

# Yarrabah Microgrid Feasibility Study Newsletter



ISSUE 3 / MARCH 2021

## STAKEHOLDER ENGAGEMENT

63	Hours of engagement
57	Face to Face Sessions
145	Stakeholders engaged
12	Pop up stalls
24	Minutes of Radio interviews
30	Business and Residential Audits
190	Views on our you tube channel

## UPDATE ON ACTIVITIES – DECEMBER TO MARCH

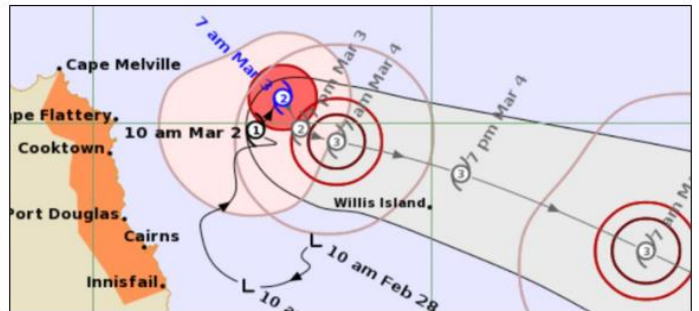
Over the past few months our main focus has been on completing energy audits on residential properties and businesses in the community. Our audit team has undertaken over 30 audits and the data from the audits is helping to inform the different solutions that may be part of the future microgrid.

Ongoing scoping and monitoring analyses is being performed to identify demand management options to optimise design of the microgrid, energy storage and management systems. All this research will ensure the microgrid is designed specifically for tropical, marine and cyclonic conditions and will serve as a hands-on site for remote and regional communities across Australia and the Pacific.

Community engagement is ongoing and specific conversations are being had with Yarrabah Community Leaders and Council about what they might expect to see as part of the microgrid.

## TROPICAL CYCLONE NIRAN

Yarrabah suffered a multi-day power outage from Cyclone Niran in early March. The community lost power on Monday 1<sup>st</sup> March and it was restored by Thursday 4<sup>th</sup> March. Over 150 local Ergon workers were on the ground and reinforcements were brought in from other areas to ensure power was restored as quickly as possible. Power to critical infrastructure was restored as a priority, followed by faults affecting the highest populations. The outage has reinforced the importance of a reliable electricity supply and the need for a microgrid to improve the communities' resilience.



## HOW DO I FIND OUT ABOUT THE PROJECT?

Visit our website and YouTube channel to find out more about microgrids and how they can be a part of the Yarrabah Community. [www.energy-connect.net.au](http://www.energy-connect.net.au) and keep an eye on Council's Facebook page – it has regular updates [www.facebook.com/yarrabah.qld.gov.au](https://www.facebook.com/yarrabah.qld.gov.au). Just give us a call and have a chat or send an e-mail:

Phone: 07 4041 0445 E-Mail: [projects@energy-connect.net.au](mailto:projects@energy-connect.net.au) Web Page: [www.energy-connect.net.au](http://www.energy-connect.net.au)

## The Lithium Ion Battery Trial

For many decades lead-acid battery technologies have been the industry standard, but numerous competing energy storage technologies are now appearing on the market, in particular lithium-ion batteries. ITP Renewables, an EnergyConnect project partner, are using 35 years of battery storage experience to undertake a Lithium-Ion Battery Performance Test.

Supported by funding from the Australian Renewable Energy Agency, the testing compares various lithium-ion battery chemistries and products available in the Australian market against claims made by manufacturers. Tested under Australian conditions, the results centre provide consumers with independent information on battery performance.

As the batteries are cycled they lose the ability to store as much energy as when they were new. The key objective of the seven-year test is therefore to measure the batteries' decrease in storage capacity over time and with energy throughput. The project seeks to provide independent performance data so people can make informed investment decisions.

All test case batteries have been shortlisted because they are commercially available and cover a spectrum of prices and chemistry variants. To ensure independence all batteries were purchased at full retail prices, primarily from third party distributors.

For over 35 years ITP has been specifying battery energy storage to optimise the design of remote solar photovoltaic / diesel hybrid mini-grids all around the world. Recently, with rapidly falling battery prices, they have extended this expertise to on-grid applications, now typically using lithium-ion battery technologies. The lithium-ion battery trial was conceived and is managed by ITP.

Battery outputs from the trial are being displayed in real-time, with summary results and lessons learned published every 6 months. These results, published at <https://batterytestcentre.com.au/> are helping system designers, installers, and consumers in making informed investment decisions.

