



Andrews Family Zero Emissions and Sustainable Living Strategy

The heart of our zero emissions strategy is to electrify everything and run our house on solar energy. For sustainable living, we follow the Avoid, Reduce, Reuse, Repurpose, Recycle methodology.

Solar

We already have a 6KW system feeding directly into the Grid on an old plan with ACTEW. We have installed an additional 13 KW solar system on our roof. A [Tesla Powerwall](#) battery saves surplus daytime energy for night-time use. We also try to use appliances like the washing machine and dishwasher during the day.

We intentionally purchased a system larger than what we needed because we wanted to be genuinely zero emissions and, in winter we have slab electric heating in parts of the house which uses a lot of energy. In Spring, Summer and Autumn, we produce more than we need. In Winter, we run even.

We researched a number of providers and went with [Solar Hub](#) due to its expertise and local presence. We chose the higher-grade panels because of their longer warranty and higher efficiency.

Electrification

We systematically reviewed and electrified all gadgets and machines. We got rid of gas heating, gas hot water, and our gas BBQ and camping stove. We already had an induction stove. We installed heat pumps for heating and cooling and for our hot water. One day when we can justify it, we'll buy an electric BBQ. For the time being, we are using a George Forman Grill from Big W. For picnics and camping, we have an [EcoFlow solar generator](#) and we use a portable induction hotplate instead of a gas stove. The generator is also handy for portable 240V electricity. It can run any gadget anywhere – ie, a fridge, microwave or kettle, power tools, etc.

We replaced our lawnmower with an [electric Ryobi](#) and all our gardening tools are cordless electric.

For transport, we purchased a [Nissan Leaf](#) which charges from the rooftop solar system. We have two e-bikes which also charge from the rooftop solar. Gregory needs a 4WD for his business. We minimise use of that vehicle and offset its emissions through [Greenfleet](#). It is waitlisted for conversion with [ROVE](#) which electrifies late-model Toyota Hilux vehicles.

To understand more about the rationale of electrification for climate action, its worth researching Australian [Saul Griffith](#) - he explains why replacing domestic appliances with electric versions the next time they need replacing is something we can all do.



Energy efficiency

To improve energy efficiency, we have:

- grown a grape vine on the northern and western ends of our house.
- Planted deciduous trees on the northern side of our house.
- double glazed some windows.
- installed cellular blinds on the windows.
- changed lights to LED.

Other sustainability measures

- We have a grey water recycling system which reutilises shower and washing machine water across the garden.
- We have 15 thousand litres of rainwater storage.
- We grow our own organic vegetables.
- We compost, have two worm farms and a green-waste bin.
- We share a trailer with our neighbours.
- We use the Green Shed and the Farrer/Isaacs Facebook Buy Nothing group.
- We avoid purchases (like Nespresso coffee machines) that create waste.
- We don't use single use plastics. For Glad Wrap we use beeswax wraps or reusable containers with lids.
- We used repurposed David Pocock placards for shade awnings over our kitchen atrium.
- We use recycled materials wherever possible – for example our back fence.
- We encourage our teenagers to turn off appliances, lights and air conditioners when not needed.
- We have a native understory planting in our front yard to encourage wildlife.
- We provide birds and possums with [feed, water and nesting boxes](#).
- We have two frog ponds.
- We have broken terracotta pots in our garden as habitat for lizards.
- We avoid using pesticides.
- We chase roaming cats out of our garden.
- We volunteer with the Isaacs/O'Malley Landcare Group.
- We urban forage for blackberries, apples and plums.