YMCA

Customer:
Breeden YMCA

Location:
Angola, Indiana

Customer Description:
Recreational community center providing family centered activities, including swimming and exercise classes/equipment. The facility functions as a Red Cross disaster center.

CHP Application:
Equipment uses natural gas to power the microturbines that generate electricity. The byproduct heat from generation is used for space heating and domestic water heating for the facility and heats the pool water. The system achieves high efficiency by controlling the electrical output to match the thermal demand of the building. The CHP system also provides back up power for critical loads in the event of any electric grid power outage enabling the YMCA to stay open for the public as well as honor its responsibilities as a Red Cross disaster center.

Major Equipment:
(2) Capstone® C60 Microturbines (120kW)
(1) Unifin Heat Exchanger (750,000 btu/hr @ 190°F Hot Water
(2) Copeland Gas Boosters (77 psi)
(1) Emergency Power Control Package
(1) Proprietary Thermal Priority Control Package

Benefits:
Breeden YMCA reduces both energy consumption and total energy costs. This location now serves as a disaster relief center. The CHP system reduces atmospheric pollutants (NOx) per kWh produced by approximately 3,000 lbs/yr., compared to local coal-fired power plants. There is a reduction in energy price volatility due to improved energy management and contracted pricing. This application promotes innovation and cross community educational opportunities. NET has partnered with Tri-State University to make this facility a working laboratory for its analog control system and energy conversion undergraduate courses.

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