A passion for clean energy

Community Renewable Energy

Greater Charlestown Sustainable Neighbourhood Group
Want to Save on Electricity Bills

Thursday 24 Sep 2026

CLEANaS
CLEAN ENERGY ASSOCIATION OF NEWCASTLE AND SURROUNDS

Sponsors:

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The Greater Charlestown Sustainable Neighbourhood Group

Milson Street Hub
Community Creativity Justice Spirituality

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Clean Energy Association for Newcastle and Surrounds

- not-for-profit association
- creating community-focussed viable clean energy projects
- providing education, resources and project services
- partnering with other community and business groups

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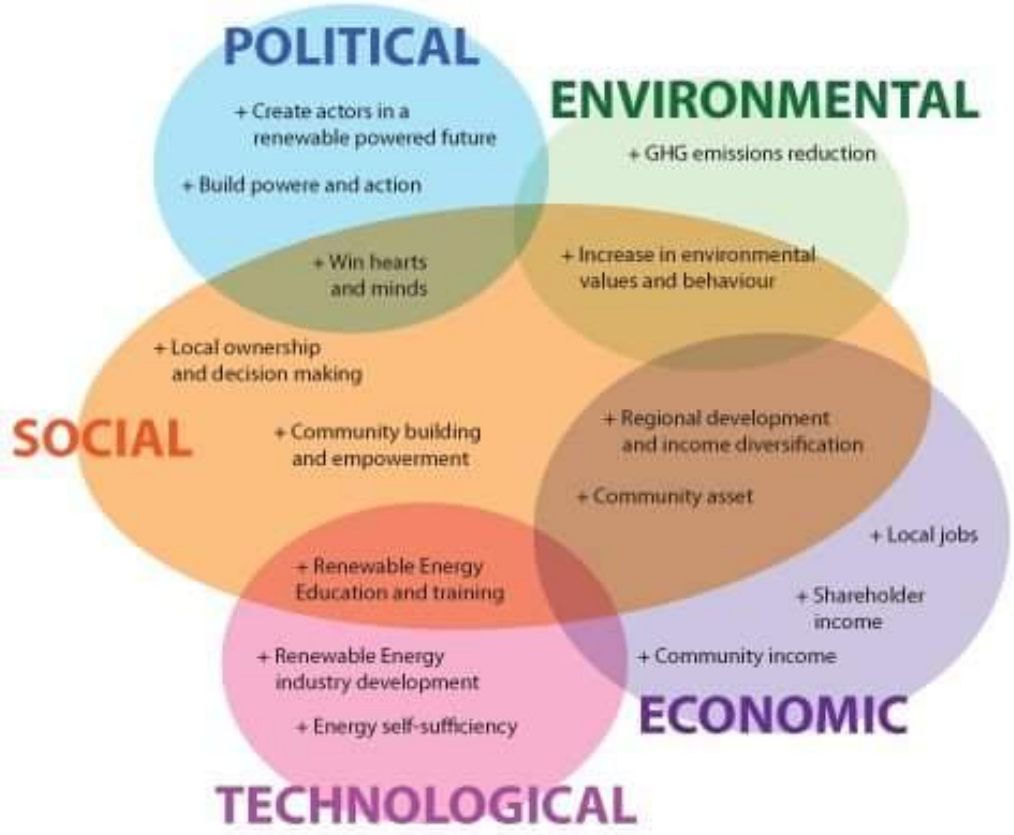
What is Community Energy?



The benefits of community renewable energy projects
From the "Home Energy Handbook", 2012

Community Energy is an approach to renewable energy development that involves the community in initiating, developing, operating, owning and/or benefiting from a renewable energy project.

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How to save on energy bills

- Electrification (getting off gas)
- Energy Efficiency
- Rooftop Solar
- Home Battery Systems
- Electric Vehicles and Chargers
- Rebates available

Electrification (getting off gas) - Cooking with Gas and Asthma

- NO_2 pollution from burning gas linked to developing asthma, and triggering asthma attacks.
- Asthma leading cause of disease burden
- 12.3% childhood asthma from gas cooking
- 30% of asthma risk from gas cooking
- 17.2% of children in Lake Macquarie have asthma

Electrification (getting off gas) - Economics

- All electric homes save $2,771/yr ($4000 with solar)
- All electric apartments save $2,400/yr
- Gas removal $250
- New gas connection $7,500 - $17,500

Energy Efficiency

- Undertake prior to solar and batteries
- Short payback periods (1-4 years)

Energy Efficiency - Payback periods

- Draft sealing (1-3 years)
- Ceiling insulation (3–5 years)
- Reverse-cycle heat-pump heating/cooling (2–4 years)
- Heat-pump hot water (3–5 years)

Energy Efficiency - Typical costs

- Draft sealing ($200-$800)
- Ceiling insulation ($1.5k-$2.5k)
- Reverse-cycle heat-pump heating/cooling ($2k-$3k)
- Heat-pump hot water ($2.5k-$4k)
- Window upgrades ($1.5k-$6k)

Rooftop Solar

- 60% Reduction Power Bills
- Payback period (4-7 years)
- Reduced Carbon Emissions (7 tonnes CO_2e per year)
- Increase home value ($15-$20K)
- Low Maintenance, Last 20-25 years
- Government Incentives
- Shift load to maximise benefit
- Cheaper EV Charging
- Maximise your solar to future proof home

Rooftop Solar - Typical costs

- $7K-9.5K (10 kW)
- $4K-$8K (6.6 kW small system)

Why get a Battery?

- Cutting Power Bills (90% with Solar)
- Utilise more of Solar PV
- Payback period (6-9 years)
- Energy Independence
- Backup power during blackouts
- Environment (greater use of renewable energy)
- Government Incentives

Home Battery - Typical Costs

- 12.8kWh Small $9k-$12K
- 16kWh Medium $11K-$14K
- 20KWh Large $14K-$22K

After Rebate:

- 12.8kWh Small $6k-$9K
- 16kWh Medium $8K-$11K
- 20KWh Large $9K-$12K

Electric Vehicles and Chargers

- EV's 70% cheaper to run (100% with Solar)
- Save $1.5-$2.5K per year
- Protection from volatile petrol prices
- Better performance and driving experience
- Lower noise and air pollution
- Reduced emissions (3 tonnes CO_2e per year), Carbon Payback period (1-2 years)
- Utilise more of Solar PV
- Government Incentives

Electric Vehicles and Chargers - Typical Costs

- Budget EVs $20K-$32K
- Mainstream EVs $40K-$65K
- Mid-range EVs $50K-$90K
- Premium EVs >$90K
- On-road Costs $2K-$4K
- Home Chargers: $1.5K-$3K

Government Incentives - Federal

- Cheaper Home Batteries Program
  - ~30% off home batteries
  - Tiered System $252/kWh up to 14kWh, reduced rate >14kWh
- Small-scale Renewable Energy Scheme (STCs) -
  - Upfront discounts for Rooftop Solar, Reverse-cycle air conditioning, Heat-pump hot water
- EV Fringe Benefits Tax (FBT) exemption

Government Incentives - NSW State

- Home Energy Saver Program
  - Zero-interest loans of up to $15,000 for energy-saving home upgrades, including rooftop solar, home batteries, insulation, heat pumps, reverse-cycle air conditioning, and Level 2 EV chargers.
  - Up to $4K discount for lower-income households

Government Incentives - – Local Government

- Solar Neighbourhoods – Solar and/or Battery Bulk Buy (Newcastle/Maitland/Lake Macquarie Councils)
- Zapcat – Independent Energy Advice (Hunter Councils)

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Further information / help

- Solarquotes
- Solar Choice
- Sunspot
- https://www.solarquotes.com.au/battery-storage/calculator/
- https://www.solarchoice.net.au/learn/calculators/residential-solar-battery-system-size-calculator/
- https://solarcalculator.sunspot.org.au/?i=5bb2e655-4799-413d-b03e-6893bbbf33f0

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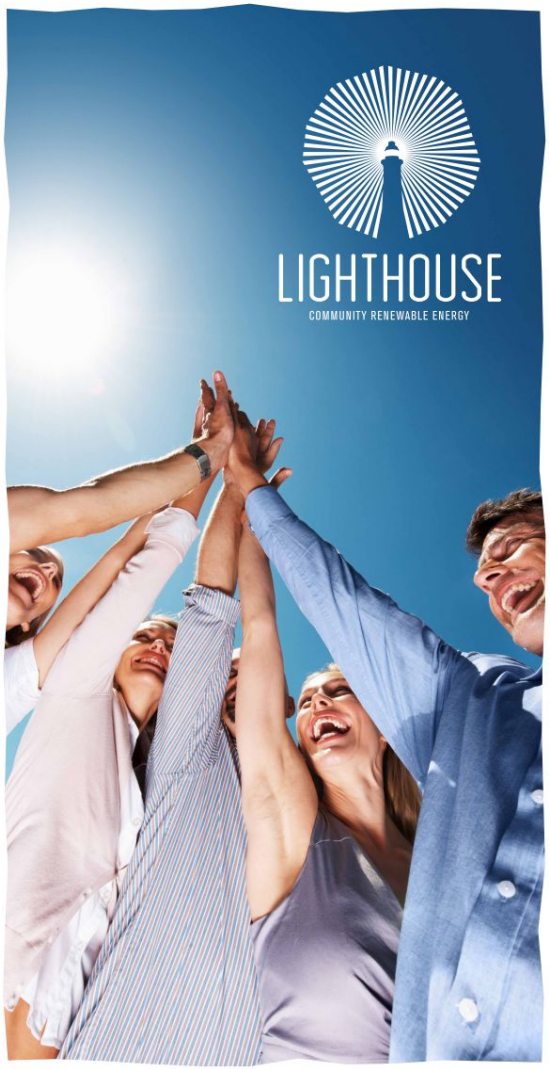
CLEANaS - Get More Involved

CLEANaS projects will require the combined efforts of individuals in the community, business and clean energy partners.



LEADING TO A CLEANER, BRIGHTER FUTURE

A project by CLEANaS

"The most ecological economical kilowatt is the one that isn't consumed" José Vicente Barcia Ecooo (Madrid, Spain)

Questions

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Thank You

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https://www.cleanas.org.au/news/want-to-save-on-electricity-bills

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