

The Environmental Protection Agency is Queensland's lead agency to promote energy efficiency, renewable power, and other initiatives that reduce greenhouse gas emissions throughout the state.



Renewable energy

CLEANER ENERGY

Caboolture Region Environmental Education Centre

Fact sheet
Caboolture Region
Environmental
Education Centre



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Introduction

Australia's first photovoltaic (PV) system to be funded under the Federal Government's Photovoltaic Rebate Program for Community Use Buildings was installed in July 2000.

The grid-interactive PV system was mounted on the roof of the Caboolture Region Environmental Education Centre at Burpengary, north of Brisbane, with assistance from the Queensland Government and partners Stanwell Corporation Limited, Energex and Choice Electric Company.

The \$52,000 system was designed and supplied by Choice Electric and is owned by Stanwell Corporation. It will generate 7.3MWh of renewable energy per annum, which will be sold to Energex Retail for use in the earth's choice renewable energy program.

The project attracted a \$29,776 rebate from the Federal Government and Stanwell provided the remaining funds.

History (CREEC)

The Caboolture Region Environmental Education Centre is located on 18ha of riverine rainforest and disturbed bushland on the banks of Burpengary Creek, Burpengary.

The centre was established in 1999 by the Caboolture Shire Council to foster and support environmental education and environmental recreation throughout the region.

A management board comprising representatives of Council, Greening Australia, community and environmental interest groups runs the centre.

The Friends of CREEC Association provides advice and support to the board. The association comprises the Wildlife Preservation Society of Caboolture, the Society for Growing Australian plants, the Caboolture Region Integrated Catchment Management Group, the Pumicestone

Region Catchment Coordination Association, the Friends of Lagoon Creek, Friends of Burpengary Creek and more than 50 individual members.

Friends of CREEC has run workshops on worm farming, plant propagation, building frog ponds, identifying frogs, water quality issues in Pumicestone Passage, waste management and identification of local fauna.

The schools initiative includes site visits, revegetation and rehabilitation programs and the urban tree program developed by the Queensland Museum.



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Why install a PV system at a Community Centre?

Friends of CREEC decided to install a grid-interactive photovoltaic system to reduce the centre's reliance on fossil fuels and to provide a hands-on teaching tool in the field of sustainable energy.

CREEC is managed to ensure that all aspects of the centre give the right environmental message from not using plastic throw-away cups to recycling, energy use and the design of the buildings.

The main building provides a working demonstration of how effective insulation, solar hot water systems, effective shading, alignment of buildings and correct choice of materials can reduce energy needs.

The core principles of living in harmony with the environment and not over-using scarce resources are integrated into all of the functions and activities at the centre.

The Photovoltaic system

CREEC's photovoltaic system was designed by a team of specialists from Choice Electric Company.

The 5kW system comprises 60 solar panels (82 watts peak) and three 1.6kW power inverters connected to Energex's three-phase grid.

The system can produce up to 7.3MWh per annum. To capture maximum sunlight, the panels face north and sit at 28°. Because the pitch of the roof was at the right angle, the panels are mounted flush to the roof.

While the system will substantially reduce energy bills at CREEC, the primary purpose of the installation was to provide an educational focus rather than a commercial bonanza. The computer display monitors electricity generated by the system, providing a hands-on learning tool for school and community groups.

Advice from CREEC

Brian Rigden recommended that community groups considering installing a PV system under the Federal Government's rebate program should make the Environmental Protection Agency their first point of call.

"You need to be aware who the various players are and what the different options are. We learned as we went along, but the Queensland Government gave us a list of those contacts and were very helpful," he said.

The Photovoltaic rebate program

The Federal Government introduced the photovoltaic rebate program (PVRP) in January 2000 to encourage the long-term use of photovoltaic technology to generate solar power and to increase the use of renewable energy in Australia.

The PVRP provides rebates for systems installed on community buildings from 1 July 2000. The rebate is paid at a rate of \$5.00 per peak watt. The minimum system size eligible under the program is 450 watt peak output.

To qualify for the rebate, community groups must be government-owned or incorporated not-for-profit organisations and must be prepared to undertake ongoing solar electricity education, extension, promotion, interpretation and demonstration activities that support the aims of the PVRP.

Green Power programs

An addition or alternative to installing a photovoltaic system may be to join one of the green power programs offered by electricity retailers. Under these programs, customers pay a premium on their electricity, which allows electricity retailers to buy renewable energy on their behalf. These programs help customers reduce their reliance on fossil fuels and decrease Queensland's greenhouse gas emissions.

Contact Energex on 13 12 53 for information on earth'schoice or Ergon Energy on 1300 650 567 for information on Ergon Clean Energy.

Further Information

For further information on the Caboolture Region Environmental Education Centre's photovoltaic system, phone CREEC on (07) 3888 8751 or facsimile (07) 3888 3211.

For further information on photovoltaic technologies, the Federal Government's Community Use Photovoltaic Rebate Program or other renewable energy activities, contact the Environmental Protection Agency's Sustainable Industries Division (details below).



For more information

call 1300 369 388
visit www.epa.qld.gov.au/sustainable_industries
email sustainable.industries@epa.qld.gov.au

