

ENERGY MANAGEMENT STRATEGIES

IN RESPONSE TO SKYROCKETING ENERGY COSTS

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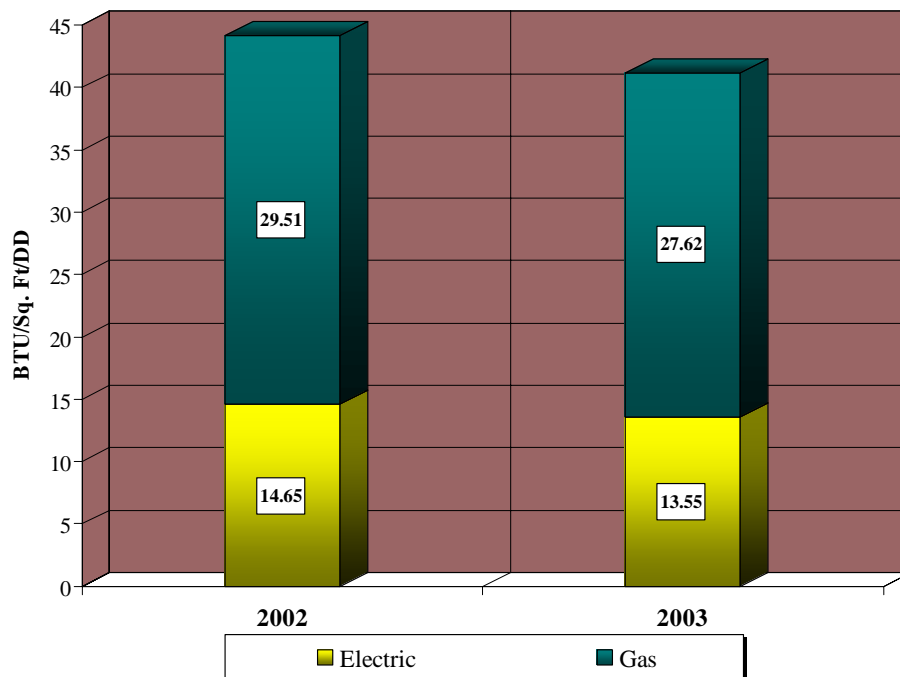
This article is based on the report submitted to Binghamton area hospitals operated by United Health Services. It is of interest to Rochester institutions because we share a similar climate, utility and regulatory environment and facility operating challenges.

2005 will bring many challenges to our ability to maintain the high quality of services we provide to our community. Among these are increasing costs for electricity and natural gas we use in our facilities. While the management of our United Health Services hospitals are carefully planning budgets to anticipate these challenges, they will rely on each of us to do our best to manage our energy consumption wisely and operate our equipment and facilities efficiently.

In 2003 the engineering departments of our Binghamton-area hospitals, under the leadership of John Carrigg, Vice-President of Operations, avoided \$61,000 in energy consumption costs through good operating practices and energy conservation measures. They continue similar efforts in 2004 and, in support of the Campaign for Excellence, look for new opportunities to improve. If weather and operations conditions remain the same, however, it is expected that new rates for gas and electricity will cause our energy costs to increase \$300,000 to \$350,000 in 2005. It is obvious that all divisions of our hospitals have to contribute to this effort to manage energy costs.

Wilson Memorial and Binghamton General Hospitals

*BTU/Sq. Ft/DD
2003vs2002
January - December*



Here are some of the factors that contribute to the cost increases we face and measures we can take to help mitigate their impact on our ability to maintain our services.

Electricity Price Increases

Approximately 68% of our hospitals' energy budget for 2005 will be for electricity costs given current consumption patterns. The price of electricity for the hospitals is expected to increase between 5% and 14.5%, depending on the energy service company that supplies it. This results largely from the expected increases in price for the oil and gas used to produce electricity.

Natural Gas Price Increases

Natural gas has become the fuel of choice for convenience, favorable price, and clean and efficient operation. Approximately 32% of our hospitals' energy budget for 2005 will be for natural gas costs given current consumption patterns. In November this year the future market commodity on New York Mercantile Exchange (NYMEX) is set to be \$8.10 per 1000 cubic feet at the wellhead; it is expected to increase to \$8.99 in December and top off in January of 2005 at \$9.50 per 1000 cubic feet of natural gas. National weather forecasting agencies expect the winter of 2005 to be cooler than average in the northeastern United States.

A variety of events have happened in our economy at large and in the energy sector itself that contributed to these price increases. For example:

- Hurricane Ivan damaged Gulf of Mexico gas production facilities that supply a quarter of US natural gas output and reduced oil production to 73% of capacity;
- If the US economy continues its expected growth, industrial demand will further increase;
- As oil prices increase, \$55.17 per barrel on October 23, 2004, many commercial and industrial consumers and electricity generation plants turn to natural gas as a fuel, thus increasing demand;
- Growth of oil demand abroad, such as in China and India, contributes to the oil price increases;
- Expectations for colder winter and flat natural gas production;

Fortunately, natural gas storage, that supplies as much as 20% of winter consumption, is at a long-time high, helping moderate price increases. As of the week ending October 15, 2004, 3223 billion cubic feet of natural gas was in storage, 8% greater than the five-year average for that week and 99.2% full. The mild temperatures throughout the nation in 2004 resulted in less demand for heating and cooling, allowing a significant injection into the storage.

Plans and Approach to Contain Overall Costs

We cannot control the weather or the cost of fuels, but we can take steps to use energy wisely. "Tried and true" cost management methods remain appropriate and valuable.

Facility users can turn off lights and office equipment during unoccupied periods; discontinue the use of personal or room electric heaters whenever practical; and keep maintenance staff advised of any energy inefficiencies and malfunctioning equipment.

Department managers should meet with their service contractors to review their operations and identify opportunities for improving the efficiency and reducing the energy consumption of their equipment and processes. They should set targets and monitor their contractor's accomplishment of them. For example, the food services contractor could adjust and fine tune cooking and washing equipment for optimum efficiency and operation. The sterile processing department should review sterilization equipment performance. Users of other medical equipment should consult with their equipment suppliers and maintenance contractors to determine how to optimize its energy consumption. Consider replacement of older equipment that may be operating inefficiently because of age if it appears that the return on investment is reasonable.

Employees should routinely shut off non-essential equipment such as computers, printers, coffee makers, copiers, etc., during periods when that equipment is not in use. Instant-on appliances such as televisions still draw power when switched off; staff should unplug them when they are not to be in use for several days.

Facility operators and maintenance staff should maintain all building systems, HVAC equipment and lighting systems at maximum efficiency; cycle off systems during non-operational hours; and replace older equipment with energy-efficient equipment. Windows should be kept clean to take best advantage of daylight for lighting.

The Engineering Department has identified a series of specific energy consumption improvement measures for equipment operations and maintenance that you will see them implement over the next several months. These measures include control upgrades and adjustment of boilers, installation of new operating controls and timers; replacement of lighting ballasts and lamps and installation of motion sensors; and perform aggressive preventive maintenance schedules.

Conclusion

While United Health Systems management is anticipating increased energy costs in planning and managing the budgets for our hospitals, they must rely on you and me to support their efforts. We must work together to operate efficiently and avoid unnecessary consumption while we continue to provide comfort to our patients and good service to our community.

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