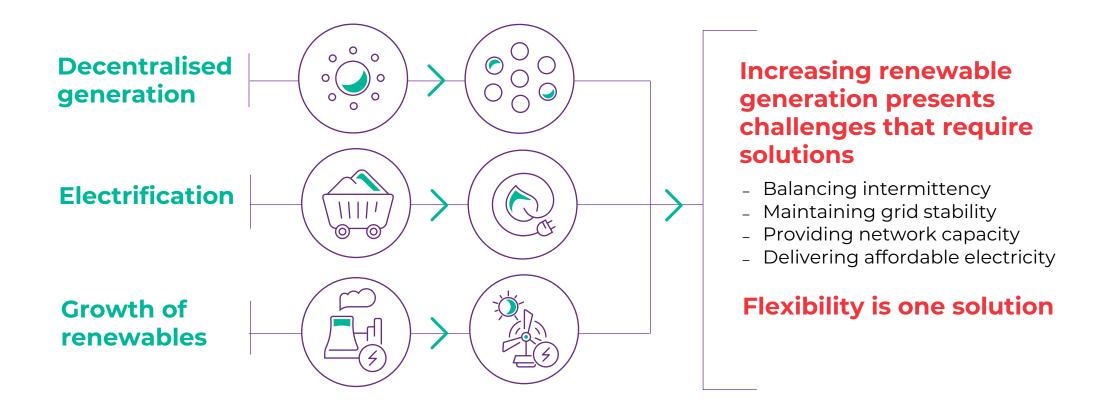


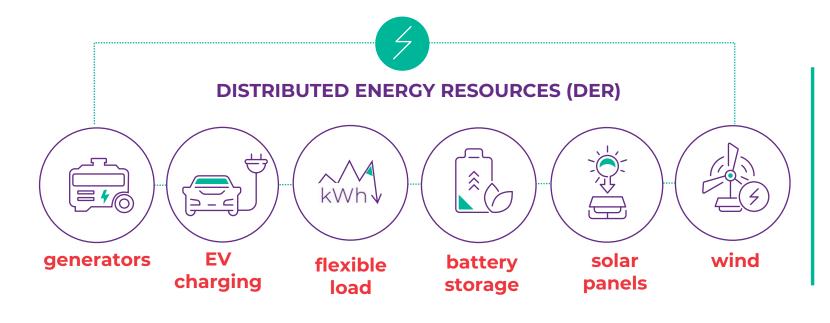
### The energy landscape is changing fast





#### Where can flexibility come from?

any small-scale, electricity supply or demand resources, that are interconnected to the electricity grid, that can be used either individually or in aggregate to provide value to the grid



Transpower estimates that DER will be worth ~\$1 billion annually by 2050



# A Flexibility Plan 1.0 A Starting point for coordinated, collaborative action

Simply Energy webinar | 22 September 2022



## **Today**

- -What we mean by flexibility and why it's important.
- -FlexForum, its purpose, objectives and members.
- -Flexibility Plan 1.0 5 categories of activities to unlock value.
- Next steps for FlexForum.
- -How to get involved.



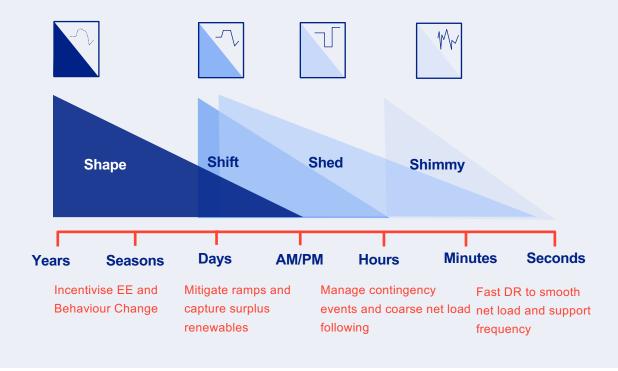
## **Flexibility**

Flexibility is useful to households, communities and businesses, and for power system and market operation.

## Modifying generation or consumption patterns in response to a signal, to achieve a desired outcome:

- Reduce energy-related capital costs.
- Reduce energy-related operational costs.
- Improve reliability and resilience
- Reduce emissions.
- Supply energy, network or ancillary services.

Distributed Energy Resources (DER) can be flexible





## A starting point for coordinated, collaborative action

### The FlexForum was formed to:

Identify practical, scalable and least-regret steps needed to enable households, businesses and communities to make choices which maximise the value of DER and flexibility.

Build a broad consensus across the electricity sector and others interests for the set of actions to integrate DER.

Build capacity and capability to implement the set of actions to integrate DER.



## **FlexForum**

Fortnightly meetings held Feb-Aug 2022 focused on delivering Flexibility 1.0 Plan by end of August.

MEMBERS









## **FLEXIBILITY PLAN 1.0**

To enable choices that maximise the value of DER and Flexibility

#### A set of steps

Deploying practical solutions that we know about

Defining and testing new ideas

### Who takes the step

Scope, approaches, resources and timeframe Research & development support from Ara Ake, EECA, MBIE, industry partners, etc

#### How the actions will deliver outcomes

Coordination through ongoing information sharing & pooling resources

Collaboration by actively involving interested parties

Engagement with broad set of stakeholders



## **5** categories of activities



Information & Data Steps

**Technical Standards** 



Technical steps to ensure safe, reliable and efficient operation

Enabling **Processes** 



Process steps to provide clear and simple pathways.

Regulatory Settings



Regulatory steps to remove or avoid barriers.



Overarching steps for delivering the flexibility plan.



Information and Education

Emissions intensity data

Low voltage reliability performance data

Streamline access to retail and wholesale price information

Define flexibility services

Streamlined access to consumption and connection data

Enable consumers options to buy/sell services



#### Access

Improve network headroom information

Ensure network headroom information is user-friendly

Voltage performance at LV layer

Understand the interaction between price-based and contracted flexibility

Easy to use process giving visibility of flexibility opportunities

> Assess connection requirements

Review after diversity maximum demand (ADMD) assumptions

Ensure connection application processes are fit for purpose

Develop a method to value flexibility for network reasons

Determine criteria for use of flexibility for network reasons

Ensure distributors can produce network headroom information

Ensure networks have incentives to explore/use flexibility options

Review voltage limits



## **Enable**



Identify minimum device standards

Technical qualification of

DER for ancillary services

Identify measurement, communication and connectivity requirements

Scalable and accessible process for procuring flexibility for network reasons

Test approaches to risk management in flexibility

Explore flexibility resource register

Ensure device standards remain up to date

Identify fit-for-purpose participation requirements

Confirm the FlexForum delivery model

Coordinate learning-by-doing

Undertake customer journey mapping



Explore use of dynamic operating envelopes

Demonstrate effectiveness of flexibility for network reasons and ancillary services

Develop a common process for validation and settlement

EXFORUM (3)

## How to get involved



## **Share**

- > your experience, plans or progress.
- > the questions you want to work on.

## Email us info@flexforum.nz



## Questions





**O** Simply Energy

## The NZ flexibility market is growing





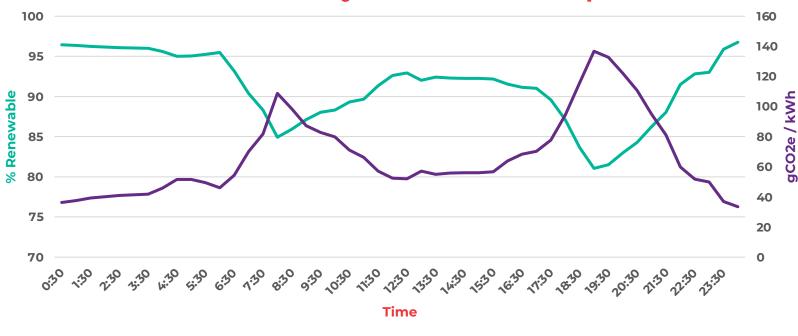


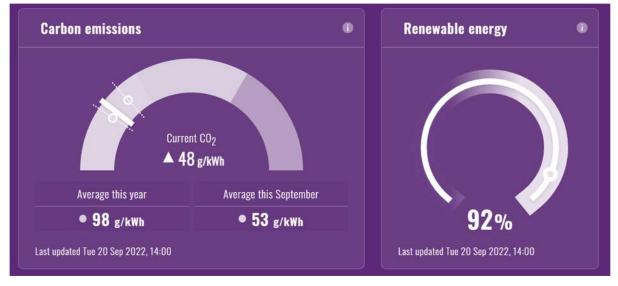


## nó::: Electricity Market Overview NZ Regional Price Overview (\$/MWh) Anekland \$100.21 Taranaki \$93.26 West Coast \$91.50 9tage \$85.67 — \$180 - \$200 East updated Tise 20 Sep 2022, 16:30

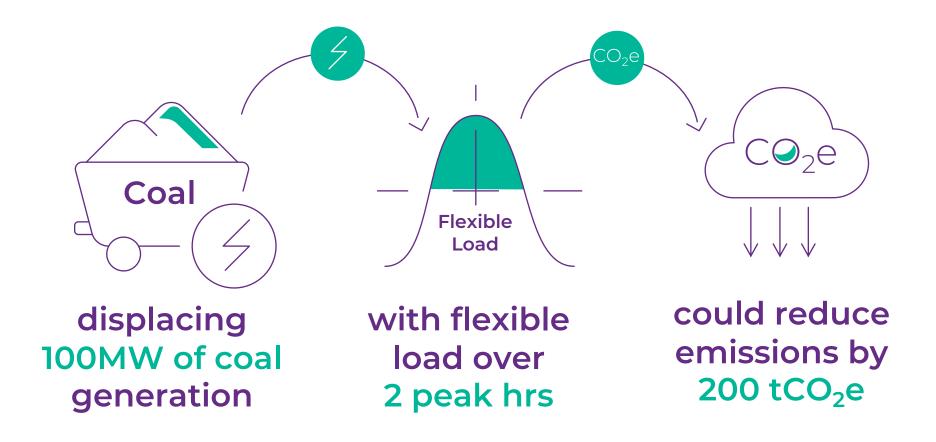


#### **NZ Electricity Emissions – 6th Sept**



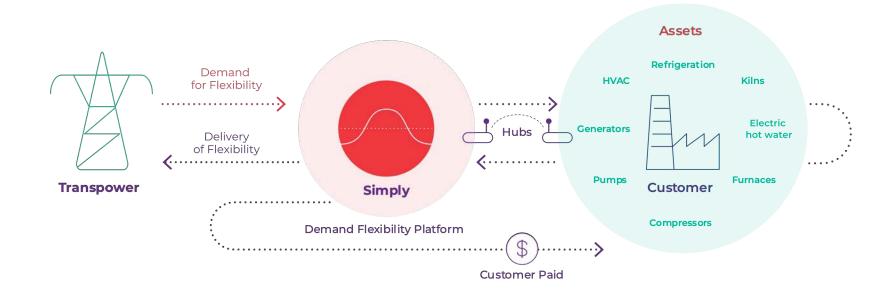


## The potential impact on emissions is significant





## **Simply's Demand Flex Programme**











### Multiple ways to participate

### Frequency Response

Reducing load quickly for short periods.

To help keep supply and demand in balance.

**EMISSIONS REDUCTIONS** 

## **Demand Response**

Reducing load for longer periods.

To help reduce grid capacity and generation constraints.

## Demand Management

Shifting and/or shedding load.

To help reduce electricity and network costs.



## Multiple reasons for participating



"We're proud to be giving the grid a helping hand by powering down our kai ora and kaimoana facility in Palmerston North, during times of peak demand."



Michelle Cherrington | Group Communications & Sustainability Manager



