

Case Study

Advocate Health Care

Diagnosis: Energy Efficiency

Advocate Health Care System is one of the nation's top 10 health systems and the largest integrated care system in Illinois. Advocate operates nearly 400 sites of care, and 12 hospitals, including three of the nation's 100 Top Hospitals, the state's largest integrated children's network, five Level I trauma centers, three level II trauma centers, one of the area's largest home health and hospice companies and one of the region's largest medical groups. As one of the biggest energy users in the country, low operating costs and energy efficiency are vital to the sustainability of healthcare organizations. And, being a nonprofit, it's especially crucial for Advocate to maintain a viable operating budget, and seek out energy rebates and incentives.

Is there a Boiler Doctor in the house?

Grumman/Butkus Associates, energy efficiency consultants, and sustainable design engineers performed energy studies at each of the hospitals to identify energy savings projects. They determined that more efficient burners along with flue stack economizers were the best way to provide a reduction in energy usage. Grumman/Butkus Associates worked closely with Boilersource to design, supply and implement the flue stack economizer portion of the project. HeatSponge Economizers were selected due to the size and the many intricacies of the projects. Retrofitting existing boilers with new burners and economizers was the most economical and efficient answer. A complex task to say the least, considering that boilers ranged in age and condition, with most being at least 30 years old and in fair condition. An inventive and comprehensive plan was born, and with the help of Boilersource, ten steam boilers at six Advocate Health Care sites were retrofitted with new, HeatSponge Economizers. Boiler optimization projects included three components designed to recover waste heat from the hospitals' steam boiler systems: flue stack economizers, heat exchangers controls, and vent condensers at the deaerator tank bleed vents.

Huge Rebates. Tiny Hospital Bill

Advocate received incentives and energy rebates from many local utilities to support the retrofits. They took advantage of custom incentives offered for unique energy efficiency projects specific to their building, and boiler controls incentives alone totaled \$444,997. Advocate has seen a reduction in annual operating costs at a staggering \$522,199 per year due to improved burner efficiency and optimal staging, that was not possible with the existing burner turn-down rates. Overall, natural gas incentives paid for half of the total project cost, including installation and engineering. Energy efficiency allows Advocate to pursue its mission, while also helping them to save energy and money. Now, that's a great checkup.

Incentives from local utilities:

Nicor Gas

\$555,300

Peoples Gas

\$202,000

North Shore Gas

\$53,400

ComEd

\$20,000



BOILERSOURCE
Going Beyond the Boilerplate