

Developed in partnership

AusNet

mondo



# Mallacoota Community Microgrids and Sustainable Energy Program

Reliable, renewable, and  
resilient energy for you  
and your community

Systems savings  
at more than

**50%**  
off



Delivered by

**RACV** SOLAR



**Did you know that heating water accounts for about 20% of your home's energy use?**

Using smart water heating can extend the amount of time that the Mallacoota community battery can run during an outage.



# Project background

After the devastating 2019-20 fire season, the Victorian Government's Department of Energy, Environment, and Climate Action (DEECA) and AusNet undertook a feasibility study to investigate how new energy infrastructure can provide support for communities and households affected by extreme weather events.

The feasibility study resulted in the creation of the Victorian Government-funded Community Microgrids and Sustainable Energy Program (CMSEP), which offers subsidies to Mallacoota to help build greater energy resilience.

The subsidies include solar systems, batteries and generators on key community buildings, and heat pump hot water services on participating residential homes. All installations will include an innovative smart energy controller, Mondo Ubi, which will optimise and coordinate energy use during an outage.

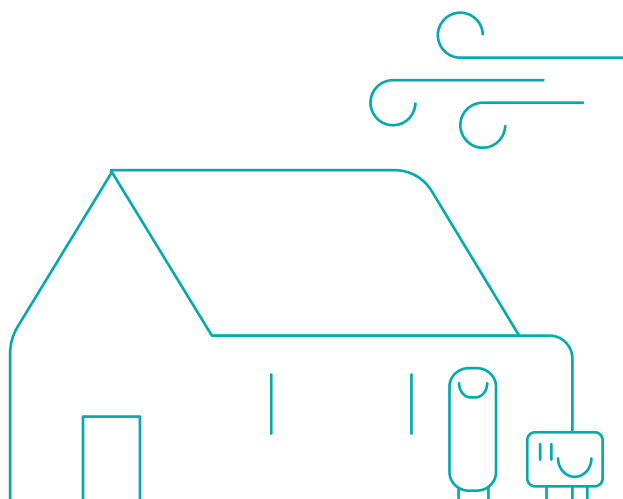
The existing Mallacoota Area Grid Storage (MAGS) hybrid battery and generator system supports a continuous flow of electricity to the town during power interruptions, putting Mallacoota in a unique position within the Australian National Energy Market.

The CSMEP three-stage program aims to further strengthen the local energy network and support communities in high-risk areas.

The program supports the increase of distributed energy supplies that can keep Mallacoota connected during electricity disruptions. This helps to maintain functionality of essential properties and services when power interruptions occur, ensuring that relief hubs remain active when people need them most.

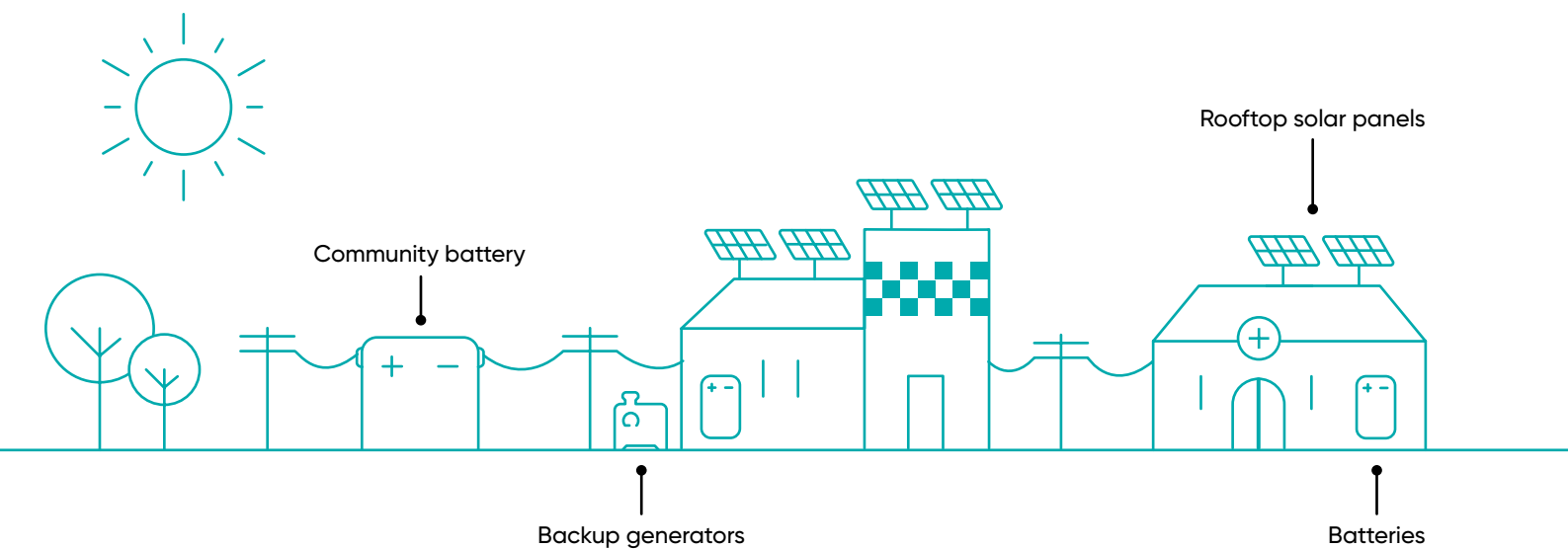
Residential properties in the area can participate and support the community by purchasing subsidised efficient hot water systems and the Mondo Ubi Energy Management Platform, which can optimise and coordinate energy use.

The efficient hot water systems will take the pressure off the local energy supply during an outage, extending the length of time that MAGS can supply backup power.



**The Community Microgrids and Sustainable Energy Program (CMSEP) is offering subsidies for efficient hot water pumps to participating homes in Mallacoota.**

# Mallacoota's Community Energy Vision



## Stages 1 and 2

### Essential services and critical businesses



Stage 1 and 2 of the program included subsidised solar panels, battery systems, backup generators, and a Mondo Ubi controller for essential services and critical businesses, and integrated them into the microgrid.

The systems feature an automatic transition between network supply and site supply, enabling sites to provide or obtain electricity to and from the microgrid during an outage.

#### Essential services received:

- Solar panels
- Battery systems
- Diesel generator systems
- Mondo Ubi energy management platform

#### Critical businesses received:

- Solar panels
- Battery systems
- Mondo Ubi energy management platform

93%

of Mallacoota residents  
strongly support  
the program

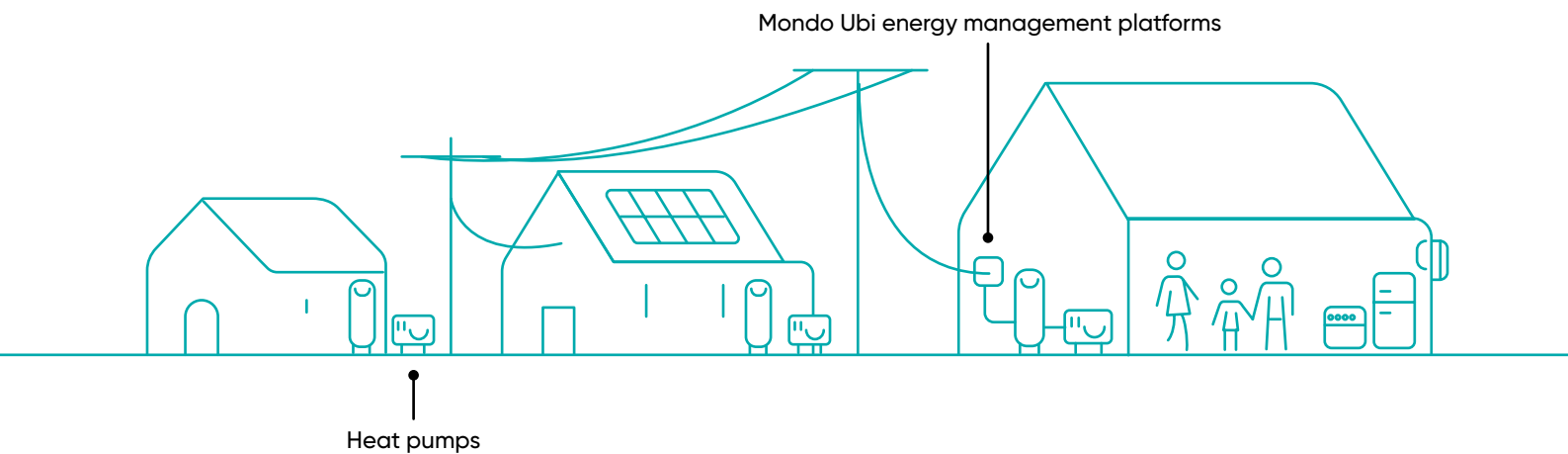
Mallacoota Community Survey 2023

“

I'm so pleased about this Community Microgrids initiative. It was the one big hope I had after the Black Summer fires – that our town could function independent of main power lines and make use of renewable sources of energy.

**Marie Connellan**  
Mallacoota resident and teacher

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## Stage 3

### Mallacoota residents

**!** UPCOMING

Stage 3 of the program will install efficient hot water pumps for participating homes, which will allow more efficient use of electricity to extend the operation time of MAGS.

Mallacoota residents will be invited to sign up for the program from November 2023. With a limited number of systems available, residents are advised to join at their earliest convenience.

**Mallacoota residents will be invited to purchase subsidised:**

- Heat pump hot water system
- Mondo Ubi energy management platform

# Reclaim™ heat-pump hot water systems

## Controlled by Mondo's Ubi and offers greater flexibility for energy resilience the community

Heat-pump hot water systems offer an efficient way to heat water, as they transfer heat from the air, rather than generate it. This means that they use less electricity than traditional electric hot water systems.

The microgrid platform can unlock the potential for energy storage by heating up water when there is excess solar generation. You will benefit from maximising your solar energy and the community benefits from a reduced reliance on the grid. The microgrid will also use the controllable heat pumps to manage load within the town.

By using less energy, hot water heat pumps take the pressure off the local energy supply, and extend the amount of time MAGS battery can run during an outage.

### System features:

- Average annual energy savings of up to 80% for hot water heating
- Average daily consumption of 3 kWh electric energy for 315L hot water delivery
- Top-down heating and fast hot water production: 110 L/hr





# Mondo Ubi™ energy management platform

## Coordinating energy resilience in Mallacoota

The Mondo Ubi platform is the smart system used to optimise and coordinate local energy use across the Mallacoota microgrid. The microgrid is made up of many different solar power systems, batteries, and hot water heat pumps that work together to be more energy self-sufficient for longer.

To coordinate energy resilience in Mallacoota, the Mondo Ubi platform uses information about the weather to predict when there might be a power outage. If an outage is likely, the platform can remotely control customers' systems to ensure they charge their batteries or heat their water storage, helping to maximise local energy storage and extend the running time of the Mallacoota community battery.



# Who is eligible?

**Subsidised, energy efficient hot water systems are only available for properties in the area shown**

**With only a limited number of systems available in Mallacoota, now is the perfect time to join!**





# How much does it cost?

**Eligible Mallacoota residents can secure a subsidised hot water system at more than 50% off system value**



## Regular energy usage

**Heat-pump size:** 250GL

**Reclaim Energy system:**  
Air-source CO2 heat pump  
REHP-CO2-250GL

**Valued at:** \$6,260\*

**Project system prices starting from:**

**\$1,000\***

## Larger energy usage

**Heat-pump size:** 315GL

**Reclaim Energy system:**  
Air-source CO2 heat pump  
REHP-CO2-315GL

**Valued at:** \$6,380\*

**Project system prices starting from:**

**\$1,200\***

### Interested in receiving further savings on your system?

Solar Victoria is assisting households to receive up to an additional \$1,000 on a hot water rebate.

Check if your property is eligible at [solar.vic.gov.au/hot-water-rebate](https://solar.vic.gov.au/hot-water-rebate)



\* Subject to site conditions

# Frequently Asked Questions

## What is energy resilience?

A resilient local electricity supply can provide electricity services even when the grid experiences an outage.

## What is energy resilience in Mallacoota?

Energy resilience in Mallacoota is achieved by increasing renewable energy resources on community buildings and properties, to work independently and in coordination when the electricity network experiences an outage.

## What kinds of energy systems will be installed in Mallacoota?

Suitable essential services and critical businesses will receive a solar system and battery designed to support their individual energy needs during an outage. In addition, essential service providers will receive a backup generator.

Eligible residents who choose to participate will receive heat pumps that reduce the energy demand on the grid and can be triggered to store heat before an outage, which will decrease energy demand on the community battery during an outage.

All participating energy systems will also have a smart energy management device (Mondo Ubi) installed to optimise and coordinate energy use.

## What is a microgrid?

A microgrid is a small 'subset' of the electricity grid that provides energy generation and storage at a local level. The homes and businesses in a microgrid can have solar panels, batteries and heat pumps. To enable the microgrid, a device called a Mondo Ubi is installed. This microgrid platform is used to optimise and coordinate energy use.

## How does Mallacoota benefit from the program when we already have grid energy and a community battery?

The program's role is to support Mallacoota's energy network that is susceptible to power outages due to its location at the end of a long high voltage line. The program will extend the Mallacoota Area Grid Storage (MAGS) community battery run time by adding additional backup power to the town to take the pressure off the grid when energy is needed most.

## What are the benefits of a microgrid?

- Improve the resilience of the electricity supply during outages and in association with emergencies
- Reduce reliance on the broader energy system by generating power locally
- Reduce carbon emissions and improve sustainability
- Maximise the amount of locally generated solar energy while reducing annual energy bills.

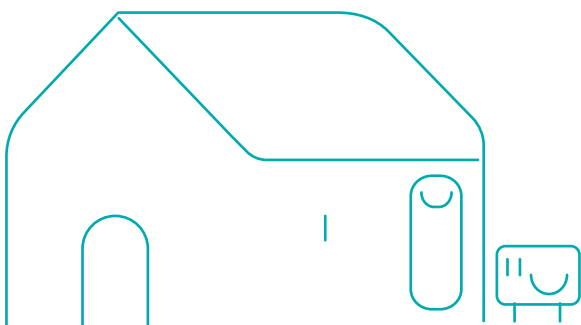
In the future, surplus electricity may be shared among participants of the microgrid, sold back to the grid or even donated to a school, charity or other community organisation in the future.

## Is the improvement of energy resilience the same thing as going 'off-grid'?

The energy systems are not designed to disconnect the property from the electricity grid entirely. But can run specific loads or possibly all loads during network outages. Participating essential service and critical business properties will have an ongoing supply for key circuits until the batteries run out of power, and generators can then take over.

## Who is behind this program?

The project is funded by the Victorian Government and AusNet, and delivered in partnership with Mondo, with systems installed by RACV Solar's local teams.



## Why is joining this program more beneficial than installing a solar system through other solar installers in the market?

The project was developed after a review of the electricity network and where the township could be cut off in an emergency. The initial study also considered which buildings in town were essential to residents during a power outage, especially during an emergency.

## What are distributed energy resources?

Distributed Energy Resources (DERs) are local energy generation and storage technologies. These resources include solar panels, batteries, energy storage systems, generators, and managed electricity loads like water heaters.

## What is a Mondo Ubi?

The Mondo Ubi allows you to stay up to date on how much electricity you are consuming. If solar system or batteries are installed generation and storage can be monitored. So you can understand and control your usage. Mondo Ubi is also the communications device and the foundation for the microgrid.

When multiple homes or businesses in an area have a Mondo Ubi, these systems communicate with one another and enable a range of benefits, including the ability to:

- Establish and track locally generated energy
- Compare your energy use and renewable energy generation to your community

## Does this guarantee an uninterrupted energy supply for these towns?

No, we cannot 100% guarantee an uninterrupted energy supply. If the poles and wires are damaged, the safety systems will shut down the microgrid. However, the backup circuits on individual buildings with solar and batteries can continue to operate and support the community.

## What if I already have solar installed on my property? Am I still able to take part?

Where existing solar or solar and batteries systems are installed, it may be possible to integrate these with the broader microgrid. Specific guidance will require a detailed site visit and discussion with our solar designers.

## How are the systems sized?

System sizes will vary according to property requirements and the intended function of the relevant community microgrid under the Program. Each system is designed specifically for your needs and the needs of your community.

In a range of instances, systems will be sized larger than needed for the single premise and, in so doing, provide additional power to activate a microgrid. To acknowledge this enlarged sizing, the Victorian Government supports subsidies so individuals or organisations are not disadvantaged.

## What type of energy system will be provided for essential services?

These facilities will be eligible to receive solar systems, batteries, generators and a Mondo Ubi controller, All integrated to provide a near-seamless transition between network supply and site supply.

## If I have a generator and solar systems already installed at my property, why should I join the program?

A solar system and generator without project participation is a great initial step in maximising renewable energy system benefits. However, by joining you will be part of a program where heat pumps help maximize your solar savings by heating water efficiently when the sun is shining.

## Still have questions?

For more project FAQ's, please visit [mondo.com.au/mallacoota](https://mondo.com.au/mallacoota)



Find out more:

