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George Langill, CEO,  
Royal Ottawa Health Care Group

## Energy Costs can be Significant

Overcoming ongoing funding cuts and continuing fiscal restraints is one of the greatest problems facing hospital administrators. Managers at the Royal Ottawa Health Care Group (ROHCG), however, have learned that they can simply offset some of these cuts with energy savings.

Expecting a funding cut of as much as \$500,000 per year, they made a conscious decision to reduce energy and

## ROYAL OTTAWA HOSPITAL IMMUNIZES AGAINST REDUCED FUNDING SUPPORT WITH ENERGY COST SAVINGS

equipment operating costs by carrying out improvements they knew would result in significant energy savings. The retrofit was implemented under an energy performance contract (EPC) between the ROHCG and Duke Solutions and implemented by Brookfield Lepage Johnson Controls. No ROHCG capital funding was necessary, because the contractor paid for and completed the project through the EPC. The contractor will then be repaid over a specific number of years with the money that the project has saved in energy costs. Total costs for the project were approximately \$1.8 million, and the ROHCG is now realizing the anticipated savings of about \$300,000 per year.

## Equipment Needed Upgrading

Some of the 30 000 m<sup>2</sup> (323 000 sq. ft.) facility's 15 buildings date to the early 1900s, so it is no surprise that there is an ongoing need for upgrading. As early as 1995, it was clear that an investment of over \$500,000 was needed to ensure that patients' needs would be met and to reduce annual operating and maintenance costs. However, raising this amount of capital was a daunting task, especially for something often viewed as far removed from patients' needs. In the words of CEO George Langill, "The EPC has allowed ROHCG to replace the majority of the aging physical plant while



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allowing facility managers to operate and maintain the facilities effectively while providing a safe and comfortable environment for staff, patients and visitors to the ROHCG.”

## The First Step is Commitment

The first step for the ROHCG or any other hospital is to become committed to saving energy and money. This requires a demonstration of support for the idea, the establishment of activities and projects, the monitoring of progress and the celebration of the successes that are achieved. In early 1999, the ROHCG joined the Office of Energy Efficiency's Energy Innovators Initiative, which helps businesses, institutions and municipalities explore innovative options for financing and implementing building retrofit projects that will lower their utility costs while saving the environment through increased energy efficiency. Managers are guided through processes that lead to better energy efficiency and cost savings as well as reductions in greenhouse gas emissions.

## Less Maintenance Means More Savings

Building maintenance managers and staff at the ROHCG liked the fact that the EPC didn't have to be implemented by in-house personnel. The newer equipment is also more reliable and operates with less maintenance: it saves money that can be used for other purposes within the facility. Projects that were only dreamed about previously may now become a reality.

## The Projects

The ROHCG EPC included the following projects:

- replacing the central heating plant with several smaller units to save distribution losses and reduce operator labour;
- upgrading the heating and building automation systems;
- installing various water-saving measures in washrooms and refrigeration systems;



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- upgrading to T-8 fluorescent lighting with electronic ballasts;
- installing CO<sub>2</sub> sensors in air-handling systems to control fresh air volume;
- installing isolation valves to eliminate heating distribution system losses during summer months;
- upgrading to new microprocessor controls for existing chillers and heat pumps to enable on/off control, temperature reset and machine monitoring;
- upgrading exterior lighting; and
- staff training.

Replacing the central heating plant with several smaller units improved energy efficiency greatly, eliminated the need for boiler operators and saved approximately \$200,000 per year. The second most effective retrofit was the upgrading of the building automation system, including the addition of about 100 new control points for equipment such as boilers and the installation of variable-speed fan and motor drives.

The ROHCG maintenance staff can now use their building maintenance skills to save energy and money. As Jerry Rogers, who at the time of the project was the Director of Environmental Services said, "The \$500,000 in capital investment savings will help to alleviate some of the impact government funding reductions will have on clinical programs."

## Learn More

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