



COMMUNITY ENERGY for Venus Bay?



Community Resilience and Reliable Energy Feasibility Study at Venus Bay

let's talk about the possibilities of community owned energy!



Keep up to date with planned community consultations via the timeline on the back. For more information scan the QR code or head to: vbcc.org.au/communityenergy

Welcome to Bulletin #3 November 2022

Community-led Energy Study

The first Community Workshop for the Venus Bay Community Energy Study was held on October 1st, 2022, at the Venus Bay Community Centre. Twenty-four local people attended a three-hour workshop to contribute ideas about a. where future renewable energy systems could be best sited and b. what size they might be to meet the energy needs of our community during normal and emergency times.

In Activity #1 we mapped community networks and relationships with energy and infrastructure and identified clusters of buildings that provide important services for the community and which would be good to power independently.

In Activity #2 we identified our household energy needs during short and longer outages and emergencies by

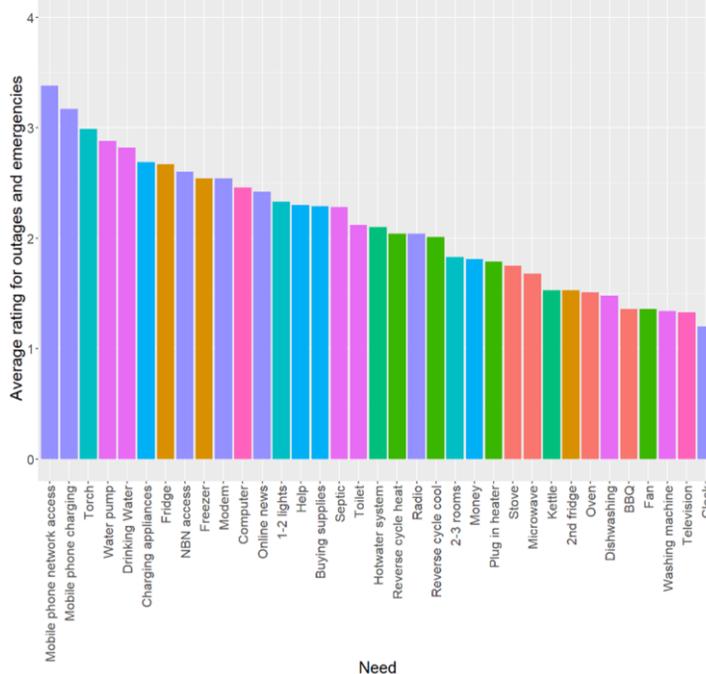


ranking the importance of different energy uses, e.g., phone charging and water pumping.

The Project Team now needs more input from people across the community, before they can properly size and estimate costs of the different options. So please look out for project representatives at local markets and street stalls where you could have a chat and learn more or complete the survey.

A Harvest Report illustrating how the day went and what we produced can be found [here](#)

Electricity loads ranked for criticality



Technically Speaking

In the last Community Energy bulletin, and at the Community Workshop #1, three scales of local electricity backup systems were explored. They were: 1. at individual, critical sites; 2. clusters of buildings like the Venus Bay shops, and; 3. microgrids for the estates or whole Venus Bay peninsula scales. Systems would work on the same principle of powering the site, cluster or whole peninsula by 'islanding' or temporarily disconnecting from the main grid during outages.

But how does that work exactly? We can use the Venus Bay Community Centre energy system as an example.

The Community Centre now has solar panels, a battery and a generator that work together to supply power directly to the Centre, all day, every day.

When the system detects that there is an outage in the main grid it disconnects the Centre so it can stand alone, that is, the Community Centre becomes its own electrical 'island', also known as islanding.

When the disconnection happens, the battery immediately supplies power to the Centre. Ideally, this happens so smoothly that no one notices. The system is so smart it is able to detect if solar power is available, or how much power is in the battery and how much can be used, or if the generator needs to kick in.



Technically Speaking continued...

The system has been sized so that it only needs to use the generator if the battery is very low after several days without sunshine.

One of the snags in all this, when extending this example across the Venus Bay Community, is that batteries and fuel for generators are expensive, and not everyone can afford rooftop solar or even put it on, if you are in a rental for example.

The impacts of cost and affordability of all the different sources of energy, are being considered through the Community Energy Project. The cost of mains vs solar and batteries vs fuel for individual sites, clusters and the whole Venus Bay peninsula are being assessed and

worked through with the Community, so the most reliable and affordable energy supplies can be determined for Venus Bay.

In Workshop #1 and through the community survey, people have been invited to identify their critical electricity needs so the Project Team can calculate energy system size options for individual site, cluster and peninsula scales. Sizing considerations also include supplying electricity for essential services; enough power for everyone during outages; powering everything. The Project Team needs input from lots of people, so system sizing is as well informed as possible. If you haven't already, please fill in the survey on the Venus Bay Community Centre website.

Community Information session - Speed date a renewable energy expert

Come and speak with one of five different experts on different aspects of renewable energy. Get some answers to those questions you've been yearning to ask.

Saturday November 12, 2022, Venus Bay Community Centre, 27 Canterbury Road, Venus Bay – 12 noon to 2pm. Light Lunch included – RSVP alyson@vbcc.org.au

Brilliantly Resilient

In this month's bulletin let's discuss Step 3 in the resilience framework being applied in the Venus Bay Community Energy Study.

One of the most important assets a community can map is its capacity to deal with a disturbance. In our case the "disturbance" will be a loss of power, insufficient energy or even an energy system that is not responding to changes quickly enough. Our capacity to deal with disturbances can come in many forms. Knowledge, information and preparation all build individual capacity. If they are incorporated into plans and procedures, they become community capacities.

At a more practical level, having spare capacity and alternatives help. It is interesting to note that many tips about resilience come from ecological systems. Diversity and flexibility create the capacity to adapt and absorb changes both in ecosystems and in communities. It is also worthwhile reminding ourselves that these are system-wide properties. If we want a resilient community, we need to look at the whole community and the connectivity between everyone.

When thinking about our capacity, this attribute is often called Social Capital, and we know Venus Bay already has wonderful social capital. The challenge might be in thinking how this works with the community members and visitors who are more loosely connected and how together they relate to energy.

Finally, it is worth mentioning governance and leadership because the capacity to step up, provide resources, and make decisions in times of need is often built through structures and organisations. This does not need to always be formal - think of the [informal helicopter rescue](#) and [quick response of the Koori Mail](#) that emerged in the recent Lismore floods. It is important to note that both organisations existed before the floods and the relationships to community members were strong enough that they felt confident stepping into the vacuum and showing leadership.

If you are interested to know more about the ways we can think about capacity, [Tarnagulla's](#) resilience project is worth a look. They started by [mapping capitals](#) and identified economic capital as a key element the community wanted to build. This was a trigger for pointing back to electricity supply and the ways they could improve it.