Resilient, renewable Millaa Millaa
Towards scalable energy resilience for regional Queensland
Who are we?

Steve Snow
*UQ*
Energy audits, behaviour change

Mashhuda Glencross
*UQ*
Human-computer interaction

Caroline Valente
*Energy Consumers Australia*
Consumer advocacy, energy poverty

Centre for Energy Data Innovation
*UQ*
Data science, electrical engineering, interaction design
Energy Consumers Australia

The **national voice** for residential and small business energy consumers.

We work to **understand and ensure consumers have their expectations and needs met** through a modern, flexible and **resilient energy system**.

We proactively shape a vision for the future, **influence and work with others** to drive change across the energy system to benefit consumers.

We influence the shape of the energy system **now and in the future** by **creating a trusted voice** for residential and small business consumers.
Why are we here?

**Big picture:** Improve the resilience of regional Queensland towns affected by cyclones OR power outages

Millaa as a pilot for scalable energy resilience solutions (e.g. microgrids) to apply to other small regional towns in regional Queensland

**Why Millaa?** Location, local support- Lions Club, small size, strong community.
Why are we here?

Regional Australia Microgrid Pilots Program

In October 2020, the Australian Government announced the $50 million Regional Australia Microgrid Pilots Program (RAMPP) to support pilot demonstrations of microgrids in regional and remote areas.

Feasibility study >>> Full costing >>> Construction
Why are we here right now?

Listen

Discuss

Hear lived experience, expectations, concerns

You!
What is a microgrid?

A self-sufficient energy system that serves a discrete geographic footprint... utilises one or more kinds of distributed energy

**Local:** Discrete electrical boundaries

**Independent:** Can operate as part of OR independent of the local electricity network

**Renewable:** Replacement for diesel generation/backup

Source: Microgrid institute: http://www.microgridinstitute.org/
How could it work?
How could it work?
Rooftop solar / battery
Shared (or community) battery
Small-scale solar farm (?)
What do we mean by resilience?

How could we make life a little more bearable compared to having no power

Use existing power sources plus some new sources to create enough power to
- Keep the fridge going?
- Get a few lights on?
- Laptop and phone charging
- Power the main street?
Feasibility study

1. Socially acceptable

2. Technically feasible

3. Economically feasible

4. Safe and within regulations
Feasibility study - How can I be part of it?

1. **Socially acceptable**
   
   You are already part of it!
   Perspectives, interviews,

2. **Technically feasible**
   
   Adopt an energy monitor - for free!

3. **Economically feasible**

4. **Safe and within regulations**
Adopt an energy monitor

Talk to me tonight / tomorrow

Email s.snow@uq.edu.au

PM me on Millaa Millaa Matters Facebook
Questions

What do you understand about energy resilience? Why is it important?

Tell us about the power outages you’ve experienced in recent years

What is “essential” energy use?

Are you willing to limit electricity use during grid outages to retain power?
Questions

Could a microgrid could be the answer?

Would people consider buying and sharing solar + battery?

Is a community battery acceptable?

Is a small-scale solar or wind farm acceptable?
Questions

Is (some) diesel generation acceptable during microgrid operation?

If you had household-scale solar + battery would you allow someone to control it during emergencies?

What are your questions for us?
Thank you
Dr Stephen Snow
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0417079392
The Pegasus unit that was used to power Ravenswood while the substation was offline for repairs has hit the road after another job well done. In emergencies, we can use this high-voltage injection unit with a large capacity generator to supply electricity into the distribution network.

Our team supported the gold mining community with mobile generation at multiple sites after a transformer at the substation was badly damaged. Thanks to crew members from Charters Towers, Inn... See more