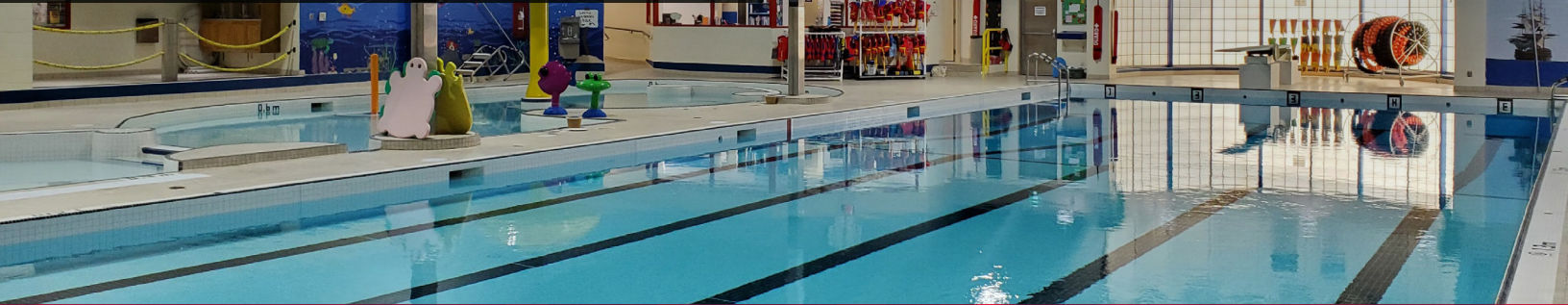




TABER AQUAFUN CENTRE ALBERTA, CANADA



“Yanmar was proposed by our partner on the project, ATCO Infrastructure for various reasons such as unit sizing, proven industry standard technology, warranty and reliability.”



PROJECT OVERVIEW

The Taber Aquafun Centre is one of the finest and most varied aquatic leisure facilities in Southern Alberta with a water slide, hot tub, pool, sauna, steam room and water slide. A 70kW micro-Combined Heat & Power

(CHP) solution was installed by LSM Energy Solutions. The total installation only took two short weeks and was easily done with little interference during the facilities pool maintenance shutdown to best avoid interruption of public access, especially during Covid protocol's.

REASON FOR CHOOSING YANMAR

Yanmar CHP was chosen to lower overhead cost, reduce utilities and energy use. The facility was facing high costs for running pool filtration, cleaning equipment and lighting. Two Yanmar 35kW micro-Combined Heat & Power units satisfy the electrical load for the building and the waste heat recovered from the CHP systems is used to satisfy the hot water heating for the swimming pool, hot tub, as well as the hot water for showering and more. In addition, to the necessary hot water for

the buildings space heating loads throughout the entire facilities.

The 2x 35 kW Yanmar CHP systems, have a thermal capability of 120 kW in addition, to 70 kW of electrical power generation significantly offsetting both the facilities heating loads and high-power demand from the grid. The CHP systems also offset the electrical demand enough to allow for the extra addition of 2x - 50kW Electric Vehicle charging stations.

ABOUT YANMAR AMERICA ENERGY SYSTEMS

YANMAR America Energy Systems is the North, Central and South American headquarters for the company's Variable Refrigerant Flow and Combined Heat and Power systems. YANMAR's Energy Systems division began operation in 1984, and today has installed

more than 375,000 Combined Heat and Power (CHP or cogeneration) and Variable Refrigerant Flow (VRF) Natural Gas Heat Pump systems worldwide. Our team and products are focused on sustainability, reliability, and efficiency.





TABER AQUAFUN CENTRE ALBERTA, CANADA

QUICK FACTS

APPLICATION: Aquatic Center
LOCATION: Taber, Alberta
COMMISSIONING DATE: September 2021
PRODUCT INSTALLED: 2 CP35D2
 NATURAL GAS

OVERVIEW

Reduced energy cost
 Lower GHG Emissions
 High Efficiency & Environmentally Friendly.

RESULTS

The existing two-million BTU boiler now only runs intermittently, when the temperature is below -20C - since the CHP systems were installed. The constant output of heat from the CHP allows increased heating efficiency. By bringing the power generation to the building, the CHP uses the natural gas that was already being used by the boiler to generate the electricity first and then the thermal energy for heating. This corresponds to a 30% reduction in GHG emissions or 175 tons at the current Alberta electrical grid emissions intensity. In areas where renewable gas is available, the reduction is 100% GHG emissions equally - from Hydro while also reducing the emissions from the boiler by 80-90%. The CHP's generate approximately 600,000 kw hrs per year saving the facility \$65,000/yr in utility costs. The CHP units are grid tied, allowing for net-metering capabilities but, also include the ability to run off-grid, adding further resiliency and emergency readiness to the community, as an area of refuge during natural disasters or other events.

