



ENERGY MARKETING

A Direct Energy® Company



Smart Energy Strategies for Healthcare Facilities

*Managing Energy Costs and Consumption Through
Demand Response, Energy Efficiency,
Innovative Supply Contracts and Group Purchasing*



Energy expenditures are an essential cost of doing business, but they also represent an opportunity to save money.

Operating 24 hours a day, 365 days a year, it is no surprise that U.S. hospitals use an enormous amount of energy. Still, the numbers are surprising: The roughly 3,000 large hospitals in the United States (those with more than 200,000 square feet of space) consume 5.5 percent of the total delivered energy used by the nation's commercial sector, but account for just 2 percent of commercial floor space and less than 1 percent of the total number of commercial buildings, according to statistics from the U.S. Department of Energy (DOE). All that energy comes at a hefty cost: The Environmental Protection Agency's Energy Star program puts the total annual spend by all large hospitals in the U.S. at just under \$9 billion.

At a time when there is increasing concern about rising healthcare costs, and the likelihood that the demand for healthcare services will continue to rise given the aging population, it is essential that hospitals and other healthcare institutions continue to look carefully at their energy bills and options for upgrading their infrastructure. Energy expenditures are an essential cost of doing business, but they also represent an opportunity to save money and improve the institution's bottom line — which frees up valuable funds for patient care.

In this paper, we will examine the following:

- Tactics that healthcare facilities, despite the need for continuous and reliable supply, can use to manage their levels of energy consumption for the benefit of both their patients and their balance sheets
- Purchasing strategies hospitals are employing to save money on their electricity, natural gas, and fuel oil supplies in the context of healthcare and energy industry trends



Earn Revenue While Managing Demand

While at first glance it may seem hospitals would be poorly matched with utility demand reduction needs, there are options that bear exploring.

Regardless of their year-round, 24/7 mandate, hospitals do have options for demand reduction initiatives. On the electric side of the energy equation, there is the growing interest in demand response by utilities and the companies that operate the power grids around the country, known as Independent System Operators (ISOs). A demand response, or DR, program pays participants to reduce their electric usage during periods of peak demand across the system. If enough customers are willing to do this, utilities are able to forego building and operating expensive, seldom-used generation units, and can therefore pass the savings along to program participants.

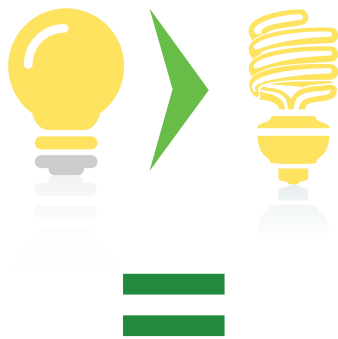
While at first glance it may seem hospitals would be poorly matched with utility demand reduction needs, there are options that bear exploring. For starters, hospitals do have the flexibility to shift certain operations away from peak afternoon demand periods if called upon to do so. Laundry, for example, a major energy user in many facilities, can be pushed to the off-peak evening hours. Similarly, using ISO forecasts and internal smart thermostats, hospitals could opt to pre-cool common facilities such as cafeterias in the summer before the afternoon peak, enabling them to cut their consumption during periods of greatest demand. It may also be possible for a hospital to run its backup generators during high-demand times. While there is money to be made by facilities willing to participate in these demand response programs, whether they make economic sense will depend on a comprehensive evaluation of the payments available through the programs they are eligible for and the participation costs.

Next Step: Ask your energy services provider to determine if your healthcare facility is eligible to participate in a demand response program, and to assess whether participation will be cost-effective.



Embrace Energy Efficiency

If U.S. hospitals switched all of their lighting to CFL or LED bulbs, it would be the equivalent of taking more than 800,000 cars off the road.



**800,000
CARS**







Given the continuous energy demand of hospitals, the energy efficiency arena is rich with opportunities for savings and is key to helping facilities lower their costs.

Statistics from the American Society for Healthcare Engineering (ASHE) indicate that many hospitals have gotten this message. In a recent survey, 95 percent of healthcare organizations reported taking steps to reduce their energy use, and 92 percent had invested in energy projects. Furthermore, 64 percent of healthcare organizations rated energy as an extremely important or very important issue for their facilities.

Regardless of the efforts hospitals are making, there is still room for improvement. For example, out of the 3,040 large hospitals surveyed by the DOE for a recent report, 375 of them — or more than 12 percent — stated that their facilities use only single-pane windows, which provide inferior insulation compared with multipane windows. An additional 1,202 reported still using single-pane windows, but in combination with multipane windows. Similarly, while many hospitals have adopted more efficient lighting — 90 percent report using compact fluorescent lightbulbs (CFLs) in some locations — it is still not the norm. Recent federal government statistics indicate that CFLs are used to light only 11 percent of the floor space in the nation's more than 3,000 large hospitals. This means facilities are missing out on substantial savings: DOE data show that CFLs cut electricity consumption significantly compared to both traditional and energy-saving incandescent bulbs, and they last longer as well (see chart below).

Traditional Incandescent Bulbs vs. Energy-Efficient Lightbulbs

	60W Traditional Incandescent 	43W Energy-Saving Incandescent 	15W CFL 	12W LED 
Energy \$ Saved (%)	–	~25%	~75%	~75-80%
Bulb Life	1,000 hours	1,000 to 3,000 hours	10,000 hours	25,000 hours

Source: DOE



A comprehensive energy efficiency plan holds the potential for tremendous savings in both consumption and cost.

Improving the performance of lighting and window insulation alone could significantly cut the energy consumption of most hospitals. But some hospitals are pursuing additional measures to reduce their demand, such as building their own solar units; pursuing Leadership in Energy and Environmental Design (LEED) certification during renovations or new construction; designing systems for outdoor air supply, heat recovery, and thermal energy storage; and installing lighting sensors. Some hospitals are also cutting fleet vehicle energy use and costs through on-site refueling stations.

A comprehensive energy efficiency plan holds the potential for tremendous savings in both consumption and cost. In a recent example featured on Energy.gov, Gundersen Health System — which includes hospitals, pharmacies, and clinics across several states and employs more than 6,000 people — began just such a program five years ago. In that short time, the organization cut its energy usage systemwide by more than 25 percent, saving over \$1 million annually in energy costs.

Next Step: *As you begin developing an energy efficiency program, identify your organization's goals regarding cost savings, sustainability, regulatory compliance and reliability of supply. Use these to guide your decision-making at all stages of plan creation and implementation to ensure your facility's goals will be met.*

While demand response and energy efficiency are essential for reducing energy load and curbing costs, a well-rounded energy plan must also incorporate innovative approaches to procuring energy. Next, we'll examine purchasing strategies healthcare facilities can employ to maximize savings while managing risk.

Look Beyond Fixed Contracts

Despite their continuous need for energy, hospitals do have cost-saving options. For starters, many hospital purchasing managers choose to shop around for their energy supply. Competition has reshaped the natural gas and electric supply industries in many states in the past several years, and energy buyers have been able to select the suppliers and products that best suit their operational goals and budgets.

When reviewing pricing, hospitals have traditionally sought budget certainty in light of their operational mandates. This risk-averse approach, which eschews potential savings for cost certainty, has prompted many healthcare energy buyers to opt for



Buyers have an opportunity to save by evaluating market prices throughout the year and renewing their fixed contracts when prices drop to lock in lower rates, rather than waiting until the end of their contracts to renew.

fixed-price contracts. Even here, however, buyers have an opportunity to save by evaluating market prices throughout the year and renewing their fixed contracts when prices drop to lock in lower rates, rather than waiting until the end of their contracts to renew.

For organizations with plenty of purchasing expertise, indexed price contracts, which involve buying your commodity needs for electricity and natural gas at market prices, present an opportunity for savings but come with some degree of budget risk. Meanwhile, hybrid approaches offer potential savings as well, but with less risk than indexed contracts. A simple hybrid approach might entail locking in 75 percent of your facility's anticipated annual natural gas consumption, say at \$4 per decatherm, while taking market price for the remaining 25 percent. This mix would offer a degree of protection from rapid price spikes, while still enabling you to take advantage of unanticipated price declines.

Another approach specific to electricity that may appeal to those with a greater appetite for risk involves purchasing blocks of power to cover your facility's needs. For example, with a careful review of past energy usage patterns, you can lock in the baseload or around-the-clock energy needs for your facility at a fixed price for a fixed period. You could then cover the facility's peak demands with another block at market prices.

Next Step: *Contact your energy services provider to inquire about the range of products available and determine if hybrid contracts or blocks offer value for your healthcare facility's particular needs and usage.*



Reduce Costs Through Group Purchasing

The advantage of group purchasing is a simple fact of economics — suppliers are much more interested in serving larger loads and will be willing to negotiate to secure that demand.

Continuing on the cost side, another option that has actually been driven by changes in the healthcare sector itself is for hospitals to form energy purchasing consortia to negotiate better deals with their energy suppliers. In years past, as stand-alone operations, hospitals were often left to negotiate and contract for their energy needs individually. But as consolidation has swept through the industry, larger hospital systems can now leverage their greater buying power to secure better prices for their electric, natural gas and fuel oil supplies. Meanwhile, hospitals that are not part of a system are choosing to join one or more group purchasing organizations (GPOs) to receive similar cost-saving benefits. Today, more than 70 percent of purchases made by hospitals are done through GPO contracts.

The advantage of group purchasing is a simple fact of economics — suppliers are much more interested in serving larger loads and will be willing to negotiate to secure that demand. This strategy offers savings regardless of today's relatively low-price environment; even when prices are low, shopping around as a group can result in a better deal for savvy customers. However, be aware that a hospital should avoid group purchasing when its load profile of energy consumption is more attractive than others in its pool. Organizations with less attractive profiles could push up the hospital's rates compared to if it had shopped alone.

When purchasing as a group, hospitals are best served by working directly with suppliers to secure favorable terms. Some hospitals look to a consultant or broker to guide them through the group formation and supplier negotiation processes, but the fees for their services will cut into the savings — and may even cost more than the amount saved by the purchasing contract. Direct negotiation, however, ensures that your facility reaps the benefits of group purchasing.

Next Step: Learn even more about group purchasing and GPOs in the healthcare industry from the [Healthcare Supply Chain Association](#) and the [Healthcare Industry Supply Chain Institute](#).



An account representative at a full-service energy provider can identify a wide range of innovative energy products and help select the ones that are best suited for your facility's specific needs.

Seek Guidance from an Energy Expert

To wade through the often complex decision-making processes involved in managing energy costs and consumption, many hospitals look for guidance from an energy services provider with the expertise to turn their priorities into viable solutions.

When considering demand reduction, in particular energy efficiency measures, a full-service energy provider can be particularly useful for conducting or helping to interpret facilitywide energy audits. An energy firm experienced at providing efficiency solutions will also be able to draft a holistic plan that considers all possible measures and their costs and estimated payback periods, as well as whether savings can be realized by implementing measures individually or all at once. Such a firm can even manage implementation of the entire project and coordinate financing, including tracking down available utility and government rebates and incentives — money that otherwise could be left on the table.

Likewise, when assessing the costs and benefits of participating in a demand response program, energy managers may be well served by turning to an energy provider that could incorporate demand response options into a broader consideration of energy efficiency plans.

On the cost side, an account representative at a full-service energy provider can identify a wide range of innovative energy products and help select the ones that are best suited for your facility's specific needs.

Conclusion

As healthcare costs continue to climb, hospitals must reevaluate their strategies for lowering demand and expenditure, **without compromising their ability to deliver first-rate care**. By proactively searching for innovative ways to manage spending, healthcare facilities are likely to identify major opportunities to revamp energy purchasing decisions and reveal new possibilities in energy efficiency and demand response. Given that a typical hospital's energy costs equal about 15 percent of its profits, exploring these cost-saving opportunities is vital for preserving and improving the quality of patient care.

› About Hess Energy Marketing

Hess Energy Marketing, LLC is a subsidiary of Direct Energy Business, LLC and a North American subsidiary of Centrica plc. Direct Energy Business is one of the largest commercial retail energy suppliers in North America. Our size, financial strength, and more than 25 years of experience position us to competitively serve our customers with a powerful combination of industry-leading products, straightforward guidance, and personalized service. We are committed to leveraging our size, strength and extensive reach to make our customers' businesses better across North American energy markets.



Forward Thinking Energy

To contact a Hess Energy Marketing Account Manager:

Email Energy@hess.com • **Call** Your local Account Manager or 1.800.HESS.USA (1.800.437.7872)