



CASE STUDY

Rural City of Wangaratta – Indoor Sports & Aquatic Centre cogenerator

Rural City of Wangaratta are reducing energy costs with the installation of the Capstone cogenerator.

Organisation

Rural City of Wangaratta is situated in North-East Victoria about 235 kilometres north-east of Melbourne, with a population of around 27,000.

Building snapshot

The Wangaratta Indoor Sports & Aquatic Centre (WISAC) has a floor area of 5680m² and features a 25 meter temperature controlled pool, a therapeutic program pool and a toddlers' pool with total swimming pool volume of 971m³. The facility also includes a gym, three full sized stadium courts, six squash courts, meeting areas and reception. There are disabled access facilities as well as a fully accredited childcare facility and a cafe. The WISAC is managed by YMCA Victoria in partnership with Rural City of Wangaratta. The WISAC building is situated at the HP Barr reserve and is split level including upstairs viewing seating.



“Our cogenerator is helping us reduce greenhouse gas emissions. Saving 4 tonnes of greenhouse gas is equivalent to taking 1 car off the road for a year.”

Cogeneration

The Capstone C65 micro turbine cogeneration system saves power by generating both electricity and heat from the one gas powered generator. The heat replaces the electricity previously used to heat pool water. In addition, gas produces less greenhouse gases than the grid electricity being replaced. Cogeneration is well suited to an aquatic centre as there is a fairly constant electrical load and heat load all year round. The WISAC is Council's highest used facility demanding power every day of the year. The heat produced is captured to heat the change room showers as well as the pool hall.

The cogenerator has been in operation since October 2014. The project was designed by BRT Consulting, with the Capstone micro turbine supplied by Optimal Group. Local electrical contractor Floyd Industries installed and commissioned in six weeks the Capstone unit. The excellent work by Floyd Industries was recognised with a Victorian Award for Environment and Energy Efficiency from the National Electrical and Communications Association. The project is part of an integrated building management system installed by Cowan Controls and Innotech. This allows the operation of the generator to be monitored in real time by Council's asset manager.

This project received funding from the Australian Government. The Federal Government funding was instrumental to the success of this project, and will make a key contribution to Council achieving energy reduction goals. A large wall infographic and electronic display at the WISAC explains the project. A community education program was undertaken and included the nearby Eco Living Community Centre which demonstrates further sustainability options suitable for both homes and businesses.

This cogenerator case study is proudly supported by the Hume Business Champions network. The network is co-delivered by Regional Development Victoria, Goulburn Ovens TAFE and nine local councils with support from Sustainability Victoria. The network promotes energy and material efficiency among businesses in the Hume region by sharing and demonstrating practical local examples to reduce costs and energy use.



“By investing in a combined heat and power system for the Wangaratta Indoor Sports & Aquatic Centre, the Rural city of Wangaratta has taken a significant step in reducing energy costs, increasing efficiency and reducing emissions to create a more sustainable Centre.”

Kane Ravenscroft
Optimal Energy



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