A Beyond Zero Future for South East NSW

Climate Action in Snowy Valleys

About Snowy Valleys — Wiradjuri Country

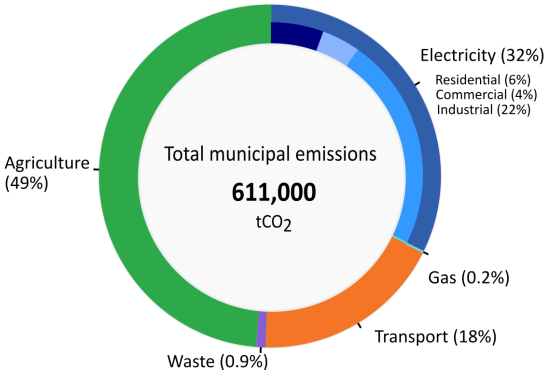
Population—14,479 (Census)

Number of residences: 5,269

Industries—beef cattle grazing, sawmilling, power generation, supermarkets, paper & cardboard manufacture, administration.

Current energy profile (from Snapshot)

- 49% of emissions from agriculture.
- 32% from electricity, primarily industrial
- 18% of emissions from on road transport
- Solar installations (2020) 1,980
- Installations each year—232 (2020)



Tackling Energy Emissions

Snowy Valley electricity emissions are primarily from Industrial users, then residential, then commercial. To reduce these emissions, all three groups benefit from Community energy generation. This provides more resilient networks, local ownership of generation and cost savings. Tumut is the centre of an essential Renewable Energy Zone (N8), and local production of clean energy will be significantly greater than local consumption. (HumeLink +2,040 MW by 2025-6)

Payback period for residential solar is 4 to 6 years, saving about $1000 p.a. — much more with an electric vehicle. The Clean Energy Council publishes consumer guides: use them to help you choose approved local retailers and accredited installers.

Home Energy Retrofits

An average retrofit without roof-top solar costs $11,000:

- cuts bills and emissions by 40%
- pays back within 7 years
- makes you $23,000 better off over 20 years

Adding a 5kW roof-top solar costing $5,000 to this retrofit:

- cuts emissions by 65%
- makes you $27,000 better off over 20 years

The most effective measures are roof-top solar, low-flow showers, reverse cycle heating/cooling, heat pump hot water, ceiling insulation and draught sealing. Retrofitting 5% of homes in the Snowy Valleys each year would see a 50% cut in total residential energy use by 2030.

Transport—Electric Vehicles are Great to Drive

- Running costs up to 85% lower than a conventional car
- Roof-top solar plus EV will typically save you $4000 a year
- See NSW Electric Vehicle Strategy for more incentives
- EVs have been more expensive than their petrol/diesel equivalent but this gap is closing fast
- Fast charging infrastructure is growing

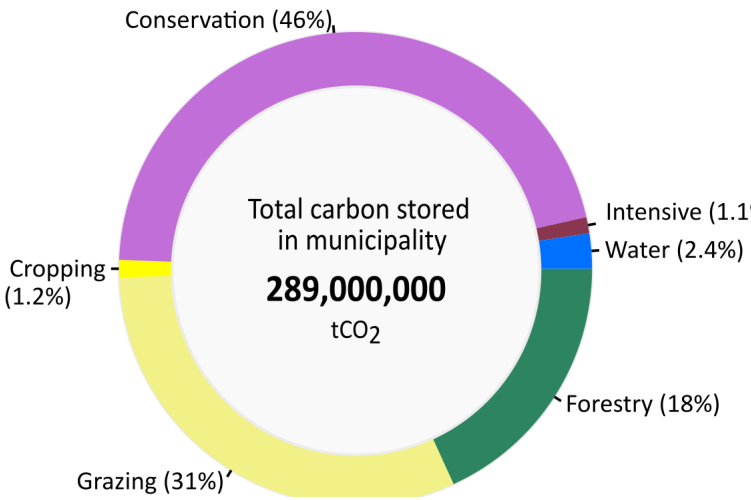
E-bikes are great for distances up to 15km.

What Else is Needed?

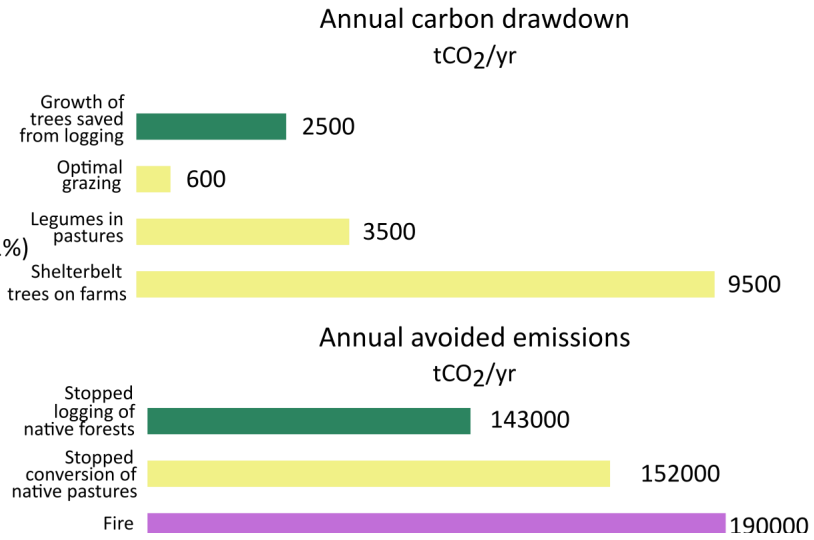
Snowy Valley residents have strongly adopted residential PV installations. Commercial and industrial installations of rooftop PV, and transition to electric vehicles are the biggest local growth opportunity for renewable energy in the Yass Valley.

- Get behind the #RePowerOurCommunities campaign
- Ask federal, state and local government to enable community scale projects - solar farms, batteries and microgrids
- Expect clear targets for emission reductions and technology uptake, and hold governments and companies accountable
- Share information and stories about the benefits of transitioning to a low carbon economy
- Look for business & job opportunities in local clean energy technologies

Snowy Valleys - Current Land Use



With 1% Land Use Change



References

Carbon Wealth in Farms and Trees

Agriculture is key to solving the climate crisis. South East NSW is well placed to implement solutions including draw-down of carbon through changed farming practices and re-taining the vast store of carbon in soils and trees. Snowy Valleys Shire is rich in trees with 54% forest or woodlands.

Livestock

Methane (CH_4) emissions from burping livestock are a major contributor to world greenhouse. Scientists have found that the common Australian red seaweed (*Asparagopsis*) virtually eliminates methane emissions in cattle and sheep, when fed as a dietary additive in low doses. In Snowy Valleys, 49% of all emissions are from agriculture, and 16% of all emissions are from livestock. If 10% of Yass Valley farmers supple-mented their animals' diet with *Asparagopsis* seaweed, 8,400 tonnes of CO_2 would be avoided annually, worth $700,000 on the international carbon market.

Soil

Soil contributes to climate solutions through carbon draw-down into organic matter and avoiding disturbance.

If 10% of Snowy Valleys farmers oversow perennial pastures with legumes and practise optimal grazing methods, this would draw down 41,000 tonnes of CO_2 each year and earn $3.3M per annum on the international carbon market.

Retaining 1% of Snowy Valleys' perennial pasture each year would avoid 152,000 tonnes of CO_2 emissions.

Planting Trees

One hectare of farm land planted with trees draws down 3.7 tonnes of CO_2 p.a. The Snowy Valleys have 217,360 hectares of cleared farm land available for trees.

If 10% of this was planted with trees in shelterbelts, ridgelines and creeklines, (1% p.a. for 10 years), it would draw down 87,400 tonnes of CO_2 into trees and another 7,100 tonnes into soil, earning farmers $7.6 million on the international carbon market and injecting 150 local jobs for 10 years.

Keeping Trees

Keeping healthy trees in the ground is a powerful strategy for carbon storage. Mature trees store far more each year than even rapidly growing saplings, particularly the largest trees. That means leaving trees on farms, in the forest and in towns is an essential part of a carbon wealth strategy.

What are the Barriers?

- Low domestic carbon price of $16/$tCO_2$, well below international price of $80/$tCO_2$
- Lack of strong regulatory frameworks, tax incentives and subsidies for participation in the carbon market
- Lack of just transition funding for forest industry restructure from logging to carbon trading
- High start-up costs for tree planting on farms
- Complexity and cost of carbon marketing
- For methane emissions, limited current availability of *Asparagopsis* supplement

More Reasons to Act Now

- Environmental benefits of moisture retention, soil health, erosion -proofing, animal well-being, biodiversity, sustained productivity and drought resilience
- Diversification of on-farm income, On-farm long-term financial dividends and investment in 'natural capital'
- Business & job opportunities in carbon drawdown, conservation and nature-based tourism