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Australia's first zero emissions aquatic centre powered by renewable energy

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has announced up to \$1.53 million in funding to Brimbank City Council to help build an integrated energy system for Australia's first zero emissions indoor leisure and aquatic centre in Melbourne's west.

The project will deploy an integrated energy solution that will be installed within a newly constructed, highly efficient building. The key renewable energy and enabling technologies include a four-pipe heat pump system that can provide simultaneous heating and cooling, including water-to-water heat recovery that will provide a whole-of-facility heating for all spaces including pools and showers.

The aquatic centre is part of the new \$60 million-plus Brimbank Aquatic and Wellness Centre, which Brimbank is building in Keilor Downs to replace the former St Albans Leisure Centre.

Shifting away from traditional gas boilers used at other aquatic centres, the centre will also install a 88 kilolitre above ground thermal energy storage system, 500 kW of solar PV, a heat recovery system and direct digital control systems.

Any excess electricity the facility requires will be provided by a 100 per cent renewable energy power purchase agreement.

The Brimbank Aquatic and Wellness Centre will be designed to achieve a '6 Star Green Star' rating. The efficient building shell and high efficiency energy system is expected to deliver an energy reduction of more than 80 per cent compared to other traditional aquatic centres.

The \$8.1 million integrated energy system will demonstrate that a model combining heat pumps with renewable energy solutions will be both technically and commercially feasible to help increase this implementation by other local governments and businesses around Australia.

ARENA CEO Darren Miller said the project will help to build a case for water-source heat pumps to be implemented in other emissions reduction initiatives and directly benefit local communities.

"Leisure and aquatic centres have traditionally been some of the most energy intensive buildings for local councils to manage.

Brimbank City Council's project offers us the opportunity to demonstrate a pathway to using commercially viable renewable energy and energy efficiency technologies to achieve a carbon neutral facility that other localities throughout Australia can learn from and adopt," he said.

Brimbank Mayor Cr Ranka Rasic said: "We're aiming for this project to demonstrate the first all-electric aquatic centre in Australia.

"We are thrilled that this state-of-the-art centre will showcase best practice in sustainable design – while delivering first class aquatic facilities and preventative health, education and social services, all under the one roof."