



## GIVING UNLIMITED ENERGY TO A VICTORIAN BOTANICAL GARDEN

### *Magnificent greenhouse built in 1897 retrofitted with TRIAD Boilers*

The history of the Buffalo and Erie County Botanical Gardens, a Victorian Conservatory in South Park, Buffalo, NY, spans over 100 years. When built, this historic landmark was the third largest public greenhouse in the United States and the ninth largest in the world.



It was the product of three visionaries: landscaping architect Fredrick Olmsted, architect firm Lord & Burnham, and botanist John F. Cowell. Today, this tri-domed facade - holding fifteen different rooms - still sparkles like a diamond on a

green velvet cushion and draws an estimated 150,000 visitors annually. Today there are less than a dozen Victorian conservatories remaining in America and this is one of only two with the tri-dome design.

What was not originally envisioned were the fuel costs associated with heating this "Crystal Palace of Plants". When natural gas and oil costs rose to record levels in 2005, Erie County officials turned to Siemens Building Technologies to perform an energy audit and make recommendations to improve efficiencies.

Working with Mark Dorsheimer, design engineer with Buffalo Engineering Co., mechanical contractor John W. Danforth, Inc., and Unlimited Energy, the representative for TRIAD Boiler Systems, Siemens proposed replacing three large 1950's firetube boilers with thirteen TRIAD Series 900 Hot Water Boilers with Power Flame CR1 gas/oil power burners.



Controlled by new efficient infrastructure provided by Siemens Building Technologies, hot water is sent to each zone from its individual boiler on demand. The boilers are cross-circuited to provide redundancy, and any boiler can be taken offline for maintenance without affecting the responsiveness of the system.

Most importantly for the county, savings began on day one. TRIAD's modular vertical configuration was the perfect fit for the old mechanical room that had precious little space for equipment. The boilers were installed easily without the need for expensive rigging or demolition. The double-digit fuel percentage savings that began at start-up can be relied upon to last well into this building's long future.



Unlimited Energy's Service Manager Dave Cammarano commented, *"These boiler went in easy, started up quickly, and worked like a charm."*

The original architect, Lord & Burnham, would be proud to see their masterpiece still providing efficient comfort and exquisite beauty to its visitors during the coldest of Buffalo winters.

Please go to [www.triadboiler.com](http://www.triadboiler.com) for other successful applications as well as detailed information on TRIAD and its product line!

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