

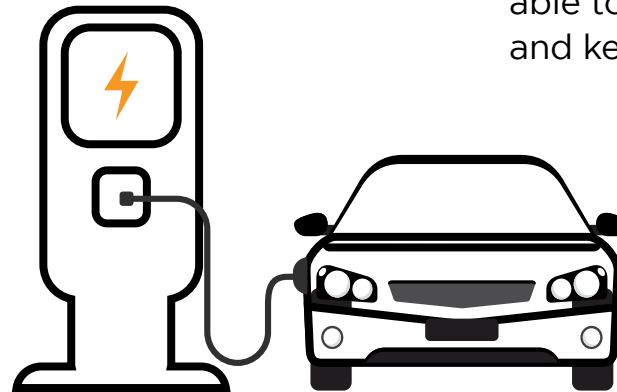
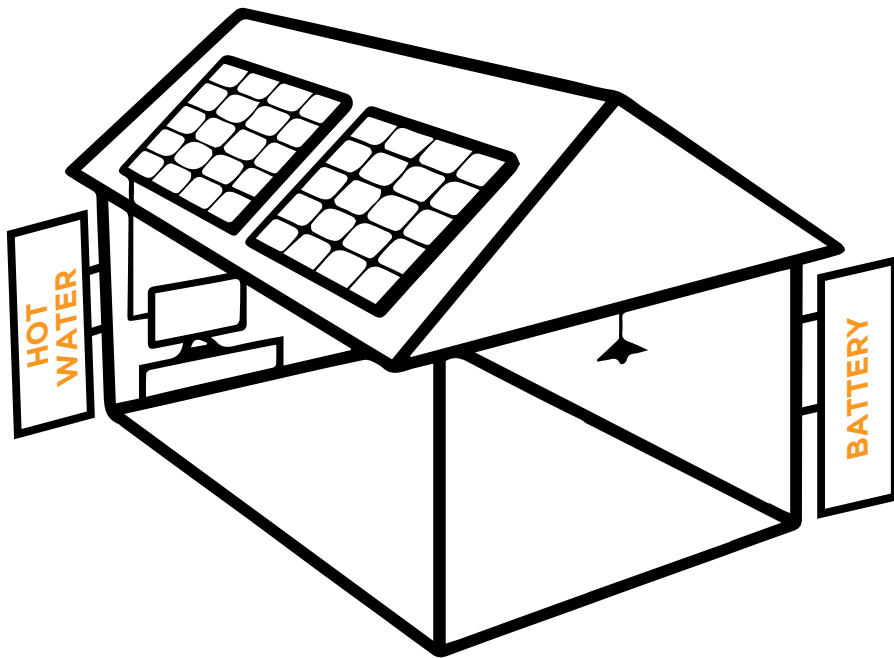


# NON-NETWORK CAPACITY SUPPORT

A GUIDE FOR DISTRIBUTED ENERGY RESOURCE PROVIDERS  
AND FLEXIBILITY TRADERS



# PROVIDING NON-NETWORK CAPACITY SUPPORT TO HELP MANAGE NETWORK DEMANDS



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ARE YOU AN OWNER OF  
DISTRIBUTED ENERGY  
RESOURCES, OR LOOKING  
TO ENTER THE FLEXIBILITY  
TRADING MARKET?

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If you own a large battery or distributed generation system, or if you have distributed energy resources like an electric vehicle, a solar-battery system, a hot water or irrigation system, or can provide demand profile management or demand reduction, you may be able to provide Aurora Energy with additional capacity support.

This easy-to-follow guide will help you with everything you need to know about Aurora Energy's non-network capacity support process, and how you may be able to help us manage peak demands, and keep our network safe and secure.

# A BACKGROUND SNAPSHOT AND WHY WE'RE SEEKING NON-NETWORK SOLUTIONS

HERE AT AURORA ENERGY, WE'RE LEADING THE WAY FOR OUR SECTOR BY SEEKING ALTERNATIVE WAYS TO MANAGE OUR NETWORK AND TO HELP DRIVE AOTEAROA'S EFFORTS TOWARDS A DECARBONISED ENERGY FUTURE.

The way communities are using technology is fast evolving, with an increase in electric vehicles and more and more people generating their own electricity. That means for companies like Aurora Energy, we need to ensure our network and operating systems can adapt to enable the uptake of new technologies, and integrate their operation to provide support to Aurora Energy's network, and the wider power system.

Globally, electric vehicles, solar, batteries, hot water and smart control - which are collectively known as Distributed Energy Resources (DER) - are increasingly recognised as being fundamental to an efficient power system that supports the electrification of the economy. By exploring ways to reduce or defer infrastructure investment, and optimise the use of grid-connected generation, we'll be able to

provide leading-edge and cost-effective solutions for our communities, ensure future growth needs can be met, and ultimately support a net-zero carbon future.

In 2020, after an extensive tendering process, we partnered with SolarZero to provide non-network capacity support in the Upper Clutha region. This was the first of its kind for our organisation, and has led the way for New Zealand's electricity distribution industry by going out to an open market for non-network solutions.

As part of our broader network strategy, we are now looking for opportunities to extend our use of non-network solutions to help manage growth on our network. Therefore, we are calling on all distributed energy-resource providers, owners, flexibility traders, and new market entrants to get involved and contribute to our decarbonised energy future.





# OUR FUTURE ENERGY SYSTEM EXPLAINED AND THE ROLE OF NON-NETWORK SOLUTIONS

The contribution of non-network solutions to help manage electricity demand needs will require the development of new market players and industry roles. Here we have summarised how the future energy system could work with the use of non-network resources, the roles of the market players needed to help, and what they will be responsible for.



## WHO DOES WHAT? ROLES & FUNCTIONS

### FLEXIBILITY RESOURCE OWNERS

Flexibility Resource Owners are those that physically own the Distributed Energy Resources (DER) that can be controlled - solar-battery systems, hot water systems, battery systems, EV chargers, heating/cooling systems (or other systems that can be controlled), or large distributed generation resources and large customers that can reduce load. Owners might be residential and commercial customers, large industrial customers, distributed generation companies and could even be Flexibility Traders.

### FLEXIBILITY TRADERS

Flexibility Traders manage a portfolio of DER resources that can be dispatched to respond to network demand needs and allocate them to their highest value use (this is referred to as “value stacking”, rather than dedicating them for single use). Flexibility Traders interact with Flexibility Buyers to provide the flexibility that they require. Flexibility Traders could be new market entrants or existing Retailers growing their capability to manage flexibility resources for the benefit of their customers.

### FLEXIBILITY BUYERS

Flexibility Buyers are often companies like us. They may want to use the Flexibility Resources to help manage demand, respond to network constraints, or to defer investment. Flexibility Buyers could also be the Transmission System Operator (to help manage system stability, voltage and frequency), the Grid owner or another Electricity Distribution Business that expresses an explicit need for flexibility and pays for it. Retailers may also offer a discount for customers with flexibility resources.

OUR PROCESS FOR SEEKING NON-NETWORK SOLUTIONS

# IT'S SIMPLE, FAIR AND OPEN TO ALL



## WE'LL CALL ON YOU TO REGISTER YOUR INTEREST

We will put out an open-call to the market, seeking registrations from Flexibility Traders interested in offering non-network solutions. We'll let you know what's required, where we need support, and the capability needed by Aurora Energy.



## YOU CAN SIMPLY REGISTER ONLINE

If you have access to Distributed Energy Resources, are a Flexibility Trader, or you're hoping to extend your offering in to this new market, then get in touch! Simply complete our registration form online to kick-start the pre-qualification process. Your registration will help us to review your capability and experience against our requirements. We'll keep the pre-qualification period open until capacity needs have been met, so everyone gets a fair chance to register their interest.



## WE'LL INVITE PROPOSALS AND ENTER AGREEMENTS

We'll assess your registration information against our evaluation criteria, and if it meets our requirements, we'll send you the Request for Proposal that includes specific requirements and seeks your commercial offer. Aurora Energy may partner with more than one supplier to meet our capacity requirements.

# FIVE SIMPLE STEPS TO PROVIDE NON-NETWORK CAPACITY SUPPORT

## STEP 1

### REVIEW THIS GUIDE & AURORA ENERGY'S OPEN CALL REGISTRATION INFORMATION

If you are, or intend to be, a Flexibility Trader and you think you've got non-network capacity support resources that may be of use to Aurora Energy in helping to manage our network, then review this guide and our open call request information as part of the pre-qualification process.

For everything you'll need to know as part of your registration, go to [www.auroraenergy.co.nz/about/non-network-capacity-support](http://www.auroraenergy.co.nz/about/non-network-capacity-support)

## STEP 2

### REGISTER ONLINE

Registrations for all those interested can be made at [www.auroraenergy.co.nz/about/non-network-capacity-support](http://www.auroraenergy.co.nz/about/non-network-capacity-support)

Simply complete the online form, and Aurora Energy will know you're keen to be involved. The registration process will stay open until we're satisfied our capacity requirements will be met.

## STEP 3

### YOUR REGISTRATION IS REVIEWED BY AURORA ENERGY

We will assess your registration against our evaluation criteria, as set out in the online form. The registration period will stay open until Aurora Energy has the capacity required in the area we are requesting additional support for - meaning there could be a number of providers selected to help.

## STEP 4

### REQUEST FOR PROPOSAL (RFP) IS ISSUED TO ALL THOSE THAT MEET REQUIREMENTS

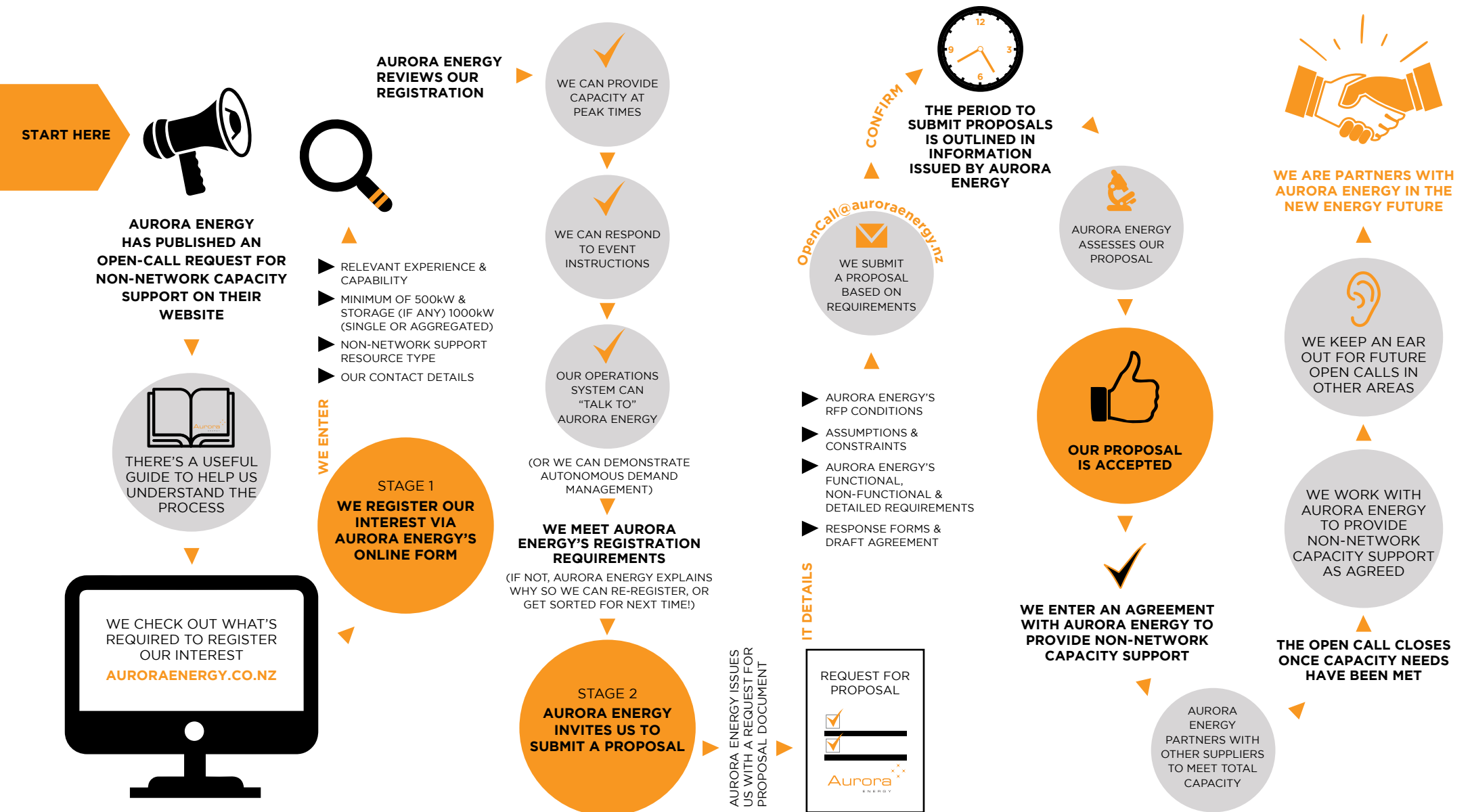
For all those who are shortlisted, Aurora Energy will issue a Request for Proposal (RFP) document. This would include details of the capacity support, together with technical and operational requirements, and seek your commercial proposal.

## STEP 5

### YOU'RE SELECTED TO PROVIDE AURORA ENERGY WITH NON-NETWORK CAPACITY SUPPORT

Aurora Energy will review all proposals, against price and non-price requirements. Those selected to provide non-network capacity support will enter in to contractual arrangements with Aurora Energy. Once agreements are confirmed, you're all set to go. You will partner with us to help manage the network in new ways!

# PROVIDING NON-NETWORK CAPACITY SUPPORT THE END-TO-END PROCESS



# GOT QUESTIONS? WE'VE GOT YOU COVERED

WE KNOW INTRODUCING NEW WAYS OF MANAGING THE NETWORK WILL BRING WITH IT NEW QUESTIONS TOO.

HERE, WE COVER OFF SOME OF THE MORE FREQUENTLY ASKED QUESTIONS.

HOWEVER, IF YOU HAVE A QUESTION NOT ANSWERED HERE, PLEASE DON'T HESITATE TO GET IN TOUCH! YOU CAN EMAIL US AT

**[OPENCALL@AURORAENERGY.NZ](mailto:OPENCALL@AURORAENERGY.NZ)**

WE ARE LEARNING TOO, SO WOULD LOVE TO HEAR FROM YOU! YOUR IDEAS AND INNOVATION WILL HELP SUPPORT OUR TRANSITION TO A NEW ENERGY FUTURE.

## **WHY IS AURORA ENERGY LOOKING TO USE NON-NETWORK SUPPORT SOLUTIONS?**

We believe the future for our energy system will see many players working together to contribute to, and manage, the electricity needs of our communities. Sharing available resources means we may be able to delay or even avoid building more costly infrastructure, and instead, create new partnerships to help manage the electrification growth of our communities. We see our role as fundamental to helping drive Aotearoa's decarbonisation goals, and to enabling the use of new technologies to support customer choices and innovation in the energy sector.

## **WHAT EXACTLY IS MEANT BY NON-NETWORK CAPACITY SUPPORT?**

Non-network capacity support refers to Flexibility Traders providing flexibility resources to help manage demand. It excludes traditional poles and wires solutions and the provision of distributed energy resources by Aurora Energy.

## **WHAT IS MEANT BY DER?**

DER refers to Distributed Energy Resources. That's those small-scale, distribution-embedded assets that either reduce load or inject more power like EV chargers, solar panels, batteries, or automated load management devices.

## **OK, BUT WHAT ABOUT "CONTROLLABLE DER"?**

Controllable DER is where the output or consumption can be turned up or down based on demand – for example, batteries, hot water and EV chargers can be controlled. Renewable generation like wind or solar is not normally considered controllable without a battery, but in some situations voltage control or generation curtailment can be considered as controllable DER.

## **WHAT TYPE OF RESOURCE CAN PROVIDE NON-NETWORK CAPACITY SUPPORT?**

A number of resources can be called on to provide capacity support. Existing household systems (like hot water heating) that can be controlled to reduce demand, or Distributed Energy Resources (DERs) such as solar-battery systems, battery systems or electric vehicle chargers. Capacity support could be provided by commercial or industrial customers that can reduce demand from certain systems or from irrigation or generating with a network-connected generator. Support could also be provided by large-scale distributed generation. Importantly, network support could be provided through the use of resources not listed here, but proposed by those registering their interest.



## **HOW WILL NON-NETWORK CAPACITY SUPPORT BE USED BY AURORA ENERGY?**

Non-network capacity support will usually be used to coincide with peak electricity demand and/or a network event in an area. It is often a more cost-effective alternative to building a network solution as it can be flexible to uncertain increases in demand, can delay investment in network infrastructure, or can avoid it altogether.

## **WHY IS AURORA ENERGY RUNNING AN OPEN MARKET PROCESS TO SEEK NON-NETWORK SOLUTIONS?**

During our tendering process for the Upper Clutha non-network solution, we found that going to market for alternatives can bring forward viable ideas not previously considered. It demonstrated that there is a role for Flexibility Traders to act as intermediaries between owners of Distributed Energy Resources (Flexibility Resources) and the distribution network owner (Flexibility Buyers, like Aurora Energy). However, given it is a new market, we didn't want to limit the time for any interested respondents to propose ideas and as a result, create barriers to entry. An open call process allows all those that are interested the time to review requirements, and decide how they want to proceed. It also allows multiple players the chance to contribute to a total solution, with the open call only closing when Aurora Energy has the total capacity required in an area.

## **WILL AURORA ENERGY RUN MORE OPEN CALLS FOR NON-NETWORK SOLUTIONS IN THE FUTURE?**

Yes, we see the use of non-network solutions as a critical part of our future network strategy. Therefore, where there are parts of our network that would benefit from the use of non-network alternatives, we will run an open call process to seek registrations, and proposals. We will open and close each process as capacity needs are met.

## **WHY IS NON-NETWORK SUPPORT OFTEN REFERRED TO AS FLEXIBILITY SERVICES?**

The flexible nature of non-network support has led to it also being referred to (internationally and locally) as Flexibility Services.

## **CAN A FLEXIBILITY RESOURCE OWNER, ALSO BE A FLEXIBILITY TRADER?**

In short, yes. Provided the total solution meets Aurora Energy's requirements in terms of capacity support, communications interface, and data capture, it is important all potential parties have the opportunity to get involved, and to help grow this new market offering.

## **IF WE HELP AURORA ENERGY BY PROVIDING EXTRA CAPACITY SUPPORT, CAN WE OPERATE IN OTHER MARKETS TOO?**

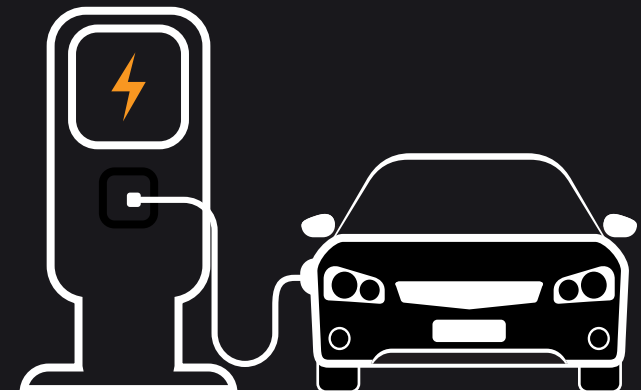
Flexibility Traders can participate in other markets that require non-network solutions, provided Aurora Energy's requirements can still be met as agreed. This maximises value to those offering non-network solutions and increases the attractiveness of entering the market with demand flexibility.

## **I'VE HEARD SOME TALK ABOUT FLEXIBILITY MANAGEMENT SYSTEMS. WHAT'S THAT?**

A Flexibility Management System, or FMS, refers to a system that allows the flexibility buyers (companies like Aurora Energy) to forecast and respond, procure, manage, contract for, issue instructions to, and pay Flexibility Traders.

## **HOW WILL PRICING STRUCTURES BE DETERMINED FOR NON-NETWORK SOLUTIONS, AND THOSE OFFERING THEM?**

In general, Aurora Energy's standard distribution pricing will apply. Our pricing enables Retailers to offer night rates and peak demand prices, and thereby incentivises DER management for network benefits. Flexibility Traders should consider working with a Retailer to provide a 'whole of ICP' night-day or peak-off-peak tariff. However, to manage critical peaks on the system, we will provide a signal and associated payment to Flexibility Traders to operate their non-network support services.



**AURORA ENERGY**

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