

DELIVERING POWER WHERE FACILITIES NEED IT MOST

With Combined Heat & Power (CHP) or onsite power generation, you control your electricity rates. Learn more about how these businesses use CHP in the recovery of waste heat to produce thermal energy for cooling and heating.



COMBINED HEAT & POWER

TOLEDO MUSEUM OF ART

Project: Install a combined heat and power system featuring four C65 Capstone micro turbines with integral hot water heat recovery modules and remote natural gas compressors. The units interface directly with the existing hot water system and electrical distribution to provide supplemental heat and on-site power.

The existing four Capstone C65 micro turbines have been saving the museum energy and dollars since 2003, and building on this success story, two new Capstone C65s have been installed in the Glass Pavilion located across the street from the museum's main building. These units produce 130 kW of electric power along with the exhaust heat recovery modules that produce a total of 800,000 BTU per hour of hot water. Connected to the hot water stream is a 20-ton absorption chiller for chilled water.

Results: Under low load conditions, the turbines generate enough heat and power to meet the needs of the entire facility. Two turbines are powering the working glass shop in the Pavilion. Hot air from the glass-blowing furnace gets recirculated through the building during the winter which means increased comfort for Museum visitors and employees in this unique all-glass building.

In total the six micro-turbines generate 15 percent of the museum's electrical power and have a relatively short return on investment—four years. Annual net utility savings are more than \$87,000.



HUNTINGTON CENTER ENTERTAINMENT FACILITY

Project: To supplement the facility's heating, cooling and electricity needs, GEM Energy installed a combined heat and power system made up of four C65 Capstone micro turbines with integral hot water heat recovery modules, natural gas compressors, and a single effect absorption chiller.

Results: The turbine array runs year round to produce electricity. In the winter, the exhaust energy is recovered to provide heating for the facility; and in the summer, this energy is used to power the absorption chiller. Under low load conditions, the system generates enough heat and power to meet the needs of the entire facility.

