

Shlegeris House (retrofit)

(Retrofit)

This home is an example of perfectly conventional construction: a rectangular box made of concrete blocks with a tile roof. It's a large house with four bedrooms, occupied by two adults and two teenage boys.

We have reduced our net electricity consumption by 100% by installing solar technologies for water heating and electricity generation. We still use electricity from the grid, but we export slightly more than we import. On that basis, we are now net producers of electricity. Note that we have achieved this with a small 2 kilowatt photovoltaic installation.

In dollar terms, we now pay nothing for electricity and receive an annual payment from Ergon of about \$400.



Despite this, our house looks and feels entirely normal, with just one exception. The exception is the pool, which is now a self-sustaining pond full of plants and fish. The pool does not require any pumping or filtering of any kind, and so uses zero electricity. Back when it was a typical dumb blue swimming pool it required at least 10 kilowatt hours per day, whether anyone ever swam in it or not.

Small things make a big difference. Chickens, for instance, process all of our food waste. This greatly reduces the amount of stuff going into our rubbish bin. The chooks themselves add good cheer, eggs, and a constant supply of rich soil.

We've fitted 25 fruit trees into all of the available spaces and eat things produced at home every day.

Household: Joe & Karen Shlegeris together with their two teenage sons

Address: 4 Edinburgh Court, Yarrowonga, Townsville QLD 4810

Climate Zone: Townsville is located in the Dry Tropics – there are two seasons: a hot and humid (November to April) wet season, and a warm to hot dry season with low humidity for the other half of the year.

Construction type: Existing home built around 1970, acquired by present owners in 1998. External walls are rendered concrete block, no special features. Internal walls include some concrete block, some wood frame & gyprock, no special features. Window treatments: few window coverings; most naturally shaded by overhangs and eaves. The roof is concrete tile roof, 17.5 degree slope, north side oriented 20 degrees east of due north. Flooring is concrete slab on both levels.



Sustainable Elements featured in this home

Solar or wind generation

2,000 watt grid-connected photovoltaic system installed January 2008.

Hot water heating

Evacuated tube solar system--has provided 100% of our hot water requirements since January 2008. A backup heating element is connected, but has never been used.



Heating and Cooling

No heating. Ordinary air conditioning used sparingly 3-4 months/year.

Energy Efficiency

We've done everything possible to reduce vampire consumption—the needless, constant waste of electricity by appliances which continue to draw power even when they're doing nothing useful. Mostly we've done this by making it easy to turn things all the way OFF, by providing accessible power points to shut off the supply to the TV and related devices, the computer and peripherals, and some of our appliances, such as the microwave oven. We avoid all devices which have a remote control facility, as these all draw power 100% of the time.

We have eliminated all incandescent light bulbs (bar one 20 watt lamp, rarely and briefly used) and replaced them with compact fluoros or LEDs as appropriate.

Pool

The unused swimming pool has been transformed into a self-sustaining pond full of plants and fish. The pool does not require any pumping or filtering of any kind, and so uses zero electricity. Back when it was a typical swimming pool it required at least 10 kilowatt hours per day, whether anyone ever swam in it or not.



Waste Management

Chickens! They consume ALL kitchen scraps--except chicken and egg shells, of course - greatly reducing the amount of rubbish we send to the tip.

Food Production

We've fitted 25 fruit trees into all of the available spaces and eat things produced at home every day. We get lots of mangoes in season, pawpaws all year long, and many kinds of citrus over much of the year, including lemons, limes, blood oranges, and grapefruit. We also get figs, lychees, guavas, macadamias, cashews, and avocados, along with many kinds of herbs which grow in the pots along the driveway.

Also of course, eggs from our currently-diminished flock of just 3 chickens.

