

Campus goes green

CONTROL SYSTEM OPTIMIZES SUSTAINABILITY

CASE STUDY:

Mount Mercy College
Cedar Rapids, Iowa



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Environmentalism in full bloom on Mount Mercy campus

Long before sustainability, green technology and renewable energy were media buzzwords, the Sisters of Mercy – founders of Mount Mercy College in Cedar Rapids – launched an environmental movement on campus that today continues to grow and thrive.

It all began with planting trees on the campus – over 500 of them – back in 1976-77. Today, Mount Mercy College’s environmental efforts continue to bloom and broaden. Environmentalism has assumed a greater role in campus life. Through advocacy, education and in partnership with Alliant Energy®, Mount Mercy College is actively reducing its carbon footprint.

While sustainability touches every aspect of college life – from its curriculum, to its staff, alumni, values and mission – one of Mount Mercy College’s most recent efforts to erase its carbon footprint is the installation of a campus-wide, energy management system.



CHALLENGE

In the fall of 2007, Mount Mercy College's strategic planning committee included "environmental sustainability" as part of the college's guiding document for the future. A committee was formed to develop and implement an environmentally responsible and community conscious campus facilities master plan.

Eager to see climate neutrality become a reality, Mount Mercy College administrators created the Campus Sustainability Committee to develop a plan and to organize and educate others on campus about sustainability and the positive impact it would have on campus.

"We understood that it would be challenging, but achievable," said Committee Chair Colette Atkins, of the charge to become a climate neutral campus. Approximately six months after the formation of the Committee, Mount Mercy College President Christopher Blake affirmed the college's plan by signing the American College and University Presidents Climate Commitment. Presidents who sign the ACUPCC document pledge to lead their campuses to climate neutrality.

SOLUTION

The committee's first task was to measure Mount Mercy College's carbon footprint with energy audits conducted in 2007 and 2008. The audits helped identify the biggest environmental issues and showed the committee what Mount Mercy College was already doing well.

Learning that electricity consumption was a major issue, Mount Mercy College joined forces with Alliant Energy to generate a plan to create a more environmentally conscious campus. Using the audit data as their compass, Mount Mercy College soon charted a new course to energy efficiency.

Alliant Energy recommended installing an AccuPower™ energy management and control system to simultaneously control the heating, ventilation and air conditioning in nine facilities on campus in addition to domestic hot water circulation and relighting the main gymnasium. Installation was scheduled for the summer of 2009 to avoid classroom interruptions during the school year.

RESULTS

Wireless capability is standard and allows monitoring of all building management functions from a single facility or remotely using a laptop. "The system also encompasses individual real-time building metering so the college can trend building energy usage and predict energy needs for planning and budgeting purposes." said Mark Dunne, Alliant Energy Technical Sales Support Project Manager.

"Working within a summer installation time frame and in multiple buildings was a challenge. But, with open communication and a great facilities staff, this project went well and stayed on schedule," noted Alliant Energy Strategic Account Manager Jennifer Horning.

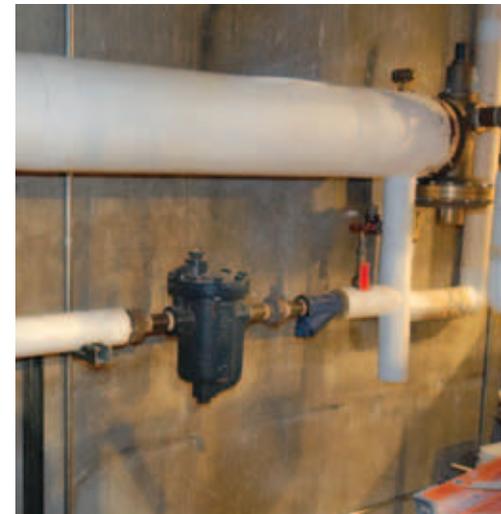
AccuPower has proven to be an indispensable tool for controlling energy use and costs. Mount Mercy College is saving more than 1.5 million kilowatt hours (kWh) of electricity annually. Additional savings are realized with annual savings of nearly 73,000 therms of natural gas.

RECOMMENDATIONS

Mount Mercy College has taken a giant step towards shrinking its carbon footprint – but it is just the beginning. "The way to get students and others excited about environmentalism is by teaching them and showing them what can actually be accomplished. Alliant Energy and AccuPower have surely demonstrated that concept for us all," said Atkins.

"We look forward to continuing our partnership with Alliant Energy as we explore additional ways to improve our energy efficiency and reduce greenhouse gas emissions," she added.

Mount Mercy College resides on land that was once known as Mound Farm. "The Sisters of Mercy had almost prescient knowledge 100 years ago that land and learning, earth and education, would shape Mount Mercy College's destiny," offered President Blake. "That ecological foundation could not be more fitting as we continue to honor sustainability in our energy usage, work and mission."





MOUNT MERCY COLLEGE

Annual kWh savings: 1,500,000

Equivalent to the annual power consumption of 178 typical American homes

Environmental impact of kWh savings:

Reduction in carbon dioxide emissions (lbs/year): 2,374,920

Equivalent to:

- Carbon sequestered by 27,622 tree seedlings grown for 10 years, or
- Greenhouse gas emissions avoided by recycling 363 tons of waste instead of sending it to the landfill, or
- 206 fewer cars on the road

Annual therms of natural gas saved: 73,000

- Equivalent to 70 fewer cars on the road

Environmental impact of therm savings:

Reduction in carbon dioxide emissions (lbs/year); 804,687

- Carbon sequestered by 9,359 tree seedlings grown for 10 years, or
- Greenhouse gas emissions avoided by recycling 123 tons of waste instead of sending it to the landfill

To discuss energy-efficiency upgrades at your facility, contact your Alliant Energy strategic account manager. Or, for more information on Alliant Energy's energy-efficiency programs, visit alliantenergy.com/business.

