



Service and Product Provider Partner

H₂O Applied Technologies, LLC

50 Federal Street, Boston, MA 02110
Business: Energy Management
Services/Consulting, Energy Services Company (ESCO)
Alfred Scaramelli, President
Phone: 617-428-8634 / Fax: 617-422-0442
Email: AScaramelli@H2OAppliedTech.com

Customer

Nazareth Hospital

2601 Holme Avenue, Philadelphia, PA 19152
Business: Hospital
Greg Doran, Director of Plant Operations
Phone: 215-335-6183
Email: GDoran@Mercyhealth.org

H₂O Applied Technologies and Nazareth Hospital achieve the first ENERGY STAR Building Label for a non-profit, private hospital in Pennsylvania.

Project Scope

H₂O Applied Technologies (H₂O) and Nazareth Hospital, a member of Catholic Health East (CHE), have partnered on a Utility Expense Reduction Program (UERP). The UERP reduces energy and other utility costs by upgrading existing facility equipment using H₂O's unique off-balance sheet funding program that does not require use of host facility capital funds or debt capacity. The Hospital is an award winning community hospital providing high quality care in the northern Philadelphia area.

Project Summary

After a detailed energy and water engineering survey, H₂O replaced inefficient equipment at the Hospital with newer technology, including new chillers, HVAC variable frequency drives (VFDs) and controls, steam traps, energy efficient lighting, and water conservation equipment. Project highlights include:

- **Energy Savings**
Energy savings of 124.9 kBtu/ft² per year and water savings of 1.8 million gallons per year resulted in total cost savings of over \$950,000 per year.
- **Investment**
Under H₂O's off-balance sheet Utility Expense Reduction Program there was no out-of-pocket cost, capital cost or debt repayment obligation to the Hospital. H₂O used its own funds to design, procure and install the entire scope of work.
- **Financial Return**
The project uses shared savings and H₂O expects to recover its investment over the 5 year contract term. The hospital is receiving 25% of all utility cost savings from the project (about \$250,000/yr), plus any maintenance cost savings, all with no capital commitment or investment.
- **Other Benefits**
The new electric chillers increased the hospital's cooling capacity by 50%, and comfort complaints have dropped by over 60% as a result of the various HVAC system improvements. HVAC system maintenance costs have also decreased. Hospital staff, visitors, and patients are very pleased with the hospital's effort to reduce energy use, improve air quality and support sustainability. ENERGY STAR's Portfolio Manager tool calculated an emission reduction of over 3,000 metric tons of CO₂ per year and an adjusted percent energy reduction of 24%.

Monitoring & Verifying Energy Savings

H₂O provides all measurement and verification according to the International Performance Measurement and Verification Protocol (IPMVP) guidelines for the life of the project.

Distinguishing Value

H₂O Applied Technologies' off balance sheet financing provided a unique funding method for the replacement of aged chillers and other HVAC equipment at Nazareth Hospital. The new chillers have provided a needed increase in cooling capacity, a reduction in maintenance time, and greater patient comfort.