FacilicorpNB Fundy Linen

SHIFT ENERGY

CASE STUDY

Company Background

FacilicorpNB Fundy Linen is a large industrialized laundry facility servicing hospitals and nursing homes in southern New Brunswick. When the plant was designed nearly 30 years ago, the philosophies of "reduce, reuse, and recycle" were incorporated into every aspect of its construction and ultimate use.

From the use of water efficient equipment such as tunnel washers and other automated systems, to a heat reclaiming system, the location of water pipes in hot waste water ducts and the recycling of final rinse water into the next wash, FacilicorpNB Fundy Linen's plant operations and practices were designed to maximize both resource and financial efficiencies.

" Due to the continuing constraints on budgets, it is imperative that a manager can access reliable data related to energy consumption. Shift Energy offers us a dashboard that allows us to measure our costs on all our utilities minute-by-minute (water, electricity and natural gas). This unique tool allows our company to devise a culture of conservation which is diffusing into the general employee culture."

Chris McIntyre
Director of Maintenance

The Case

FacilicorpNB Fundy Linen asked SHIFT Energy to see if further optimization in energy efficiency for this modern facility could be achieved, what measures needed to be taken and how much additional energy savings could be realized.

Initial Findings

SHIFT installed its Energy Management Solution to monitor electricity, natural gas and water consumption in August, 2010. SHIFT Energy was able to establish a detailed energy consumption profile for the facility after the first month of service. An example can be seen in one of our dashboard screen shots below:

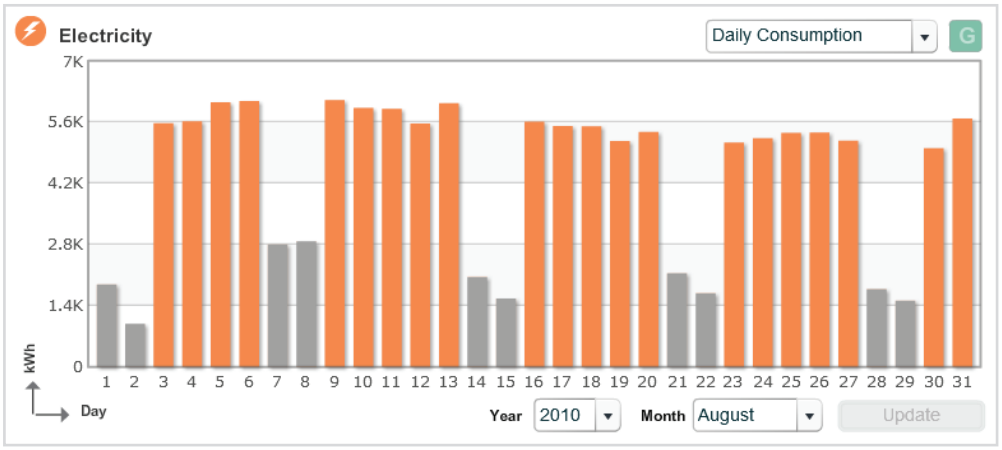

Figure 1

Daily Electricity consumption graph for the month of August, 2010 (first month in service).

Energy used (approx.) week-days
5,000 - 6,000 kWh

Energy used (approx.) weekends
1,800 kWh

Analysis

SHIFT's Energy Management Dashboard provides one-minute resolution for all monitored data points. It captures a highly detailed view of the plant's energy utilization. This allowed us to create an in-depth analysis otherwise would have been impossible to acheive.

After enough data was collected, SHIFT's energy experts began to analyse for patterns, inconsistencies and opportunities in both the operating process and energy envelop using our unique inference algorithms, data mining tools and Energy Management Dashboard.

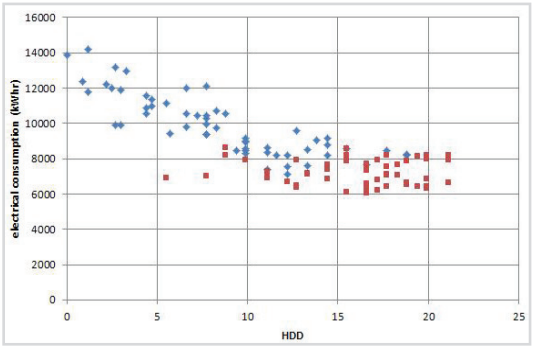

Figure 2

Using weather data (i.e. heating degree days) and consumption correlation analysis to understand the plant's energy operating envelop.

As a result, we identified several opportunities for FacilicorpNB Fundy Linen in a very short period of time.

Saving Opportinities Identified

After three months of service, SHIFT's energy experts have identified immediate saving opportunities in three distinctive areas.

Lighting

The electricity data showed that demand has a significant drop at 8pm on operating days which was caused by the shut off of all the lighting. However, the facility only operates to 4:30pm in most cases. The customer took the recommendation from SHIFT and changed the lighting shut off time to 4:30pm from 8pm, and only keeping necessary security lights on after that.

$1,500*/yr

Heating and Cooling

SHIFT engineers found that afterhours electricity demand in September was three times higher than that in October. We later determined that it was caused by HVAC (cooling) operating continuously during afterhours, which was completely unnecessary. By adjusting the HVAC operating schedule and the temperature setpoints during after hours, FacilicorpNB Fundy Linen will save both electricity and natural gas cost at today's utility rates.

$10,000*/yr

Heat Recovery as Renewable Energy Source

SHIFT also monitors a waste water heat recovery system, which FacilicorpNB Fundy Linen operators questioned whether it would function within its design parameters. Using the Dashboard to monitor it in real-time, we validated its performance and demonstrated that it significantly reduced natural gas usage.

$25,000*/yr

*estimated

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