



### **Wayne State University Chooses Energy Efficient Boiler Solution**

With the sharp rise in campus steam costs from the district steam supplier, the Wayne State University (WSU) Board of Governors, through its Facilities Planning and Management Department, embarked on a study to review options to reduce its operating costs.

WSU engaged the professional services of DiClemente-Siegel Design Architects & Engineers, Southfield, to provide a feasibility study comparing the current and future costs of campus steam, as compared to the owning and operating costs for its own boiler equipment. The study concluded that it would be cost effective to proceed with implementation of boiler

plants (either individual or cluster plants) to self-generate steam or hot water for all university buildings. Cash flow analysis from the study indicated cost avoidance of \$135 million over 30 years, with a net present value of \$42 million.

With recommendations from DiClemente-Siegel Design and the assistance of an astute team of project management and operations professionals from WSU, the decision was made to proceed with the \$43 million project into construction.

The project went out for public bid in March 2006 to equipment suppliers and installing contractors who secured contract awards to proceed. The project completion occurred during the 2007-08 heating season with cooperation from the current district steam provider, with all systems in operation by January 7, 2008. Systems included equipment as furnished by Cleaver-Brooks Company of Milwaukee, WI, along with their local representative D. J. Conley Associates Inc., Troy. Installation was provided by DeMaria Building Company, Detroit; John E Green Company, Highland Park; Pipe Systems, Inc., Troy; and W. J. O'Neil, Inc., Livonia. All parties worked together

to collectively address common issues and ensure steam and hot water was ready when needed.

The project consisted of 30 individual plants receiving 69 steam and/or hot water boilers having environmentally friendly 30 ppm Low NOx (nitrogen oxides) burners vs. the industry norm of 100+ NOx burners, along with all necessary auxiliary boiler room equipment.

The ability to comply with stringent specification requirements while providing quality, long lasting equipment with low operating costs and local support service and parts availability resulted in the equipment choice by Wayne State University.