

Data Journey and Insights

Community Webinar

Tim McCoy – Wattwatchers Program Manager 3 Oct 2022





- 3-year project running until mid-2023
- \$1.8M+ in federal & state grant funding
- Data-led feasibility study to explore
 - o a potential Heyfield local microgrid
 - other community energy solutions
- PLUS, share the lessons learnt with other communities around Australia



Public launch event: 25 February, 2021



Heyfield: a helicopter view of the town



FUN FACTS:

Did you know?

- Heyfield uses around 17 gigawatt hours (GWh) of electricity annually
- That's enough to power nearly 3000 homes for a whole year
- Or it's the same as boiling the electric kettle about 113 million times!







Community Liaison Officer Emma Birchall with local installer Brenton Stuart (Stuart's Electrical Contracting)

Project is capturing lots of energy data:

- 90+ smart energy monitoring devices installed
- These cover 75+ homes, businesses & schools
- Additional data is being collected from
 - the local electricity network (AusNet)
 - local industrial sites





Project participants have been using the Wattwatchers MyEnergy mobile app to monitor and understand their energy usage.









"Since the device was installed, we have replaced 2 appliances - a fridge & reverse cycle aircon.

Both units show a marked decrease in power usage as the monitor shows in real time."

Heyfield Resident and MyTown Microgrid CRG Member











Combined Schools Consumption and Solar Generation





Combined Schools Consumption and Solar Generation





Combined Heyfield Businesses Consumption





Combined Heyfield Businesses Consumption













Combined Heyfield Community Facilities

My Community Facilities



Combined Heyfield Community Facilities Consumption and Solar Generation







No. of Sites 79 No. of Devices 98	Energy from Grid 2,035 kWh ↑	Total Energy 2,419 kWh ↑
Total Solar Energy	Total Excess Solar Export to Grid	Renewable Energy
525 kWh ↑	141 kWh ↑	21 % ↑



- Total Energy - Total Solar Energy







Energy Consumption Breakdown









Nesidential
Commercial
School

Gross CO2 Breakdown by Site Type





Microgrid and Local Energy Solutions

- **Community Battery** shipping container sized storage (0.5 MW to a few MW)
- Neighbourhood Batteries fridge sized cabinets (0.1 MW to 0.5 MW)
- Load Flexibility Moving hot water (and more) from overnight to middle of the day
- Community Retailers Some have closed down while others continue to operate!
- Aggregator Someone who can coordinate the generation, storage and flexibility



Energy Transition Outlook to 2030

Decarbonisation

- Further retirements and performance decline of coal-fired power stations
- Increased penetration of renewables
- New offshore wind, storage, and transmission infrastructure

Electricification

- Degasification switching from gas appliances to high-efficiency electric ones
- **EVs** More affordable EVs becoming available with more fast-charging stations
- Demand Response and Flexibility Increasing focus on when electricity is used rather than how much
- Local storage options community, neighbourhood and homes and businesses
- Alternative generation opportunities biomass and more rooftop solar



Want to find out more?





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