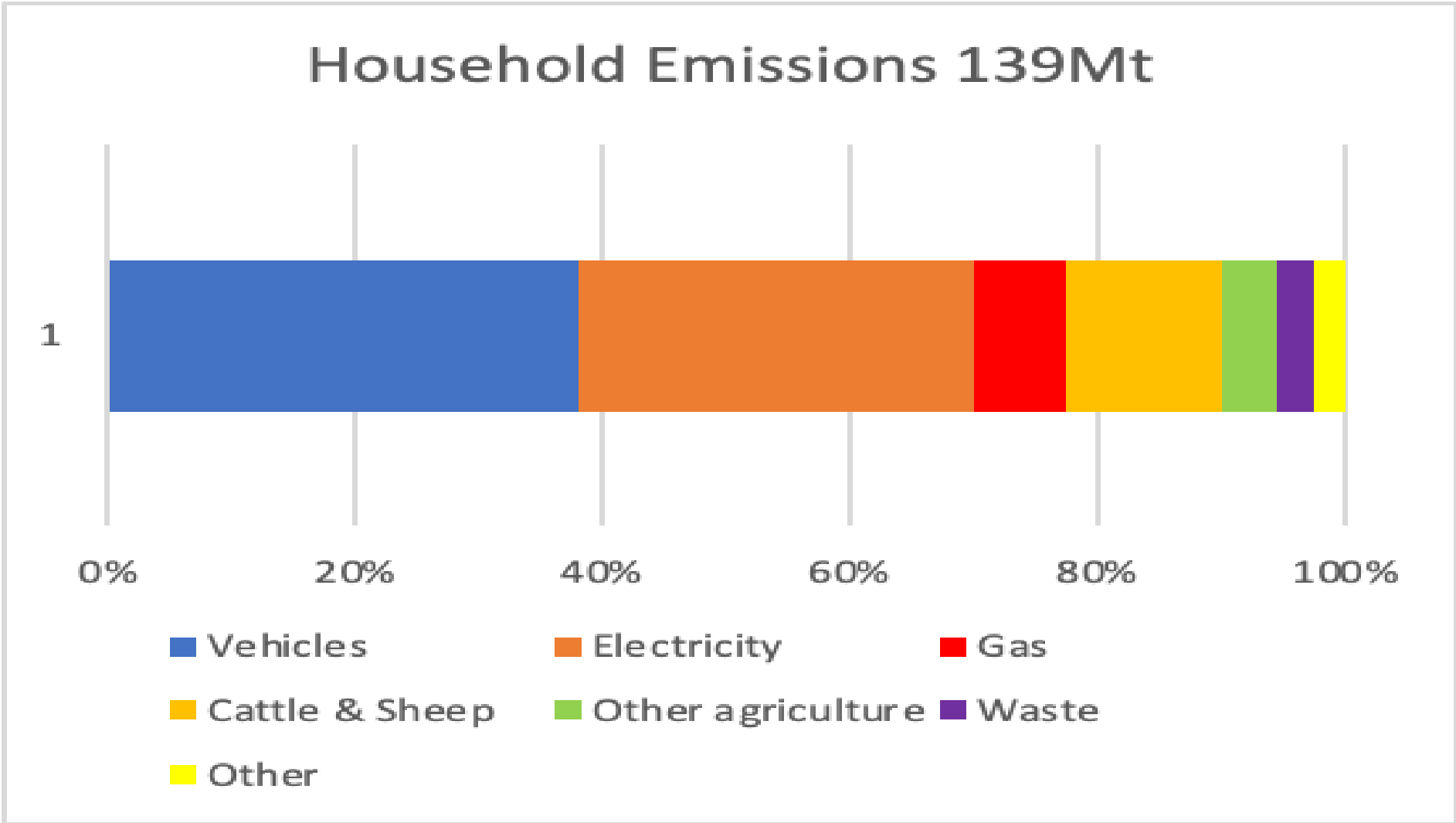




HOUSEHOLDS

Residential CO2 Emissions in Australia



Getting to Zero Carbon - Retrofits, No gas, Energy-efficient appliances, Behaviour change, Solar panels



Retrofits, solar panels, solar hot water

Measure	Reduction in total electricity used
Energy savings from retrofits	30%
Lighting upgrade	2%
Changing to air conditioners for heating	20%
Hot water system upgrade	15%
Electric & induction cooking	3%
Efficient appliances, powerboards, behaviour	15% ³

What we need to do

- Improve the energy efficiency of new and existing homes to reduce energy consumption and reduce energy bills
- Electrify homes by moving away from gas as an energy source and use energy efficient electric appliances for heating and cooling, hot water and cooking
- Switch to 100% renewable power
- Install rooftop solar PV to provide cheap renewable power
- Install home batteries to store energy or utilise bi-directional charging from EVs

How to get there

Strategy 1

- Raise awareness in the community of the scale of household emissions and the importance of making reductions
- Provide education and relevant resources with a focus on the practical aspects of how to reduce household CO2 emissions

Strategy 1a - Raise awareness

- Promotion through traditional media - local radio, TV and newspapers (interviews, articles etc)
- Promotion through social media
- Promotion through City of Newcastle channels (newsletter, mailout with rates notices, libraries, website, media and social media)

Strategy 1a - Raise awareness

- Promotion through environmental and community groups channels
- Recognition / Awards for CO₂ emissions reduction – in order to educate and motivate

Strategy 1b - Provide education and resources

- Provision of information and links to resources through Council newsletter and mail outs and through community groups
- Provision of detailed information and resources on the Council website and libraries
- Provision of talks, workshops and webinars for community members who are seeking more detail and answers to questions

Strategy 1b - Provide education and resources

- Support community groups to come together to share knowledge and ideas on how to reduce emissions using a small group model.
- Provision of educational materials for schools
- Provision of talks and workshops for schools

Strategy 1b - Provide education and resources

- Involve community experts and volunteers
- Provide access to equipment for home energy audits on a loan basis

Strategy 1b - Provide education and resources

Education and resources would include topics such as:

- *How to measure your household CO2 emissions*
- *How to do a home energy audit*
- *Home retrofits to make them energy efficient*
- *Greenpower*
- *Solar PV*
- *Home batteries*
- *Heat pumps*

Strategy 1b - Provide education and resources

Education and resources would include topics such as:

- *Induction cooktops*
- *How to transition from gas to electricity*
- *Reducing emissions from motor vehicle use*
- *Electric vehicles*
- *Bidirectional charging*
- *Reducing emissions from air travel and holiday cruises*

Strategy 1b - Provide education and resources

Education and resources would include topics such as:

- *Links to existing rebates and incentives*
- *Sources of low cost or interest free loans for emission reduction*
- *Information on solar PV for apartment blocks, strata and renters, etc.*

Strategy 1 - Who could be involved?

- Council
- Environmental groups
- A wide range of community groups and networks

Strategy 1 - Who could be involved?

- TAFE, University and High Schools
- Housing providers
- Building associations and advisory groups

Strategy 1 - Who could be involved?

- Charities
- Individuals with particular expertise in this area
- Volunteers who could provide manpower and a wide range of skills

Strategy 2

Provide relevant services

- Directly provide or subsidise the provision of a home energy audit service across the LGA to assist households to reduce their energy consumption, reduce their bills, and reduce their CO₂ emissions.

Strategy 2 - who could be involved?

- Council
- Environmental groups
- Other community groups
- TAFE and University
- Housing providers

Strategy 3

Update Council controlled regulations that would result in a reduction in residential emissions

- Require new builds and renovations to be fully electric (and prohibiting new gas connections)
- Require that gas appliances, at end of life, are replaced with electric appliances

Strategy 3

Update Council controlled regulations

- Consider prohibiting the installation of new wood heaters and the removal of existing wood heaters before a property can be sold
- Consider the banning of wood heaters in urban areas

Strategy 3

Update Council controlled regulations

- Review existing regulations that may inadvertently prevent emission reduction

Strategy 4

Advocate for other regulatory changes

- Mandatory disclosure of Energy Efficiency for new dwellings at the time of purchase
- Mandatory disclosure of Energy Efficiency for existing dwellings at the time of sale and lease

Strategy 4 - who could be involved?

- Council
- Environmental groups and other community groups
- Housing providers
- Building associations and advisory groups

Summary

1. Raise awareness in the community and provide education and resources
2. Provide home energy audit services
3. Revise Planning Controls
4. Advocate to state and federal government for other regulatory changes
5. Provide access to rebates, incentives and low cost finance

Other strategies

6. Bulk purchasing of relevant equipment
7. Support community-led renewable energy projects where appropriate
8. Collaborate with utilities and businesses to implement schemes that will reduce residential emissions
9. Identify and apply for funding to support emission reduction initiatives