

OVERVIEW

St. Mary's General Hospital has over 2,000 staff, physicians and volunteers working in a 405,773 square foot facility. To manage its energy use, St. Mary's needed a clear, real-time picture of its gas, water, steam and electricity usage. Previously they had relied on receiving energy data through the monthly billing cycle that resulted in a month long period before Operations staff knew that an anomaly had occurred.

To budget for future costs and explain when costs increased or usage went outside its normal range, Operations staff needed a better understanding of their typical energy use. Accurate data was also needed to correlate with day-to-day operations for identifying energy saving opportunities and to provide a baseline for future energy saving projects.

"Before we had the EMIS system it would be a month before we would know our consumption data. Now we have continual, real time monitoring of our utilities."

- Roger Holliss, Director of Engineering at St. Mary's General Hospital.

SOLUTION

As a local company and one of the most experienced in the field of the Energy Management Information System (EMIS), St. Mary's chose Energent as the supplier of its EMIS. All utilities entering the hospital are monitored including gas, water, steam and electricity then stored into a central database by Energent. The system was initially installed in 2011 and using energy modeling and linear regression, Energent established a baseline of energy consumption that eliminates the influence of weather. The baseline is used to establish upper and lower thresholds for consumption and set up email alerts in the event the usage goes outside of the expected range. Operations staff receives a monthly summary of the utility activity via teleconference and a report where they can investigate any anomalies and reconcile with the actual day-to-day operations, such as the increased water use during the stopping and starting of chillers or a power outage.

CASE STUDY



Organization

St. Mary's General Hospital, Kitchener, Ontario, Canada

Function

Hospital Facility Management

Challenges

- Utility data only available through monthly billing cycle
- Needed better understanding of what drives energy consumption
- Required baseline on energy consumption

Solution

- Install EMIS System
- Energy Modelling to establish energy consumption baseline
- Email alerts on all utilities when outside of regular operating range
- Monthly teleconference to identify and investigate consumption anomalies

Benefits

- Address utility consumption problems quickly and avoid unnecessary costs
- Better understanding of energy use through baseline data
- Third party monitoring of Energy Saving company contract
- Accurate calculations of extra costs during unexpected outages



"I've always had the philosophy that you can't manage what you can't see. The EMIS gives us a clearer understanding of our usage and alerts us when anomalies occur. What we save through the energy monitoring more than covers the cost of the EMIS service."

- Roger Holliss, Director of Engineering, St. Mary's General Hospital.

BENEFITS

St. Mary's has real time energy usage data and a better understanding of what drives their energy use. Email alerts set for when utility consumption goes outside of a pre-determined range allows staff to quickly mitigate problems and avoid unnecessary costs. Through monthly updates, anomalies can be identified and investigated using the specific data for the time and date that an event occurred. The data helps to identify areas of potential savings and to monitor usage after energy saving initiatives are implemented. St. Mary's recently signed a Letter of Agreement with an energy saving company to implement 20 energy saving initiatives. Energent will provide third party monitoring of the project and verify the savings that are achieved using the EMIS.

Baseline data provides a normalized view of energy usage that can be used to budget for future costs and quantify changes in energy costs when unusual events occur. During a flood event in 2015, the gas and electricity supply had to be shut down and through the use of the Energent models, St. Mary's was able to quantify the extra cost required to run the facility on emergency power and used the calculations as part of a successful insurance claim.

"In the absence of the Energent data, I don't know how I would have quantified how much gas and electricity I would have used [during the flood event]."

- Roger Holliss, Director of Engineering, St. Mary's General Hospital.



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