

# Cooler Places in a Warming Climate

**COUNCIL NAME**

Bega Valley Shire Council

**WEB ADDRESS**

[begavalley.nsw.gov.au](http://begavalley.nsw.gov.au)

**SIZE**

6,279 square kilometres

**POPULATION**

35,000

## Overview of the project

Extreme heat events are estimated to cause more deaths in Australia than all other natural hazards combined and are predicted to increase with a changing climate. Bega Valley rural villages of Bemboka, Quaama and Wyndham are particularly vulnerable to heat waves due to the age of residents, distance to health providers, lower socioeconomic profile and design of community infrastructure. To reduce the incidence and severity of heat-related illness in these communities, Bega Valley Shire Council created cool refuges in local community halls. Building grid-independent systems at each hall also helped reduce their vulnerability during bushfires.

The positive public health preparedness outcome delivered by the project includes raising community awareness of the dangers of extreme heat and the role of their local hall as a safe refuge during extreme weather and other emergency events.



Bemboka Hall with 17 kW of solar PV and 13.5 kW Tesla battery

## How the project was carried out

### Community Consultation

Bega Valley Shire Council undertook initial consultation with the three communities of Wyndham, Bemboka and Quaama to:

- gather information about how people currently cope with extreme heat
- understand community views on preventative public health measures, such as creating cool refuges in community halls; and
- capture baseline data to measure changes in extreme heat behaviour after consultation and education activities.

Results from the surveys have provided important information, which is being factored into the operation procedures and cool refuge trial.

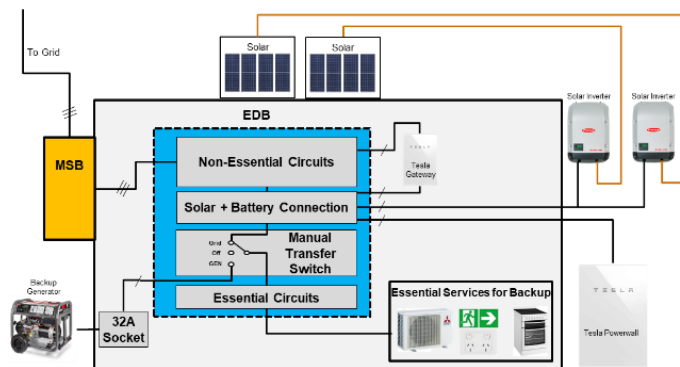
### Infrastructure Component

The aim of the infrastructure component of the project was to provide a cool refuge in the halls with a robust, sustainable energy source. This required assessing building layouts facilities and energy efficiency measures to ensure the halls could operate in a heatwave scenario, as well as supplying solar/batteries, a plug-in generator and additional air conditioning where needed.

Council initially undertook roof and general building assessments of each hall, engaged electricians to assess the electrical systems at each hall and reviewed any other relevant reports, such as asbestos reports. It was discovered early on that installing solar/battery systems that can operate separately from the grid required a higher level of expert input before a procurement process could be undertaken. To proceed, a consultant was engaged through Department of Planning, Industry and Environment's Sustainable Councils and Communities program to help design the most appropriate system for each hall. The same consultant also provided support and advice throughout the tender process and implementation phase of the infrastructure component. The solar/battery design and procurement was the project's most demanding aspect in terms of Council time and resources.

Determining the location of the cool refuge in each hall was an important starting point. Where possible, smaller sections, such as supper or mess rooms that can be isolated, were selected to optimise air conditioning. Other considerations included disability access, evacuation plans and equipment, fridges, water, toilets and their locations, space (how many people can each facility accommodate), etc.

To date, the halls have been fitted with new solar PV/battery systems with a generator plug-in option and air conditioning where needed. The new systems will allow these halls to operate independently from the grid, in the event of a blackout, whilst also reducing Council's power bills and carbon emissions. Other energy efficiency measures are still being considered. However, due to availability of qualified contractors and COVID restrictions, this has been delayed.



Example of electrical distribution system designed for Bemboka Hall

At this stage it appears a much broader conversation needs to occur with stakeholders, such as NSW Health, to better manage the health risks associated with extreme heat and assist community members access cool refuges during heatwaves.

### Outcomes now and in the future

Community halls in the Bega Valley townships of Bemboka, Quaama and Wyndham have been upgraded to provide cool refuges to the community. Information on building performance and community usage over the summer of 2021/22 will inform checklists and operational procedures currently under development.

The baseline survey will be complemented with a follow-up survey and the results made available more widely. A high degree of interest has been generated in the project through social media with 7,300 residents being reached. Enquiries have also been received from local councils across NSW and Australia indicating an interest in replicating the project in other rural communities.

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## Benefits and lesson learned

Strong co-benefits were demonstrated by this climate resilience project. Even though climate change is a multiplier of negative issues, the solutions are a positive multiplier. For example, Council has built a large amount of redundancy into the halls with solar/battery and generator plug-in options able to withstand grid failure. The community will also benefit through a reduction in hall running costs and their overall carbon footprint. Importantly, Bega Valley Shire has initiated conversations with its community around the need to adapt to climate change and prepare for more extreme weather events.

The following project learnings will inform any future heat-proofing projects undertaken by Council:

- Liability issues around potential health incidents when operating the centres needs further work.
- Ensuring the active involvement of health care professionals in the community health component.
- Tapping into resources of other sustainability programs and networks was important to help fill skills and knowledge gaps.
- Ensure adequate time and budget are allocated towards assessments of items, such as heritage, asbestos, electrical capacity, structural capacity, appropriate locations within the hall.
- Ensure adequate time and budget are allocated towards proper design of these complex systems.
- Each hall committee is unique and will require customised procedures to operate a cool refuge. Adequate time needs to be allocated for this consultation to occur.

This multidisciplinary work incorporated social, health, sustainability, climate change, construction and engineering elements, requiring a broad range of skills and knowledge from Council, State Government agencies and external experts.

## More information

Further information is available on [Bega Valley Shire Council website](#).  
To view the video of this project, visit the [LGNSW IRCC video pages](#).

## Contact

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