

Hamilton

Case Study: Hamilton College, 12/1/2009

Hamilton College Utilizes Building Dashboard® to Confront Climate Change

Hamilton College, a liberal arts college located in upstate New York, has a history of leadership in sustainability. In 2007, Hamilton joined the American College and University Presidents' Climate Commitment, and recently the college completed a climate action plan that sets an ambitious target of reducing carbon dioxide emissions by 50% by 2020. To meet this goal, Hamilton is focusing on improving building efficiency on campus, and developing strategies to address behavior patterns and improve conservation. A key element is using Building Dashboard® to monitor, visualize and contextualize resource use in real time.

Monitoring Building Performance

Hamilton College recognized that changing the behavior of building occupants is a critical component of their conservation efforts, one that offers valuable educational opportunities in addition to the environmental and economic benefits.

While behavior change has been identified as an important step in conservation, the resources one uses in residence halls, classrooms and campus buildings often remain invisible. Without meaningful access to information about their consumption, building occupants are unable to make the best choices to reduce their use.

In order to make this information visible, and to contextualize that information in a way that is engaging as well as informative, Hamilton College has installed Building Dashboard® across campus.

How It Works

Building Dashboard® monitors and displays resource use information by accessing building performance data through Hamilton's building automation system. This allows the Dashboard to take real-time data from a variety of sources and display it in a user friendly and educational web-based platform.

Integrating Building Dashboard® On Campus

Hamilton College started by monitoring a handful of residence halls, and several academic/administrative buildings. Integrating more buildings into Building Dashboard® is easy with the campus automation system. Now Hamilton College has real time monitoring in 11 residence halls, the Kirner-Johnson



humanities building, Unified Science Center, their Outdoor Leadership Center and five other campus facilities

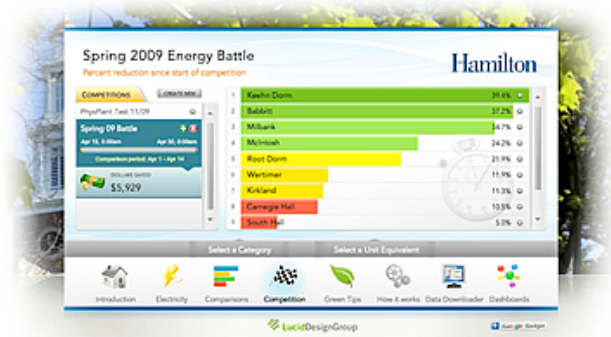
Of these buildings, the Kirner-Johnson humanities building is an iconic showcase for campus sustainability at Hamilton. The newly renovated LEED® Gold building includes monitoring for a solar photovoltaic array on the roof as well as the electricity production from a 10-kW wind turbine installed on the southern edge of campus.

Fostering Behavior Change (and saving money) Through Competitions

Utilizing Building Dashboard, Hamilton has found a number of innovative ways to engage students in resource conservation. In 2009, occupants of their residence halls hosted an energy reduction competition. For two weeks in April, residence hall communities competed to see which hall could achieve the greatest reduction in electricity use. The winning residence hall saw a 40% reduction, and overall the competition saved \$6,000 and 60,000 pounds of carbon dioxide.

Building Dashboard® as a Teaching Tool

Hamilton's Dashboard has the Data Downloader module, which allows students and faculty to access data from the resource monitoring system. "The Data Downloader is something we hope will be increasingly important to our students," said Steve Bellona, Director of Facilities.



Helping Facilities Manage Resource Use

In addition to faculty and staff using the Building Dashboard®, the facilities staff has used it to determine if historical data is comparable to current operations. "Facilities has been using the Dashboard to do visual diagnostics to see if the buildings are following their usual usage patterns. It has been a useful tool in identifying when something in a building isn't working properly," says Mr. Bellona, "Once you've established a usage pattern within a building you know if there is a spike, something is not working on the mechanical side."

Well Positioned for Change

As Hamilton College continues to make strides in resource conservation and campus sustainability, Building Dashboard® will be an integral part. "Our overall experience has been positive thus far," says Mr. Bellona, "as students become more aware of it, and we get better at using it, we are finding new applications and ways to integrate it into our overall sustainability initiatives."

To view Hamilton College's Building Dashboard®, visit: <http://www.buildingdashboard.com/clients/hamilton>

Or, read more about Hamilton College's sustainability initiatives: <http://www.hamilton.edu/sustainability>