



The Windsor Suites Gains Control Over Energy Usage

The Windsor Suites, a long-standing Center City Philadelphia hotel, converted from district steam to natural gas to satisfy their energy demand for both heat and hot water. This 400,000 square foot multi-use hotel has been centrally located on the renowned Benjamin Franklin Parkway since 1963. The Windsor is home to 317 total units that are made up of hotel, extended stay and residential apartments. There are also two restaurants connected to the facility that operate separately.

Over time the hotel saw continued increases in their annual energy spending. They decided to conduct a feasibility study to analyze their overall energy usage and determine the cost effectiveness of integrating an on-site boiler plant to eliminate their need for district steam. The answer was quite clear as the projected savings would equal more than \$180,000 annually and equipment could be housed in an unutilized space on the 15th floor.

Investing in energy to generate savings was seen as a tremendous opportunity. Director of Engineering & Risk Management Len Pinto knew it was time for a change from district steam. “The built in fuel and non-fuel costs that are passed to the customer left us with little control or even the ability to accurately forecast month to month,” said Pinto.

The Windsor was familiar with the complications for buildings running on district steam. The old system controlled the steam flow by pneumatics, and was plagued by 25 floors of air leaks. To compound matters, it was designed to operate as an open loop system. So the condensate was mixed with fresh cold water to reduce the temperature below 140 degrees and then discarded back into the city sewer system. By replacing district steam with natural gas on-site boilers with a closed loop water system, The Windsor now saves about a million gallons of water each year.

“From start to finish, PGW followed through on everything promised and has been an amazing partner.”

– Len Pinto
Director of Engineering
& Risk Management,
The Windsor Suites

After reviewing a feasibility study that demonstrated the overall savings from switching to natural gas, The Windsor decided to take energy usage into their own hands. “The cost savings were a no brainer,” said Len Pinto. Switching to natural gas offered the facility more control over the hotel with HVAC and hot water and overall guest comfort, and with natural gas they can manage their system for the future. Pinto worked closely with PGW’s Marketing team throughout the conversion process. An important factor in the overall conversion process was to ensure that the installation was seamless for the residents and guests of The Windsor Suites. Building representatives confirmed upon completion of the conversion that there was not one complaint from any guest or employee.

In place of district steam, The Windsor installed three 2,500 MBH boilers of which two are dual fuel and one is high efficiency natural gas. In addition, two domestic hot water heat exchangers and a new chiller were installed on the roof to increase the overall energy savings. The chiller features variable speed compressors, helping to save additional energy through modulation.

Since completing the conversion in 2014, The Windsor Suites has experienced an immediate reduction in energy costs with savings of \$35,000 in the first month alone.

“From start to finish, PGW followed through on everything promised and has been an amazing partner,” said Pinto. “PGW takes pride in providing outstanding customer service and building relationships with our customers.”



Two dual fuel boilers and one high efficiency natural gas boilers at The Windsor Suites.



Piping and heat exchangers that generate domestic hot water.