

Why hospitals CEOs are thinking about the A/C bill

By [Andrew L. Wang](#) August 23, 2014

As Advocate Health Care moves ahead on a \$92 million expansion of Good Samaritan Hospital in Downers Grove, it's primarily concerned with adding three stories of private patient rooms. But it's also focusing on the air conditioning system.

In an industry being pushed to reduce everything from overnight stays to nursing staffs, energy efficiency is a largely untapped area for cutting costs, experts say.

It's more than just switching out old light bulbs. NorthShore University HealthSystem is overhauling operating rooms to make them less power-hungry, while Swedish Covenant Hospital uses structural beams channeling chilled water to cool its new outpatient building and LED lighting in its garage. Meanwhile, virtually all of the new hospitals built in the area in recent years have been certified as "green" buildings.

Hospitals are among the most resource-intensive commercial buildings because they must operate continuously and require energy for items as simple as lights and as complex as surgical robots. They have strict requirements for temperature, humidity and air quality, meaning they need sophisticated HVAC systems, and they include nonclinical functions that have high energy demands, such as food services and information technology.

For large hospital systems, annual energy costs can reach into the tens of millions of dollars, no small amount in an industry of thin margins. Yet most health systems still don't make green investments a priority, experts say. The incremental savings of an efficient boiler, for example, aren't as sexy as the revenue pop of a new magnetic imaging machine.

"It's a largely untapped competitive edge," says Dan Doyle, chairman of Grumman/Butkus Associates Ltd., an Evanston engineering firm that advises health care systems, including Advocate and NorthShore, on energy use.

Inpatient facilities accounted for only 3 percent of square footage among all U.S. commercial buildings but gobbled up 8 percent of energy consumption, according to a 2003 U.S. Energy Information Administration [survey](#), the most recent figures available.

Lighting accounts for 43 percent of hospital electricity usage, according to the federal data, so simply turning off unneeded lights is often the first move. The next step up, in terms of complexity and cost, are upgrades that would automate behavioral changes, like motion sensors that switch off lights in unoccupied areas, or fans that slow airflow through unused rooms.

When price tags reach into the hundreds of thousands of dollars for equipment like boilers and chillers, efficiency projects must compete for funding against other initiatives at the health system, says Cecilia DeLoach Lynn, director of facility engagement and metrics at Practice Greenhealth, a Reston, Virginia-based health care industry coalition. "It's still finding its way to the top of the agenda," she says.

JUSTIFYING NEW FACILITIES

Once health systems decide to build new wings or replacement facilities, efficiency concerns are part of the justification, though they are never the main reason behind the projects.

For Advocate the primary purpose noted in its application to the Illinois Health Facilities and Services Review Board cites the need to convert Good Samaritan to all private rooms ([see the PDF](#)). The application then notes

that potential energy consumption levels for the new tower would be 20 percent lower per square foot than the rest of the hospital.

The project would make the building a bigger energy consumer in absolute terms, but it will cut usage on a square-foot basis, says Austin Rennick, Advocate's manager of energy solutions.

"If we reduce our energy usage, we're reducing our carbon footprint, which is improving the health of those that we're supposed to be serving," he says. "It's doing good by doing less bad, in a way."

Meanwhile, Evanston-based NorthShore, which spends about \$20 million annually on utilities across its four hospitals, is focusing on "greening" operating rooms at Skokie and Highland Park hospitals by reducing the number of times per hour the air in the rooms gets cycled during nighttime hours. It's also replacing all OR lights with LED bulbs, which use less power and don't emit as much heat.

"In the past we looked at (investments) that paid back within five years, and anything beyond that was off the table," says Michael Fiore, the system's corporate director of environmental health safety and sustainability. "We're definitely looking beyond that now."

Swedish Covenant last year was granted LEED Gold Certification for its new outpatient building, the second-highest sustainability rating from the **U.S. Green Building Council**.

"Hospitals are struggling to survive," says facilities Vice President Saliba Kokaly, "so we have to stay as efficient and productive as we can."

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