YARRA ENERGY FOUNDATION

Timothy Shue, Chief Operating Officer

www.yef.org.au

To facilitate the uptake of renewable energy and energy efficiency by all sectors of our community to reach net zero emissions as soon as possible.

Let’s Electrify Melbourne

Powered by

YARRA ENERGY FOUNDATION

Supported by

Sustainability Victoria

VICTORIA State Government

Fitzroy North Community Battery

CITY OF YaRRA

CITIPOWER

Funded by

VICTORIA State Government | Environment, Land, Water and Planning

YARRA ENERGY FOUNDATION

Australian National University

Battery Storage and Grid Integration Program

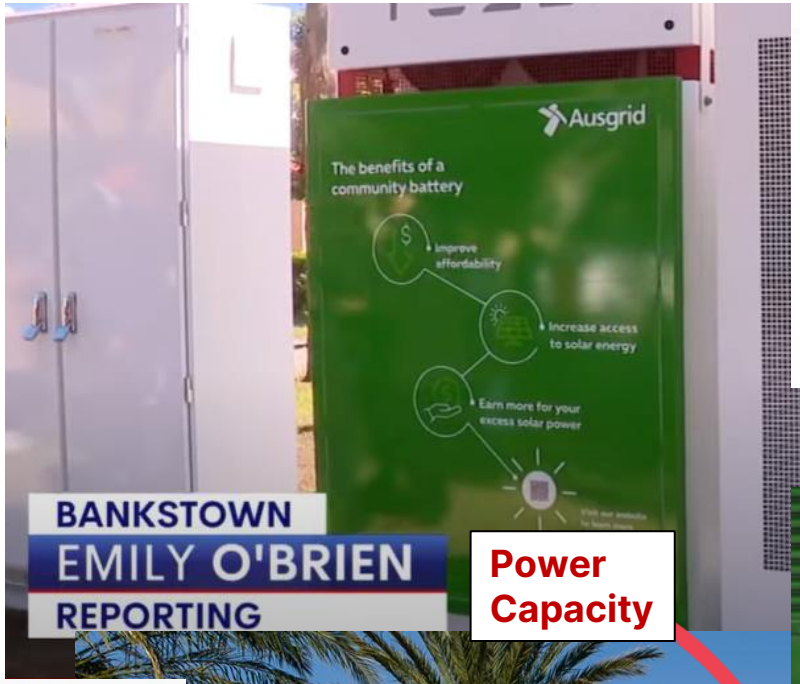
An initiative of The Australian National University

The Yarra Community Battery Project

Yackandandah's community battery may not be 'big' but it's enough to 'petrify' energy providers

The Business / By Emilia Terzon

Posted Mon 24 May 2021 at 5:13am, updated Mon 24 May 2021 at 10:13am



Menu

RENEW ECONOMY
Clean Energy News and Analysis

Federal Labor promises to slash taxes for electric vehicles, build community batteries

Michael Mazengarb 30 March 2021 38

Share Tweet in 0

Power Capacity

Storage Capacity

Community Batteries Can...

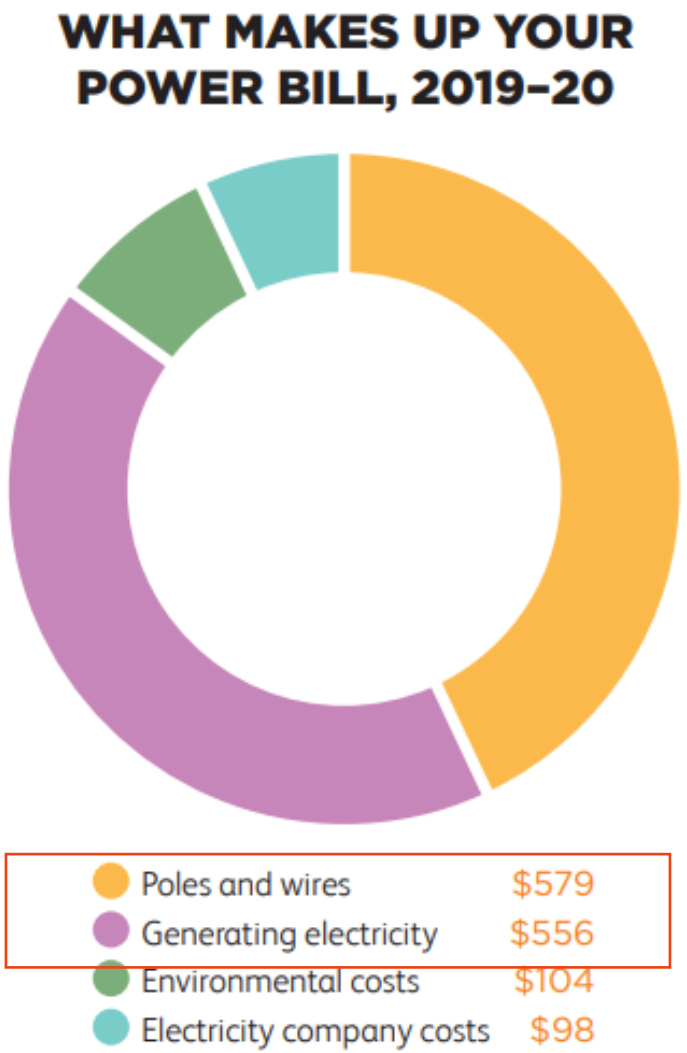
- **Reduce 'solar waste'** (removing export limits)
- **Allow for more solar to be installed** (without network upgrades)
- **Reduce losses** (production near consumption)
- **Support the network** (as fossil fuel generators retire)
- **Bring more energy equity** (if available to everyone – solar or not)
- **Help build more trust in energy sector**
- **And...**

Improve affordability

Driving down the long-term costs of

- Orange: Poles and wires
- Purple: Generating electricity

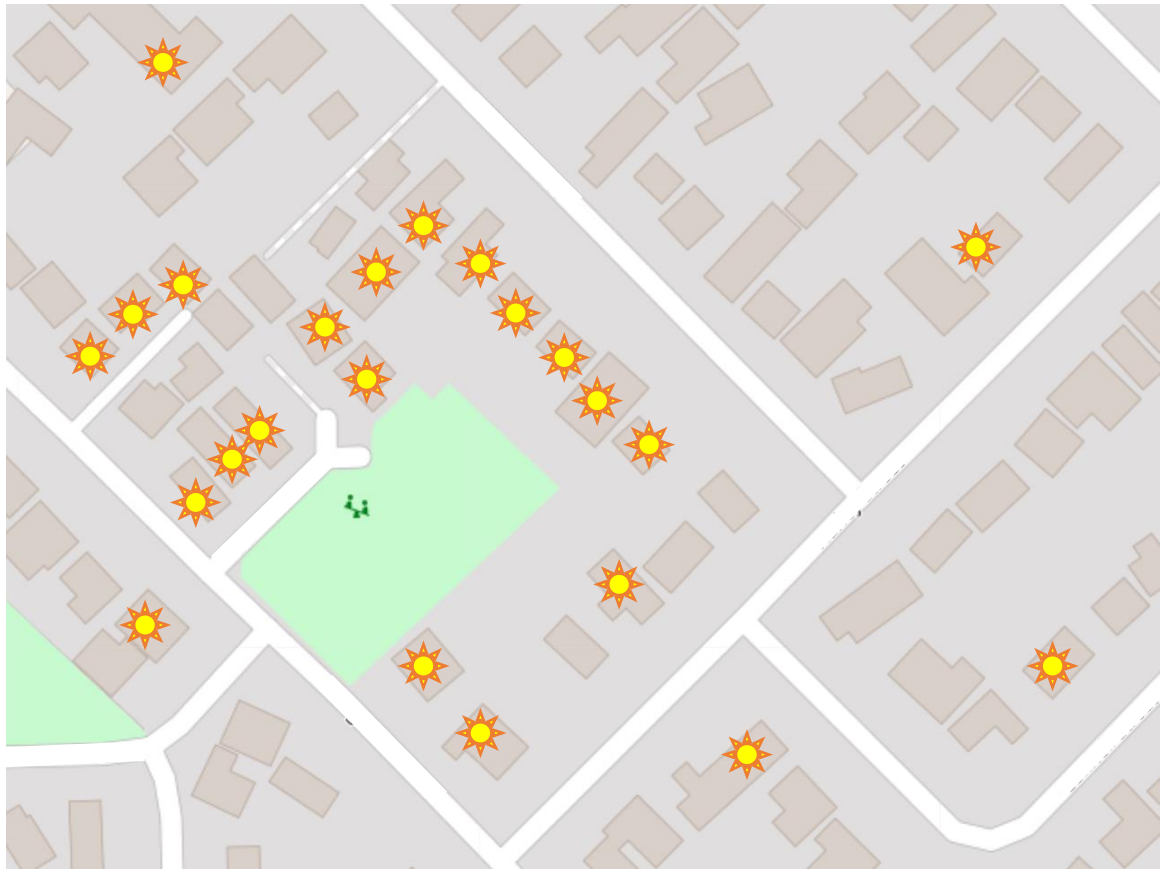
- Increase local supply of renewable energy



What makes up your energy bill. Graphic from Clean Energy Council, 'Clean Energy Australia Report 2021' factsheet. Data from the Australian Energy Market Commission, 'Residential electricity price trends 2020 - final report'.

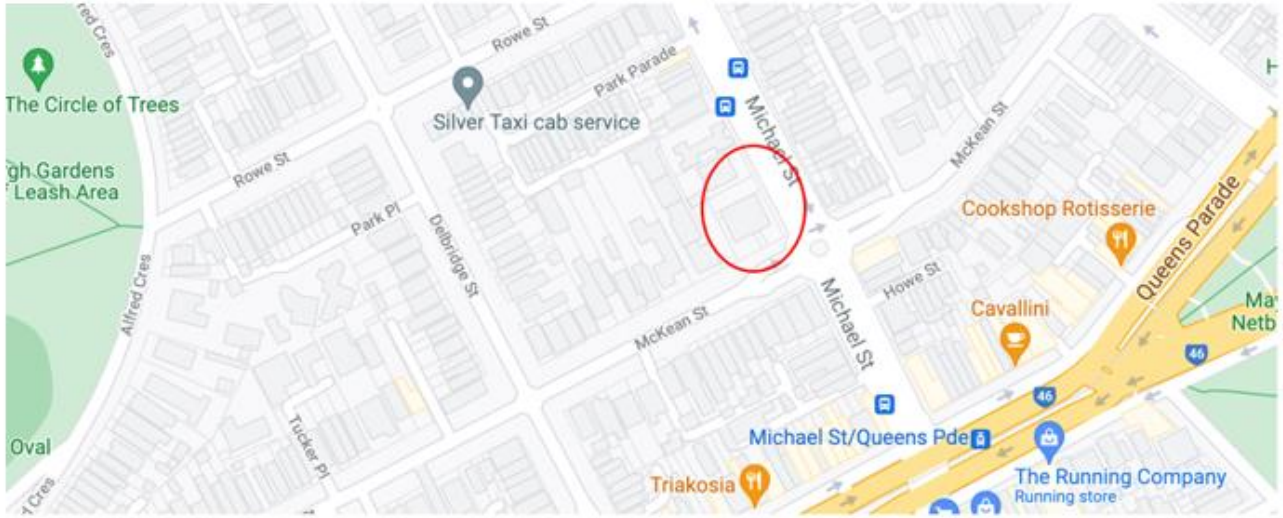
110kW/284kWh

Conditions for a Community Battery



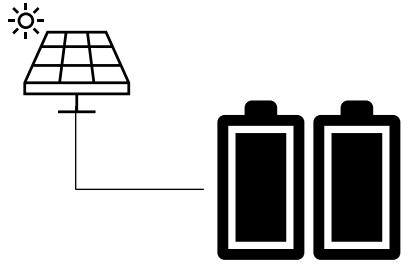
1. **A solar cluster along a power line**
2. **Constrained network in that area**
3. **Appropriate land**
4. **Keen community interest**
5. **Strong council support on climate action**
6. **Finance and technical resourcing**

Below: Maps and images of 195-203 McKean Street, Fitzroy North 3068. The circled areas indicate the proposed location for a community battery.

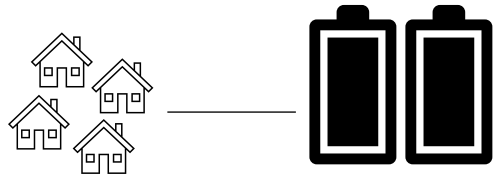


How it Works

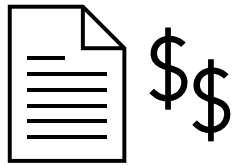
The battery charges up during the day.



It discharges at night to homes/businesses

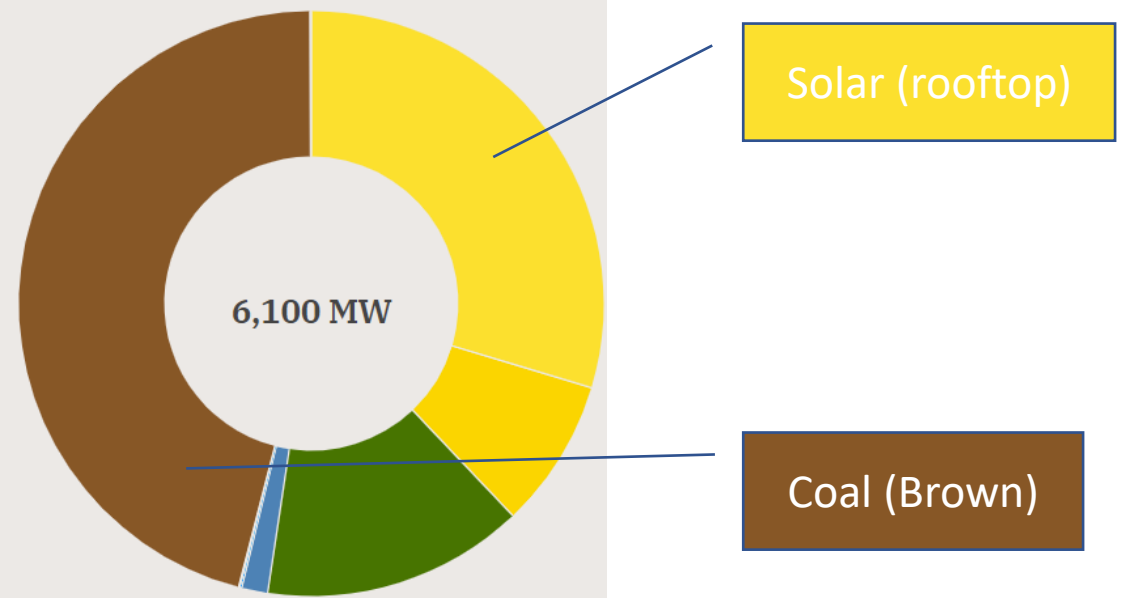


Everyone can participate, even those without solar and renters

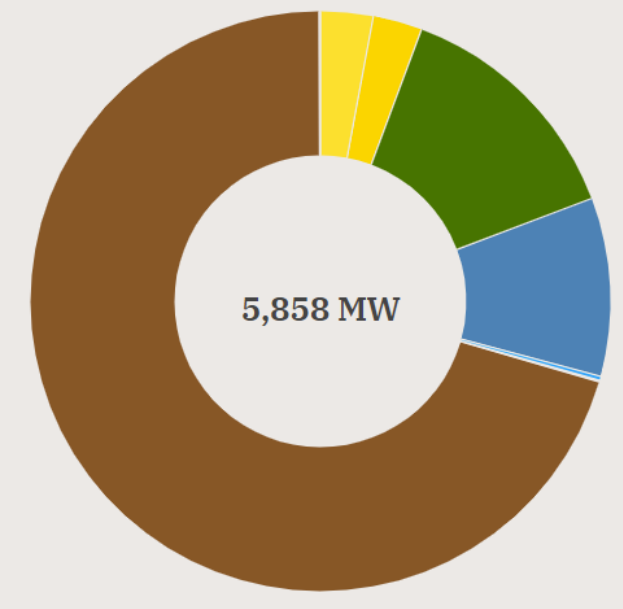


Shifting the ‘solar window’

DAY
12:30pm 21 October (Victoria)

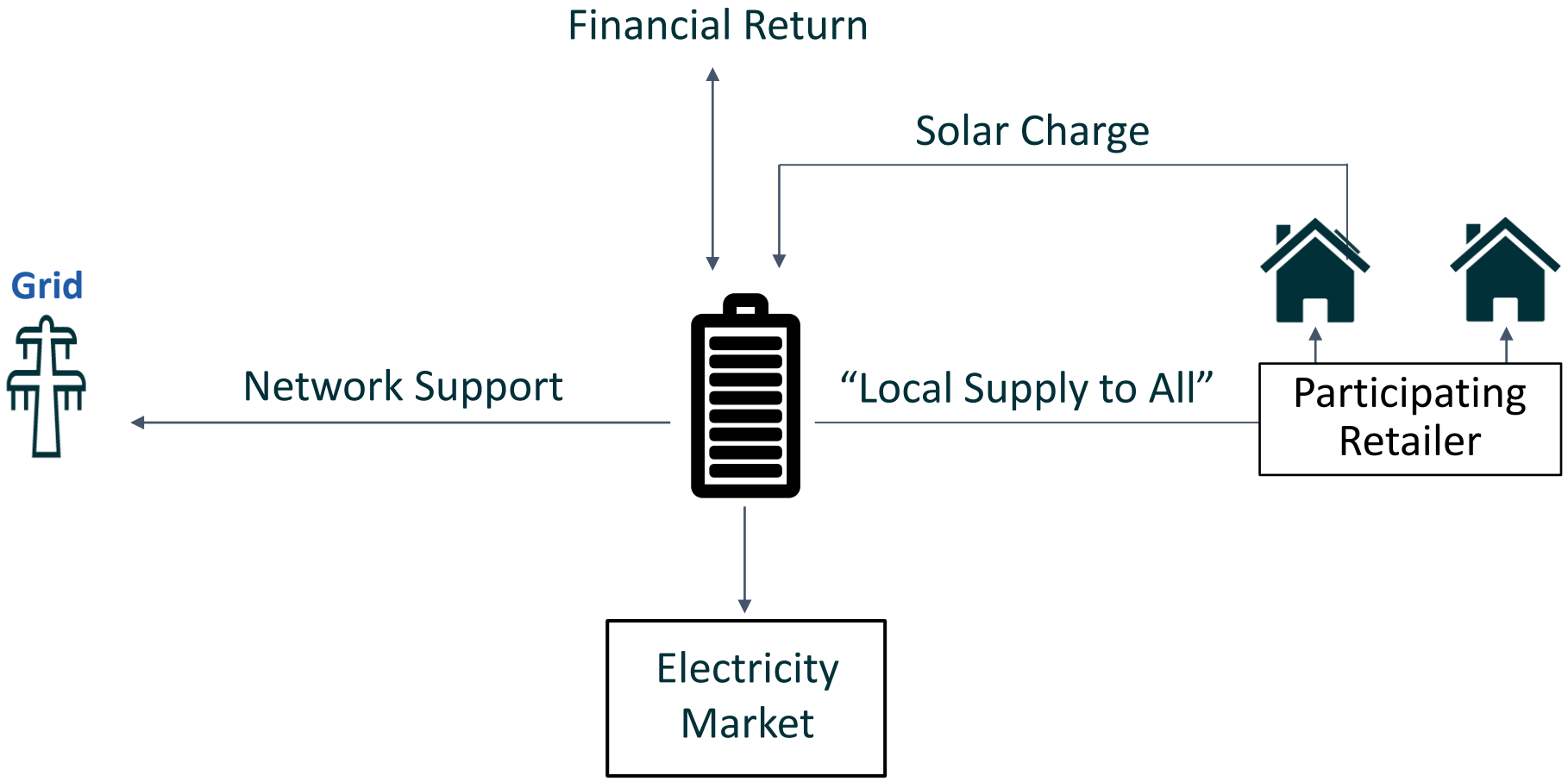


EVENING
6:30pm 21 October (Victoria)

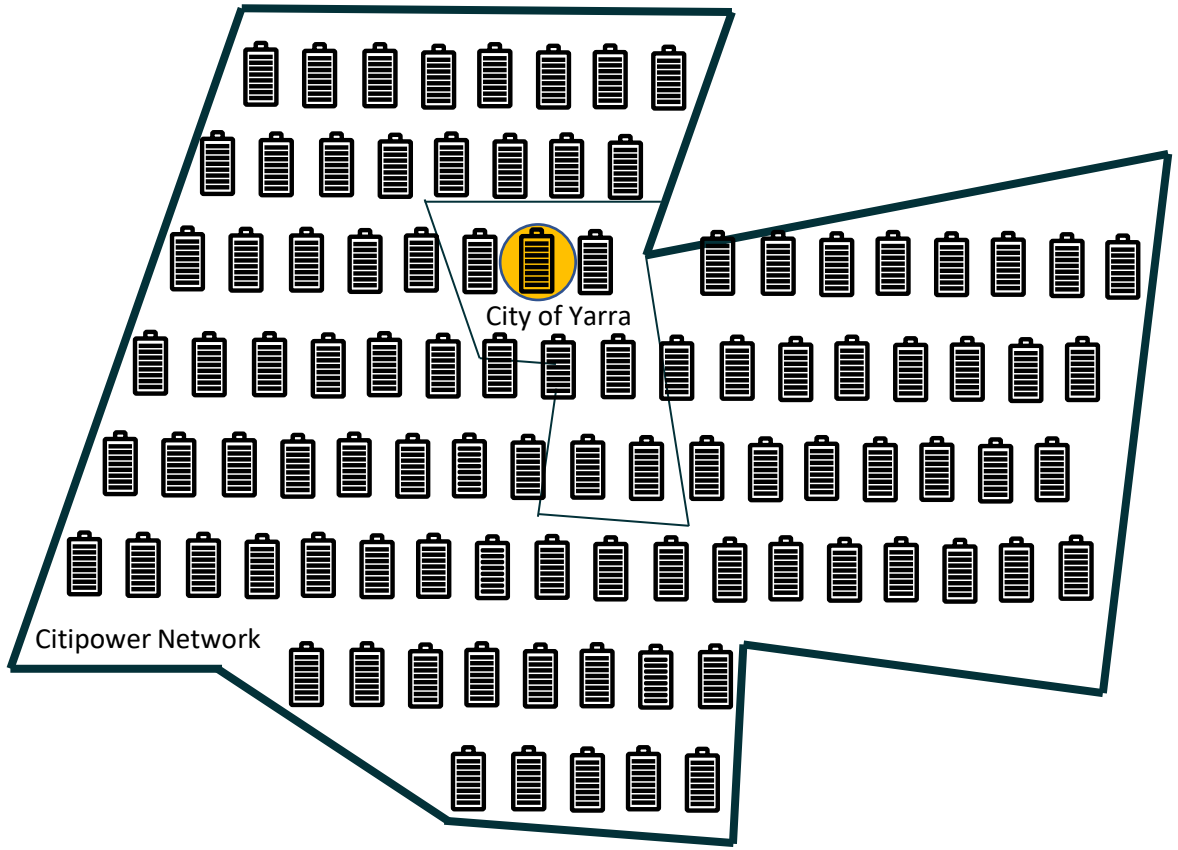


Solar produced during the day is not available for peak demand at night. Peak demand (3-9pm) coincides with emissions intensive, coal-fired electricity.

Business Model

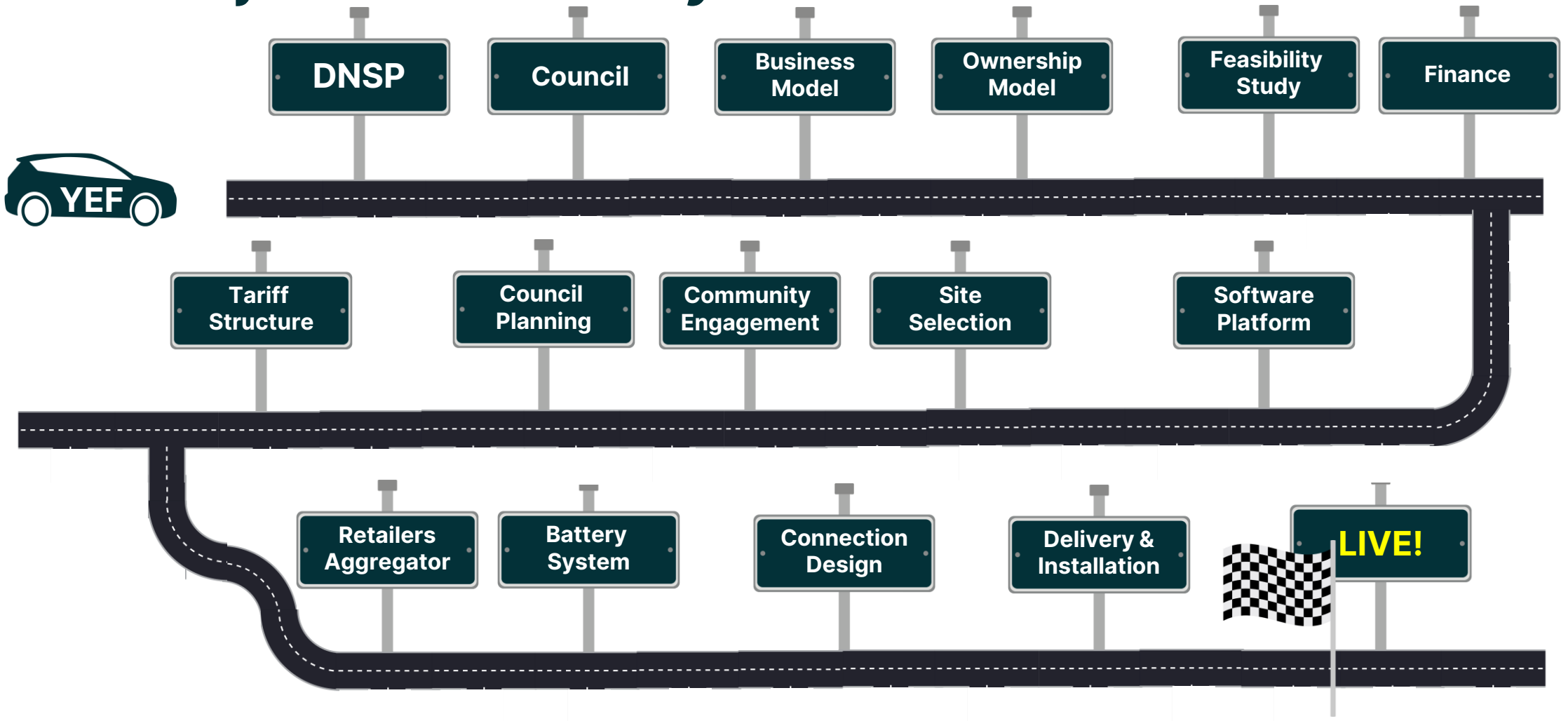


Vision for the network



- **A community battery network**
- **CitiPower network-wide**
- **Third party ownership**
  - 👉 **Storage & supply**
  - 👉 **Network support**
  - 👉 **Market trading**

Project Journey



Engaging communities on community batteries

Challenges

- Low awareness
- Can be complex
- Low trust in energy sector
- Community scepticism
- NIMBYism
- Little experience
- No budget
- Critical to project delivery
- Deadline < 12 mos
- High uncertainty
- Risk can’t be eliminated

Education

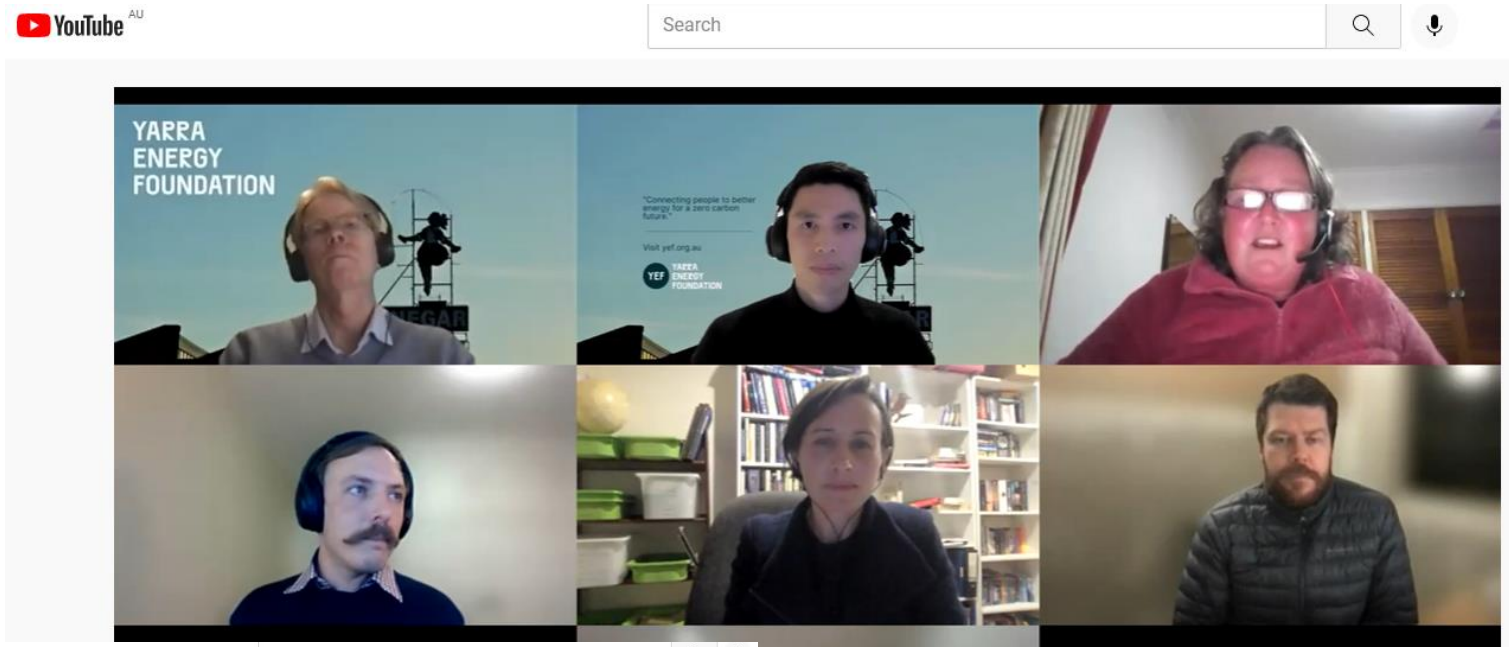
General webinars

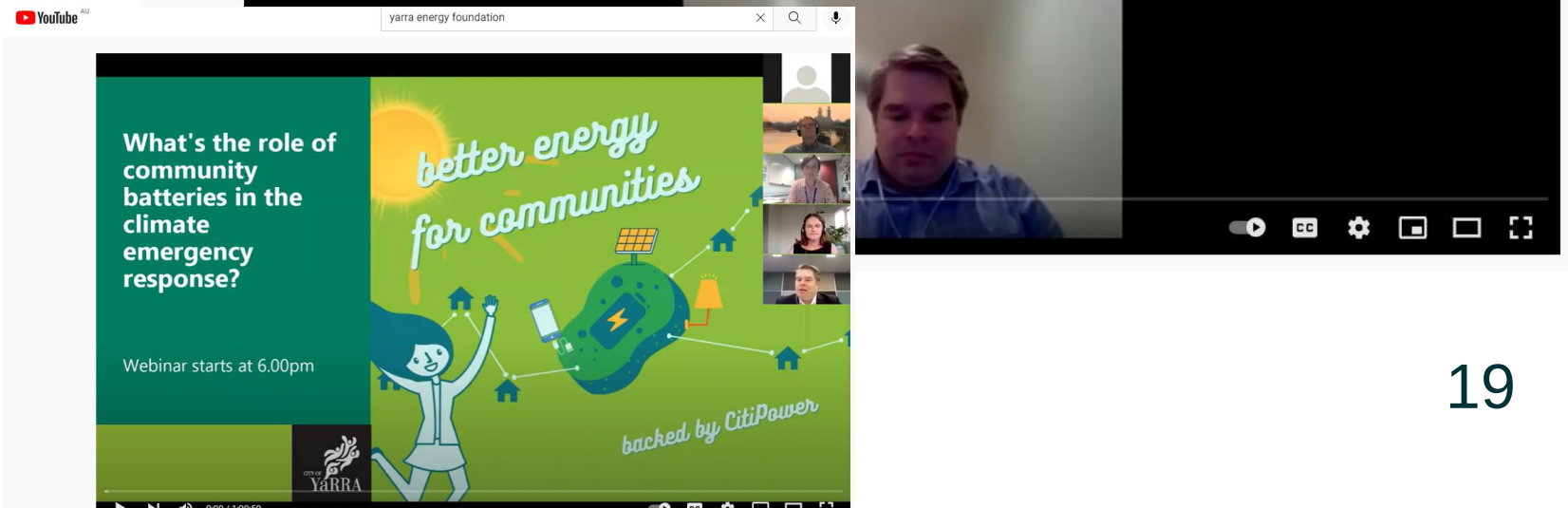
Information on our website

Talking to people

Surveys

Solar sponge





Engagement plan

Timeline

Focus of engagement

Stakeholders

Risks

Phases for engagement	Phase 1	Phase 2	Phase 3
Timeframes	April-June 2021	July 2021 – November 2021	December 2021 onwards
Focus of engagement	*Introducing concepts of 'community batteries', informing residents, providing opportunities for residents to ask questions, and sensitising people to the role of community batteries and why they are needed.*	*Keeping the trial site community informed as the project progresses, explain what preparation is undertaken prior to the installation of the battery. Community battery launch is to be confirmed, but could be early 2022.*	*Integrate key learnings from community engagement to establish lessons for future community engagement processes. Continue engagement with trial site community in preparation for Council planning application.*
Engagement activities to support project delivery	• Develop FAQs and make available online • Write explainers in article/blog format (e.g. YEF's on website) • Engage and answer questions from community on social media • Establish best contact person(s) and channels for enquiries • Develop key messages for the community • Prepare content and options for media release • Consider developing collateral options, such as flyers or letters to send out to residents/businesses • Establishing a mailing list and contact database of trial site residents, as well as other interested community members	• Organise online information sessions for trial site residents • Communicate project updates via email to trial site residents • Launch feedback containers (e.g. survey, social media posts etc.) • Continue to manage enquiries via email/phone and address concerns • Continue to feed-in community's feedback into the development of the project • Investigate with Council the possibility to run a community art/design competition for the battery itself, engaging the local art community and exploring placemaking opportunities	• Use learnings from community engagement to inform future community engagement plans and processes • Collate community feedback and decisions to inform Council planning application • Battery installation launch event • Communicate with trial participants throughout the trial period and seek feedback on their experience • Continue to host regular events and information sessions about community batteries, the project and future trial sites

Engagement spectrum

Negotiables vs non-negotiables

What is the community's decision-making power?

IAP2 Spectrum of Public Participation

IAP2's Spectrum of Public Participation was designed to assist with the selection of the level of participation that defines the public's role in any public participation process. The Spectrum is used internationally, and it is found in public participation plans around the world.

INCREASING IMPACT ON THE DECISION

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Messaging strategy & tactics

Aim: To establish a positive emotional response to and association with community batteries

Aim
To establish and grow a positive emotional response to and association with "community batteries".

Strategy
To frame community batteries as familiar technology which will become increasingly normal in our lives as we transition to a renewable energy society.

Tactics

- Tap existing schemas, like food or water storage, to allow people to make easy conceptual leaps to 'shared community battery energy storage'.
- Use familiar technology like personal powerbanks to expand a basic conceptual understanding of community-scale storage, while reducing the risk of overwhelming people with technical complexity. This may reduce fears of the unfamiliar and unknown associated with new technologies.
- Raise energy and electricity literacy so people feel confident in their understanding of the concepts, and that they can relay their understandings and benefits easily to others.
- Consistently use inclusive framings of "we" and "our" and "shared" to emphasise benefits for the collective and community.
- Empower people with practical and memorable metaphors, such as "solar sponges", that will allow easier knowledge transfer and give community batteries a better chance at entering the vernacular.
- Use appropriate humour and upbeat language to differentiate and make content more likeable, shareable, and memorable.

Problems & Solutions framing

- **Solar waste**
- Energy inequity
- Export limiting
- Energy affordability
- Batteries are expensive
- Climate change
- Network constraints
- Mistrust in energy sector
- Peak demand and power quality
- Cost of network upgrades

What problems is the Community Battery solving?	
Problem	**Solution**
Community	
'Solar waste' – excess energy produced by local residents' solar systems which is not utilised.	The battery will capture and charge up during the day when solar export energy is highest, and release it during peak times or at night.
'Energy inequity' – not everyone is able to: install solar, access green and affordable energy, benefit from renewable energy, engage with the energy system (cultural, capacity, health, physical barriers etc.).	The battery will help to redistribute renewable energy across the community. All homes within the network catchment area, not just homes with solar, will be able to choose to use green energy from the battery.
'Export limiting' – blockages in the electricity network restricting more homes from connecting solar to the grid.	The battery would help remove restrictions on homes that want to export solar to the grid. This would increase the payback on solar if homes are able to export energy.
'Energy affordability' – electricity prices contribute to bill pressure, exacerbating already vulnerable people and households.	The battery would apply *downward* pressure on the cost of electricity, and have the effect of lowering the cost of renewable electricity for battery participants (customers/members?). *Can we explain how and why this would be the likely outcome? Can we prove it in the trial?*
'Batteries are expensive' – batteries are not yet cost-effective at the household scale.	The battery would operate at the "neighbourhood scale", a more cost effective way to use and operate energy storage with batteries.
Structural and system-wide	
'Climate change' – a major concern for many people, especially in the City of Yarra.	The battery enables more people to switch from coal-fired energy by providing an accessible and affordable alternative energy supply.
'Mistrust and lack of engagement with the energy sector' – many people have low trust in the energy sector, low levels of energy literacy, and may not be interested in the battery, or be sceptical about who it will benefit. Low trust = high risk of community disengagement and disapproval	The battery may be a visible and tangible asset to the community that enables greater access to renewable energy. Something that people can 'see, feel, and touch', supported by transparent information about the battery and its rationale.

Principles of engagement

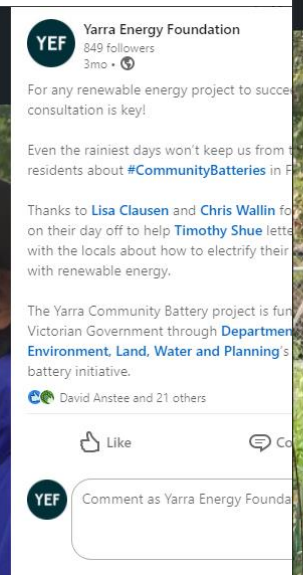
- Transparency
- Active listening
- Communicating clearly
- Trusting and earning trust

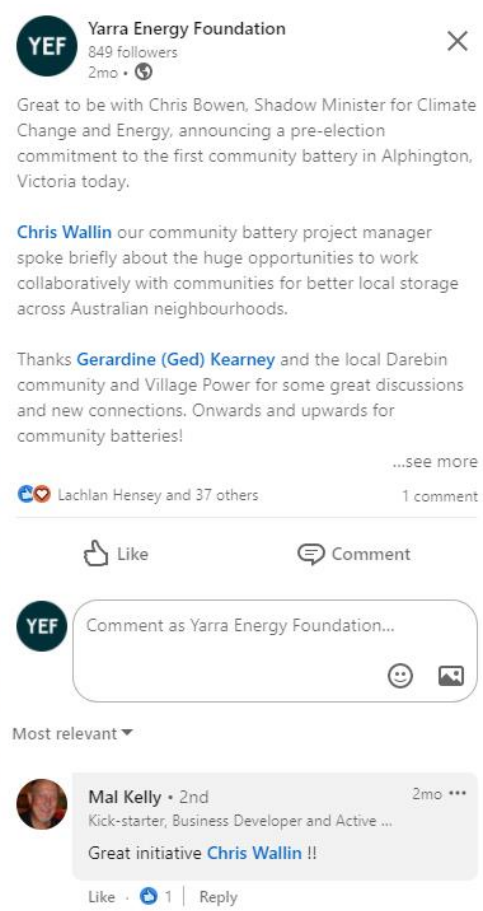
Principles of engagement

These are the principles YEF and project partners are committed to throughout community engagement:

1. **Transparency**: YEF and partners will be honest and up front with the community about the project's goals and progression. This will include sharing updates with the community through the consultation process. Subscribe to YEF's newsletter for project updates.
2. **Active listening**: YEF will seek to make space to actively listen and respond comprehensively to community's concerns, questions and comments. Through meetings, consultation and drop-in sessions, YEF will listen respectfully to community's values, priorities and needs as they relate to the project. View our events calendar for the next information or drop-in session.
3. **Communication**: YEF will explain clearly to the community what they can influence, how their input will shape the project team's decision-making, and communicate the outcomes of those decisions, including timeframes and the parameters that YEF and partners are working within. Follow YEF on social media for all major announcements (Facebook, Twitter, LinkedIn)
4. **Trust**: By putting trust in the community's ideas, knowledge, hopes and perspectives, YEF will endeavour to continue building trust with the community in the project, partner organisations, and the energy sector more broadly.

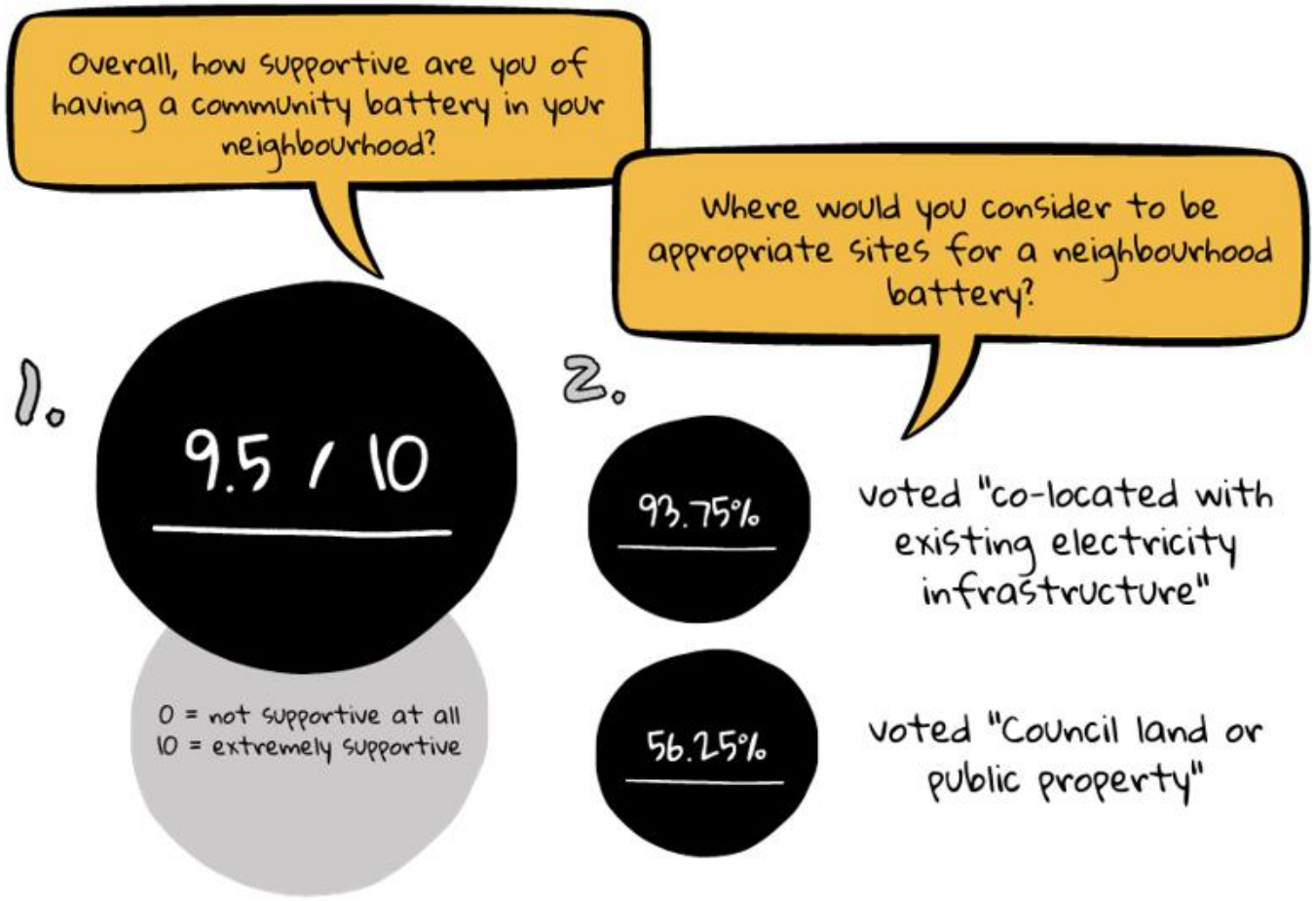
Getting out and about






SAFETY
OBSERVER

265 letters were distributed to nearby residents and these are the results of their feedback. You can take the survey by scanning the QR code below, or visiting: bit.ly/39728Qo

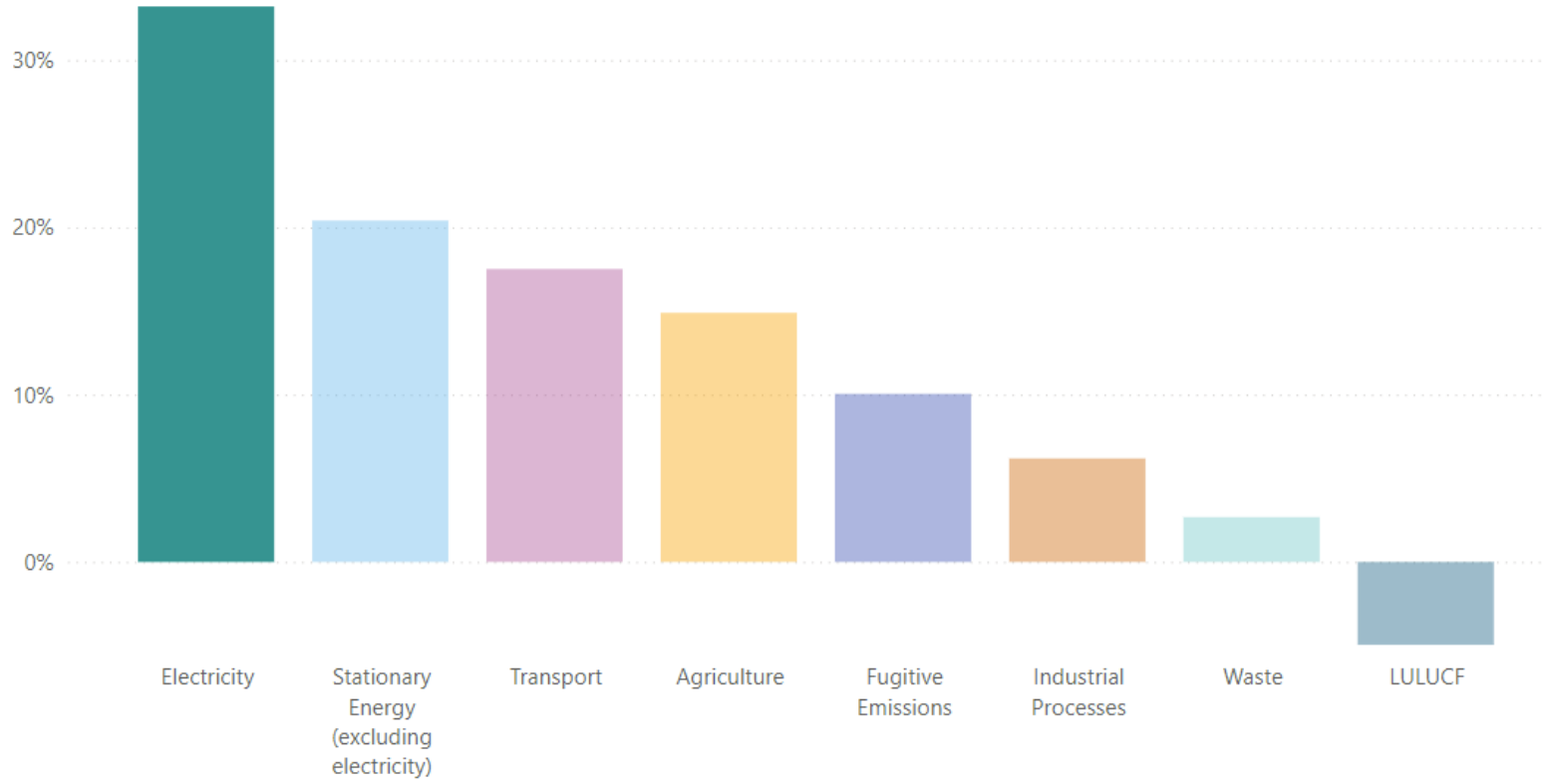


Have your say
Take this survey

Electrifying Melbourne with renewables

Australia

Emissions sources: What can be powered by renewable energy?



Australia

'We can get to 80 per cent emissions reductions by 2035'

"We can get to 80 per cent emissions reductions by 2035 and we don't need any new technology at all."

Australia's 2020 domestic emissions by sector

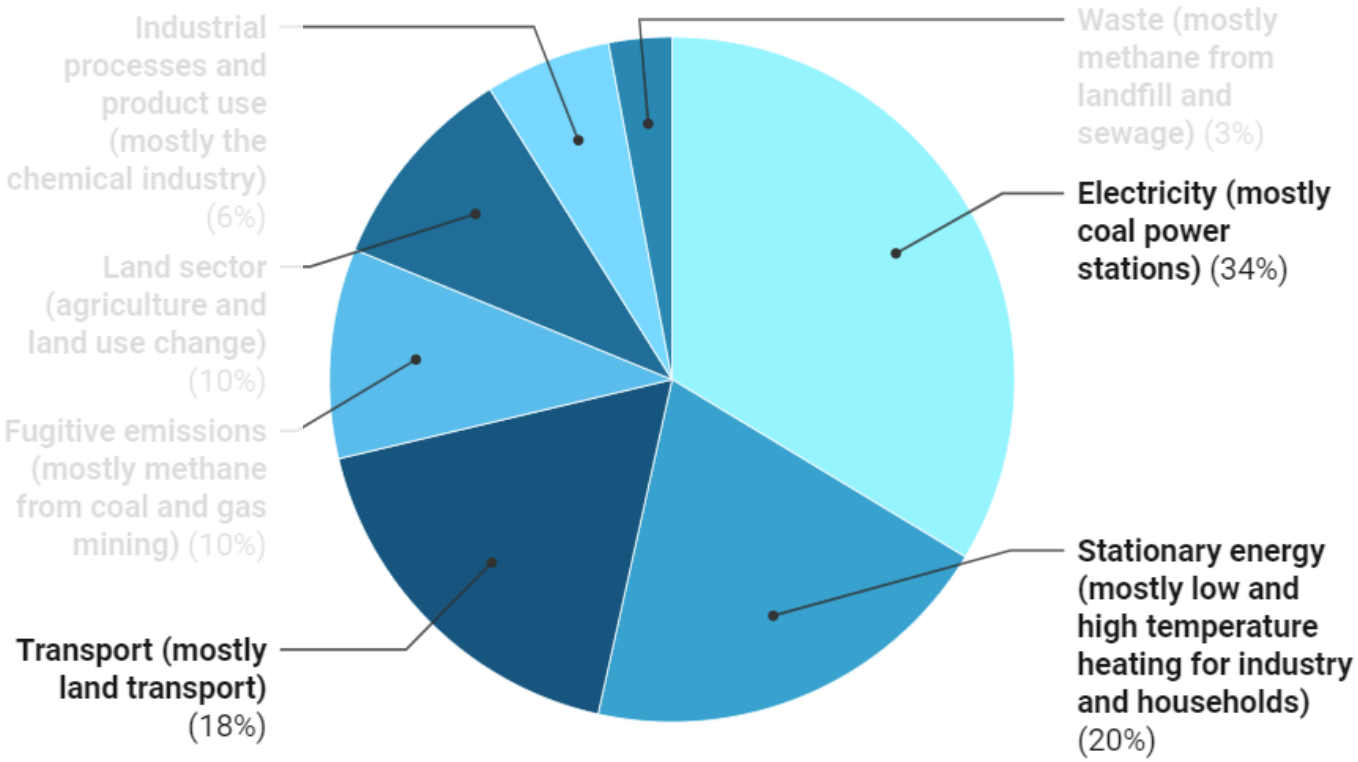


Chart: ABC Science • Source: Department of Industry, Science, Energy and Resources • Get the data

Yarra Energy Foundation
849 followers
2mo •

"We are leading the world, and I hope you go faster because the world needs you to" - inspiring to have Saul Griffith launch the Metro Community Power Hub's campaign today to #ElectrifyMelbourne with clean, renewable energy.

With a line up of brilliant speakers Peter Mercouriou David Anstee Deborah Sykes Alicia Darvall Fran Macdonald (thank you!). Recording will be available shortly.

We also launched our new website to make it easier for people to take action - http://www.mcph.org.au/

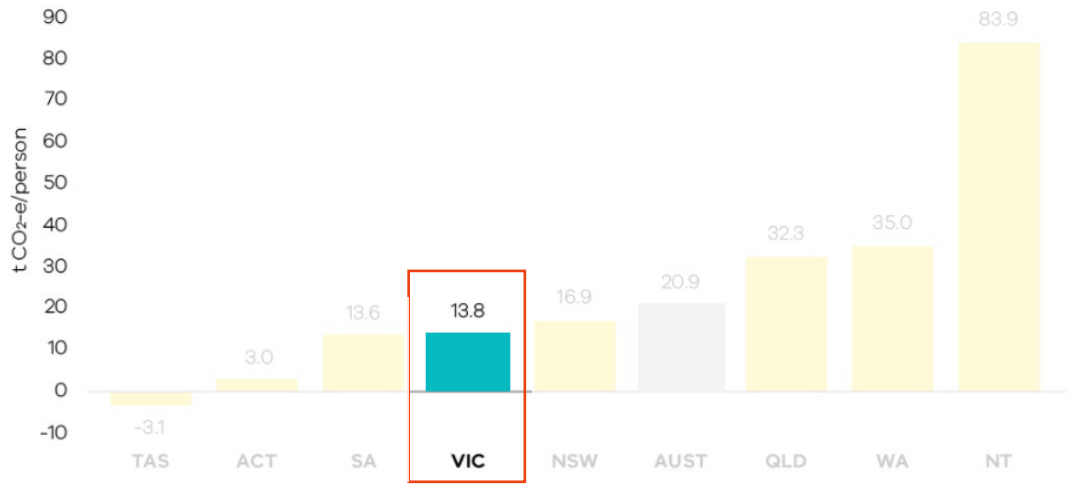
#ElectrifyEverything #RewiringAustralia ...see more

Lachlan Hensey and 17 others

Like Comment

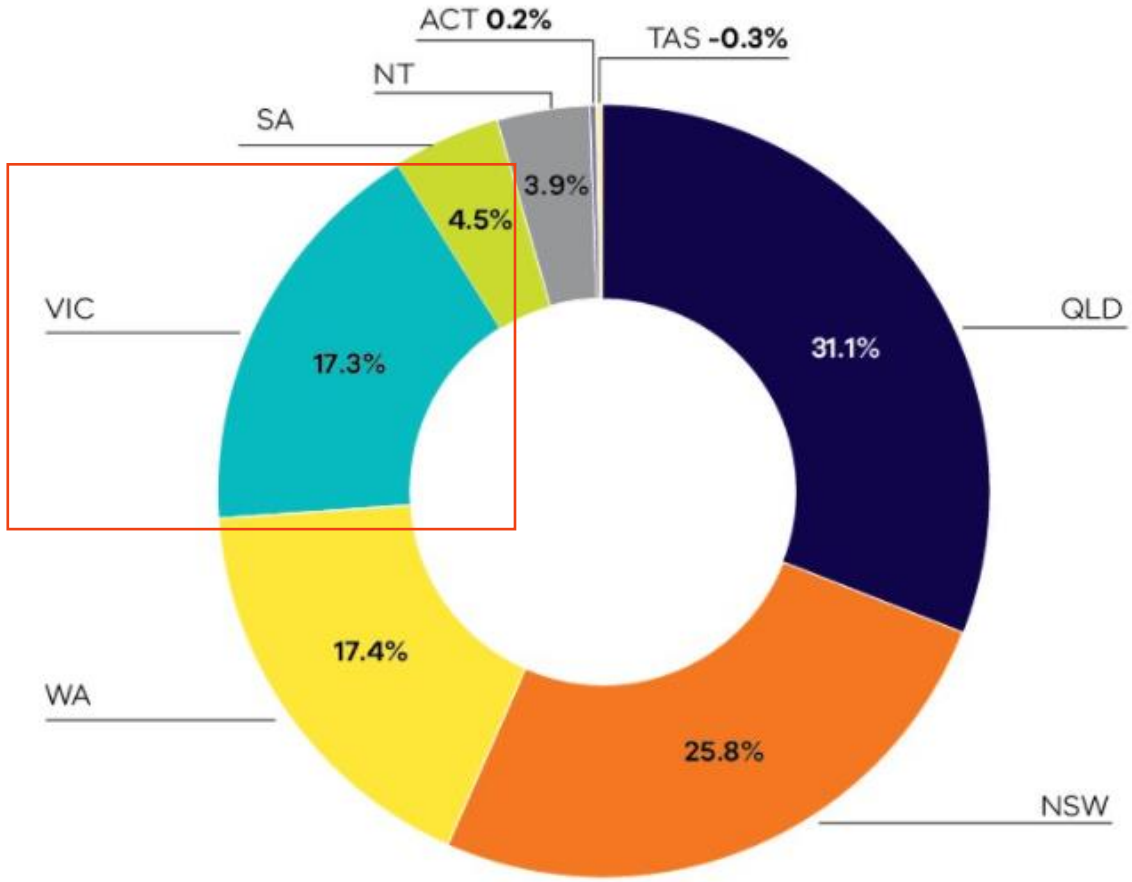
Victoria

Victoria's per capita emissions are less than the national average



Note: Tasmania's figure of -3.1 t CO_2-e per capita reflects the fact that net absorption in the LULUCF sector in that state

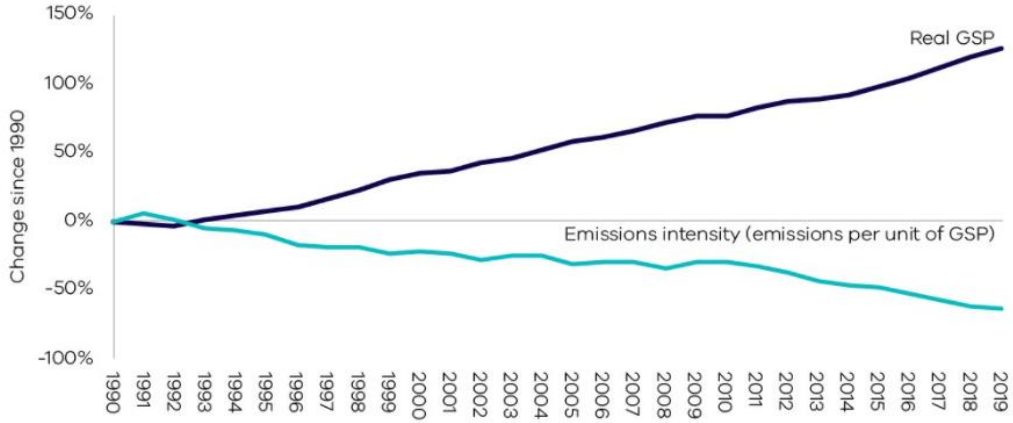
Victoria contributes 17% of Australia's emissions



Replicable, scalable, financially viable, and equitable model for renewable energy storage and supply

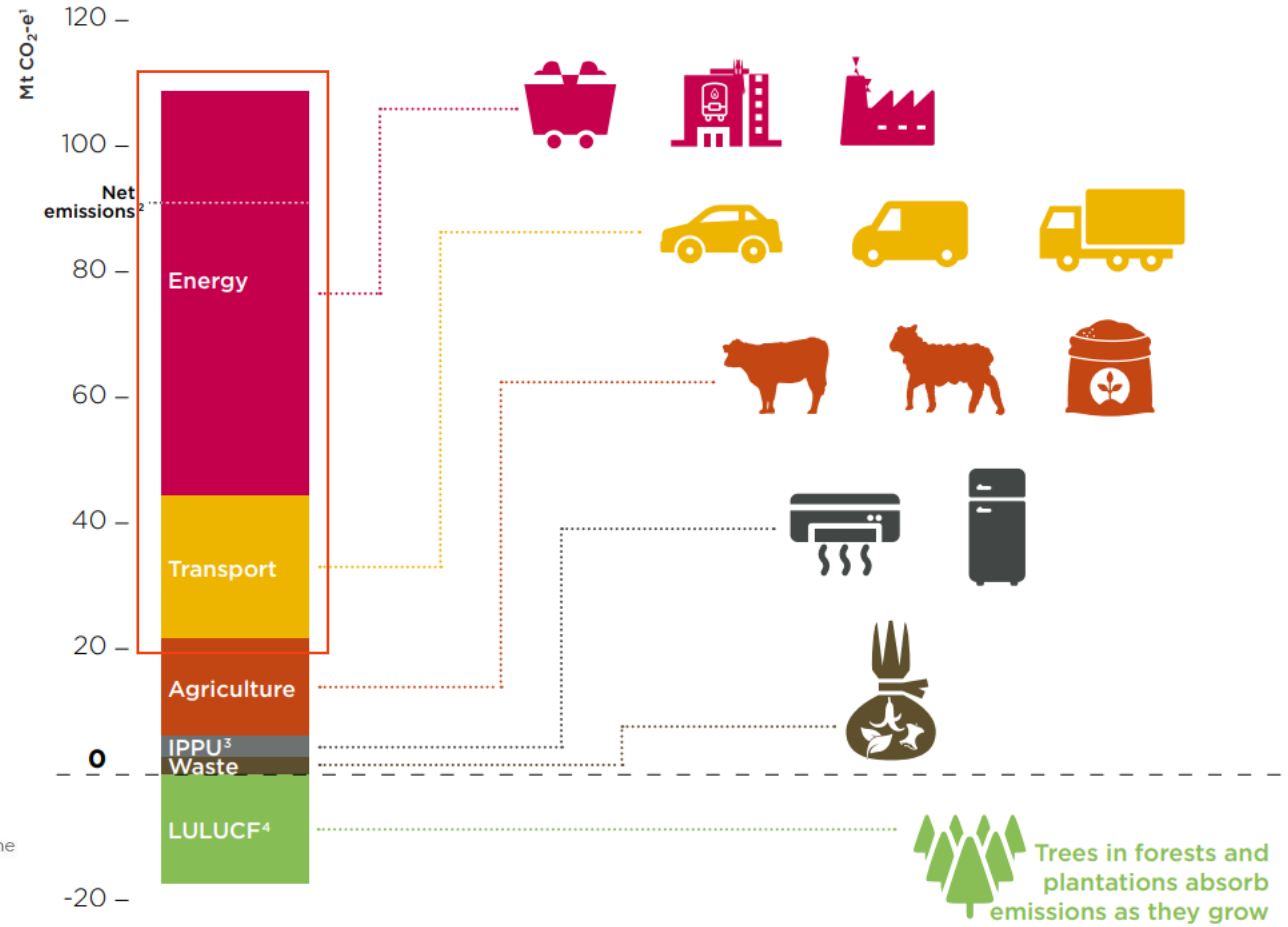
Sector

Victoria's economy is less emissions intensive



Between 1990 and 2019, real Gross State Product (GSP) increased by 126%, while emissions fell 19%, resulting in a decline in the emissions intensity of the Victorian economy from 0.55 to 0.20 kilograms CO_2-e per dollar of GSP.

Victoria's greenhouse gas emissions by sector in 2019



Victoria's greenhouse gas emissions by emissions sector in 2019

1 Million tonnes of carbon dioxide equivalent emissions

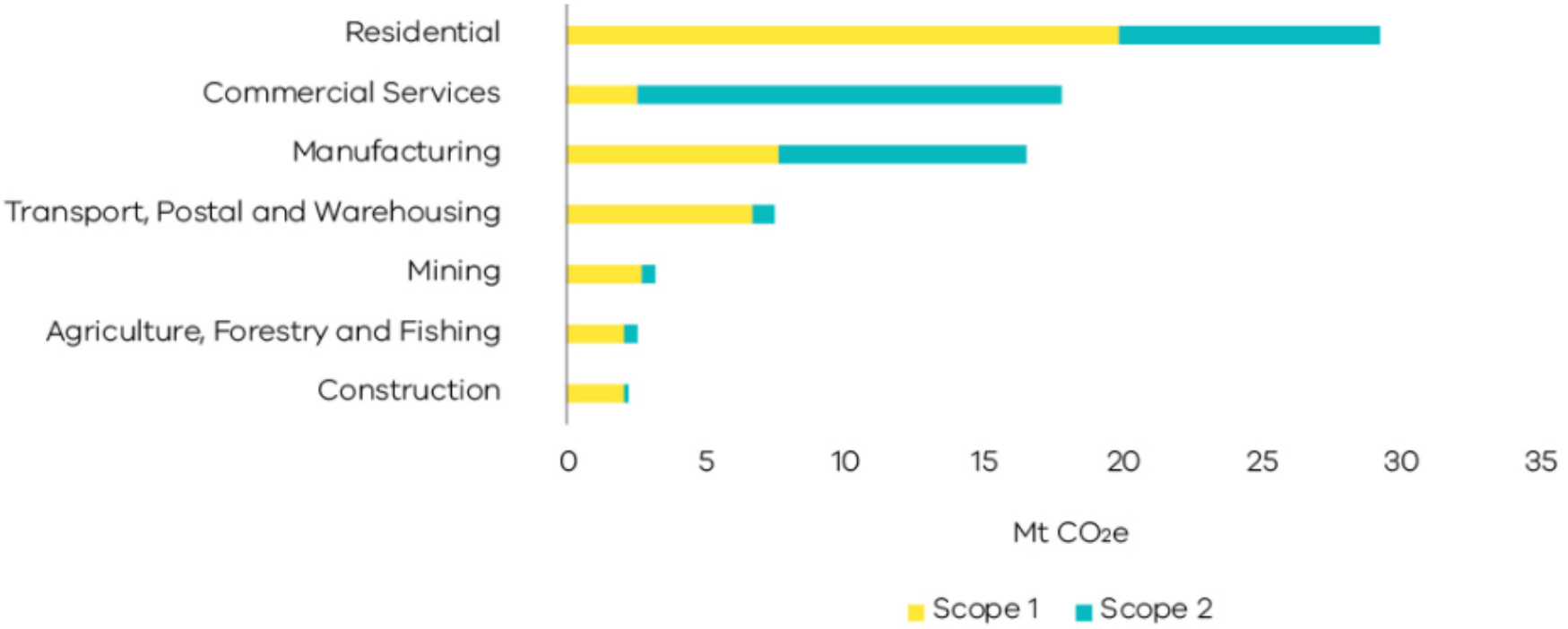
2 Victoria's net emissions are total emissions less the emissions absorbed in the LULUCF sector

3 Industrial processes and product use

Economic Sector

Major contributors to greenhouse gas emissions by economic sector

Major contributors of greenhouse gas emissions by economic sector are residential (households), followed by commercial services (including retail and wholesale trade, health care, education, accommodation and food services, professional services, etc.) and manufacturing.



Learn more

www.yef.org.au/community-batteries

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YARRA ENERGY FOUNDATION

https://www.yef.org.au/community-batteries/