

GE helps Southern Maryland Hospital save 17 million gallons of water and over \$150,000 in water costs annually



While conducting an audit of Southern Maryland Hospital's cooling and boiler water treatment systems, John Thompson, Regional Sales Executive for GE Water & Process Technologies, spotted several opportunities to help the hospital substantially cut its water use and costs.

"I noticed that two of the hospital's three HVAC cooling towers were using old water treatment controllers that weren't allowing the towers to cycle up," Thompson explains. "So the towers were continually blowing down to drain, and then using excessive makeup water. On the boiler side, the blow-down was being controlled manually, which resulted in large swings in the operating range. The boiler feedwater quality was also an issue, which limited the cycles that the boiler could run and increased the energy consumption of the boiler. All in all, the cooling and boiler systems were resulting in a costly waste of water and energy."

"After analyzing water cost data from the hospital, I recommended a water treatment program that included GE's advanced cooling chemicals and an upgrade to Aquatrac automated water treatment controllers," Thompson says.



PROJECT PROFILE

The facility

Founded in 1977, 358-bed Southern Maryland Hospital is the area's largest full-service acute care facility and leading center for vascular, cardiac and emergency medicine.

The opportunity

Substantially reduce Southern Maryland Hospital's water use and costs in HVAC (cooling and boiler) water treatment systems.

The GE solution

Complete automated water treatment program incorporating:

- Aquatrac™ Smart Flex cooling tower automation and boiler control technology
- Continuum AEC corrosion and scale control program
- All-polymer boiler internal chemical treatment program
- ChillerCheck energy monitoring software program

The results

- 17 million gallons of fresh water saved annually
- \$153,793 annual reduction in operating costs

"Reduced water consumption yielded real dollar savings, which was redirected to patient care and clinical services."

*Michael J. Chiaramonte, CEO
Southern Maryland Hospital*

“For the boilers, I recommended Aquatrac automated boiler controllers, new softeners and a chemical control program that featured GE’s patented all-polymer chemical technology.”

Aquatrac Smart Flex controllers monitor and control the chemical program for the cooling towers and boilers, helping to minimize energy consumption and document the success of a total water treatment program.

“Under our HVAC chemical treatment program, GE’s patented Continuum AEC technology allows Southern Maryland Hospital to run increased tower cycles,” Thompson adds. “The patented all-polymer boiler treatment program improves boiler efficiency by maintaining cleaner heat transfer surfaces. The chemical programs are controlled and verified by the data-logging Aquatrac controllers.”

By controlling corrosion and scale deposits that can result in unscheduled outages, premature failure and reduced heat transfer efficiency, GE’s chemical treatment programs help chillers and boilers operate at high cycles without fear of deposition, reducing water, treatment and energy costs.

Monitoring chiller energy efficiency

Along with the automated water treatment controllers, an advanced software program called ChillerCheck was incorporated to allow Southern Maryland Hospital to monitor the energy efficiency of its chillers to better control operating costs.

A PDA- and web-based software application, ChillerCheck analyzes all chiller operating parameters that impact chiller performance efficiency and utilizes daily operational data to detect potential problems. Detailed reports provide both technical troubleshooting and economic impact information.

Running on all three of the hospital’s chiller systems, ChillerCheck monitors energy costs to ensure Southern Maryland Hospital’s energy expenditures remain on target.

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imagination at work

Proven in performance

The fully automated GE water treatment program has performed as promised. Southern Maryland Hospital now remotely monitors and trends its program for maximum system protection and optimal energy efficiency.

The program has allowed Southern Maryland Hospital to run increased tower cycles and increased boiler cycles, while saving tower blowdown and makeup water. The result: the hospital has reduced its fresh water use by more than 17 million gallons per year and realized annualized water cost savings of over \$150,000. Clean heat transfer surfaces on the chillers and boilers have also contributed to system efficiency to keep energy costs in line.

“The decision to partner with GE on this environmentally friendly physical plant solution was an easy one,” says Michael J. Chiamonte, CEO of Southern Maryland Hospital. “Reduced water consumption yielded real dollar savings, which was redirected to patient care and clinical services – our community commitment.”

“Water conservation and reuse can be a valuable tool for hospitals to improve the overall health of their facility, and reduce fresh water use and operating costs,” Thompson adds. “Southern Maryland Hospital is a great example of how hospitals can simultaneously achieve both their environmental and economic goals.”



In recognition of its significant environmental leadership, Southern Maryland Hospital was honored with GE Water & Process Technologies’ Return on Environment Award. Pictured (left to right) Phil Harizal (GE Mid-Atlantic Manager), Steve Jordan (GE General Manager), Mohamed Rezgui (SM Hospital VP Operations), John Thompson (GE Regional Sales Executive) and Michael Chiamonte (SM Hospital CEO).

Reduce. Conserve. Streamline. Sustain.

Whether you’re growing a new, leaner hospital from the ground up, or targeting specific areas of your existing facility for greater, greener returns, GE can help bring new efficiencies and savings to every area of your facility.

To learn more, contact your GE sales representative or call (866) 439-2837

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