



Queensland Communities in transition

Columba Catholic College, Charters Towers

This case study is part of a series of case studies that have been developed as part of the Queensland Communities in Transition Program. For further information, visit www.cleangrowthchoices.org¹

Columba Catholic College is a co-ed combined primary/high school with around 460 students including about 110 boarders and 120 staff. The Mt Carmel Campus (boy's residence) is situated on an x acre site with new and refurbished buildings and sporting facilities. School Principle, Candi Dempster and Facilities Manager, Warren Phillips have a long-term plan to reduce the environmental footprint of the college and are getting some great wins on the board.

HIGHLIGHTS

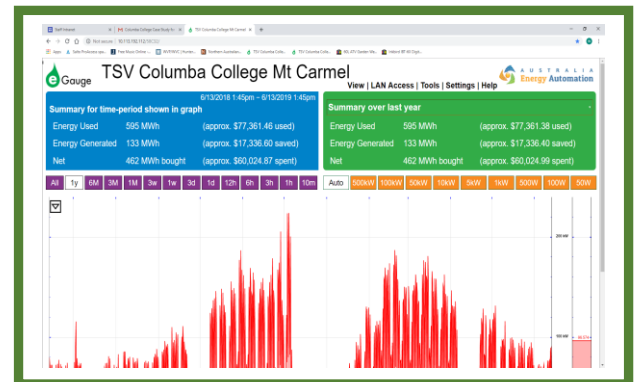
- 17% reduction in electricity use from 2017 to 2018
- Installation of a 100 kW solar PV system saving around \$17,500 per year
- Building Management System with real time energy monitoring

*'The school is making some great headway into reducing energy use which already has led to substantial savings. I'm proud to be part of a school that is managing to maintain its heritage and take advantage of new technologies that improve efficiency –
Facility Manager, Warren Phillips*

Columba College have significantly reduced their environmental footprint through a host of initiatives that have made savings in energy, water, fertilisers and also reduced waste.

Renewable energy supply and Building Management System

- A 100 kW solar PV system was been installed at the Mt Carmel campus in 2017. This has resulted in a 17% reduction in electricity use for Mt Carmel between 2017 and 2018 and savings of around \$17,500 per year.
- The college boasts a Building Management System which provides real time energy monitoring for 5 Mt Carmel buildings. The BMS, was provided by local suppliers, NQ Control Services.



Energy efficient lighting

- Movement sensors have been installed in the newer school buildings as well as about 80% of all classrooms. This ensures lights are not left on unnecessarily.
- Energy efficient LED lighting has been installed in the new 'Rice Block' and the school is gradually upgrading lights in the remaining buildings. So far, around 40% of lights have been upgraded.

Air Conditioning

- The school buildings are fitted out with over 100 split system air conditioning units. Building temperatures are monitored in real time via the Building Management System. An on-line dashboard shows temperatures with set points locked at optimum settings based on time of year.
- The air conditioning also works via a timer so that they stay on for around 2 hours after being manually switched on by staff. This is enough to cover 2 lessons prior to breaks.
- The systems have an 'economy' setting so that outside air is used directly for heating or cooling depending on temperature settings. This maximises the efficiency of the air conditioning system.

