

Toowoomba's St James Parish Centre goes solar

The St James Anglican Parish in Toowoomba, Queensland houses a Parish Office (open between the hours of 9am - 3pm Monday to Friday) and a community centre known as the Parish Centre.

The centre is used regularly to host events with rooms booked every week, mostly during the day, with some meetings and functions held in the evenings.

The centre boasts a large kitchen to accommodate a significant amount of catering associated with these events and features a commercial electric oven and a commercial dishwasher.

The centre's building has been well designed and this minimises the need for heating and cooling, however, the Parish Office identified the need to reduce energy bills.

Given the building had a large north-facing roof area, the decision was made to install and generate their own solar power.

The Parish Office also requested an energy audit to determine existing energy usage and used the results to reduce power use prior to the installation of the solar power system.

In May 2008, a 2.15 kilowatt solar photovoltaic (PV) system with a 3kWh inverter was installed on the roof of the Parish Centre.

The system is connected to the electricity grid and comprises 10 solar panels on the north-facing side of the roof.

Outcome

With the cost of electricity rising, the St James Parish Centre management are very pleased with the savings achieved and hope to expand the solar PV system in the near future.



Above: The solar panels as installed on the north-facing roof.

Technical data

- 10 solar panels cover a roof area of 15.5 m².
- Cost of installation (after government rebates) - \$10,259.70.
- Payback time is calculated at 13.5 years.
- System generates on average 9.4 kWh's per day.
- System averages 4.39 effective sunlight hours per day.
- The solar PV system generates about 25 percent of the power used in the centre.
- The cost saving per year is about \$1200.

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