Capstone®
the proven microturbine solution

# SeaGate Centre: Toledo

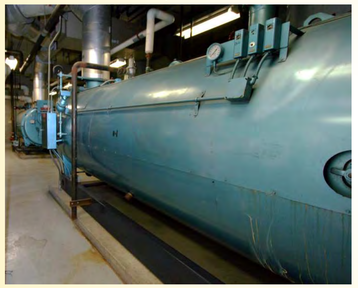
The renowned SeaGate Centre in the heart of Toledo, Ohio, is host to a wide variety of concerts, sporting events, conventions and, most recently, a 240-kW array of four Capstone C60-ICHPs commissioned late last year.

When "the joint is jumpin'" the SeaGate Centre draws heavily on the grid. On off days, the cavernous facility uses much less. The SeaGate Centre microturbines are anticipated to cut energy costs and consumption by up to $125,000 per year.

The four factory-integrated heat exchangers atop each microturbine serve as a variable efficiency boiler with a capacity of up to 1.5 million Btu. Since start-up in November 2005, the SeaGate Centre has been able to heat the facility most days and nights using only the microturbine heat exchangers. That has allowed the center to completely turn off one of its two 8.6 million Btu boilers and run the other one at minimum firing rate.

Across town, two other sites use C60-ICHP microturbine arrays. The University of Toledo's Center for Visual Arts has two C60-ICHPs due to commission next month. And the adjacent Toledo Museum of Art has a four-unit array that has been running reliably for more than a year. A presentation on the museum array is scheduled to take place at the DOE's Microturbine Applications Workshop at 10:00 a.m. Wednesday, January 18, 2006. The museum's Plant Manager, Paul Bernard, is unable to attend; however, Dave Blair of BHP Energy Solutions, Ltd. will be making the presentation.

The SeaGate Centre's microturbines are scheduled for operation in coordination with events using a Capstone PowerServer. Between events, the microturbines are providing enough power and heat to maintain minimum building occupancy. The array's PowerServer has the capability to intelligently control the array and maximize fuel-efficiency.

Comparing US EPA emissions test data on the Capstone C60 engine to that of US EPA test data on regional utility power plants, 90% of which are coal-fired, and low-NOx boilers, the microturbines generate each unit of energy with 97% lower NOx, half the greenhouse gas $CO_2$ emissions and an amazing 99.8% cut in acid-rain-producing $SO_2$.

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