibility would be to take advantage of savings. In order to be compelling, the savings would need to feel meaningful, and the pricing would need to be simple and easy to understand. If the system looks too much like today's off-peak power plans that require complicated calculations to work out how to make savings (which are often perceived to be marginal), then motivation will be limited to just the more enthusiastic energy optimisers in the population. While savings are a motivator, the potential for being penalised can be a major concern. If messaging leads people to believe that they will become significantly disadvantaged if they are unable to participate, people will feel a sense of injustice. Creating significant negative sentiment.

Although there are some nuanced considerations for some demographic groups.

People with less disposable income need reassurances that this isn't just for the wealthy.	There is a risk of alienating a significant proportion of New Zealand if messaging has too much focus on smart technology without appropriate discussion of how households without disposable income can access and benefit from these things. Likewise, too much focus on EV charging with "token references to dishwashers" can be alienating to those who feel they have very few appliances that can benefit from demand flexibility.
EV owners will need reassurances that they will retain control of when and how their EV charges.	EV owners are particularly motivated by the prospect of more affordable energy that can be used to run their car for less. However, this is often accompanied by reservations about allowing a smart system or a power company to take control of when their vehicle charges and how quickly. The primary concern is not having enough battery to drive when they need to. But other concerns exist about the way in which power companies could interfere with their car's systems, battery or charger.
Solar owners are most positive but will need strong assurances and incentives to open up access to their systems and batteries.	Of all the demographic groups that participated in the research, the solar owners are the most positive about the concept of demand flexibility. For many, the concepts outlined during the focus group didn't feel novel, they felt like normal concepts that were available today. Given their ability to generate, and in some cases, store their own energy, solar users often see themselves as best set up to participate in demand flexibility. While most are motivated by the idea of using their systems to access even cheaper energy, they have reservations about allowing external parties or technologies to have access to their batteries or systems. There is concern about losing an element of the 'grid independence' that they value. And there is also a more tangible technical concern about the impact that this could have on their equipment. At present, the incentives offered by power companies to participate in this way are not seen to be compelling enough to compete with their concerns. So, more significant incentives and assurances would be needed to motivate solar owners to participate in an automated demand flexibility system.

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