

Make it Electric



Energy information to help you manage your operation • Volume 22, Number 2: April 2009



Bemidji State University

Students turn it off to win energy-saving competition

On a college campus someone always is burning the midnight oil. But in November students at Bemidji State University (BSU) used a lot less electricity for studying and other activities as they strived to win BSU's *Do it in the dark* energy-saving competition.

Residence halls were pitted against each other. Students living off campus were pitted against fellow apartment dwellers. According to BSU Sustainability Coordinator Erika Bailey-Johnson, Pine Hall, the winning residence hall, won by reducing electrical consumption from one month to the next by approximately 10 percent. In addition to bragging rights, Pine Hall residents won the *Do it in the dark* traveling trophy, which is a huge green and white light switch created by BSU industrial technology students.

"We haven't verified the energy savings associated with this exciting challenge, but we are encouraged by the preliminary findings," said Ken Johnson, Otter Tail Power Company Energy Management Representative. "It's great to see students rallying together around energy savings and taking that enthusiasm to the community."

Stiff competition

"It was the first time we'd tried anything like this, and it was definitely a success," said Bailey-Johnson. It was so successful that in February BSU took on six other campuses (Carleton College, the College of Saint Benedict and Saint

"We're trying to prolong awareness, keep people engaged, and get people to change their habits."

Erika Bailey-Johnson
BSU Sustainability Coordinator

John's University, Gustavus Adolphus College, Macalester College, Saint Olaf College, and Winona State University) in the Minnesota Campus Energy Challenge and in March planned to launch its second *Do it in the dark* competition. According to Bailey-Johnson, BSU is "trying to prolong awareness, keep people engaged, and get people to change their habits."

To help students identify ways to save energy, BSU's Students for the Environment Club created business card-sized tip sheets that offered advice such as unplugging unused electronics and taking shorter showers. From a table in Hobson Memorial Union, club members distributed the cards and registered off-campus students for the *Do it in the dark* contest.

Most off-campus competitors managed to reduce their consumption through some tried-and-true tactics. They turned down electric heat thermostats, turned off lights, and unplugged electronic equipment when not in use.

(continued on page 2)



Junior Chris Veit, Grand Rapids, Minnesota; Senior Trent Nelson, Newfolden, Minnesota; and Senior Kelly Rishovd, Lakeville, Minnesota, proudly display the trophy for Bemidji State University's "Do It In The Dark" residence hall competition. Each of these students lives in Pine Hall, the winning on-campus facility.

Perhaps the greatest lesson learned in the first competition was about plug loads, or phantom loads, which refers to electricity drawn by electronics and appliances even when they are turned off.

"Some students told me that they all had TVs in their rooms but, during the competition, they went into the same room and watched one TV," said Bailey-Johnson.

Students pay "green" fees

BSU students are committed to using resources wisely and cutting waste. Last spring the BSU Student Senate approved a \$5-per-student-per-semester "green" fee to pay half of Bailey-Johnson's salary and fund minigrants and student employment for projects that address environmental issues.

Students may request up to \$500 per project, and those offered employment are paid for a maximum of ten hours per project. One student was employed to reduce the amount of junk mail sent to one academic department. Any mail deemed junk by faculty or staff went to that student who then contacted the sender and asked that the recipient be removed from the mailing list. Another green-fee proposal in the works involves purchasing equipment for measuring electricity use in campus offices.

Part of bigger plan

The green-fee projects and events such as *Do it in the dark* reflect BSU's ongoing commitment to environmental stewardship. The university has had an environmental advisory committee since 1992. Bailey-Johnson, who earned her master's degree in environmental studies at BSU, became the campus's first sustainability coordinator in August 2008.

A big part of Bailey-Johnson's job is to help BSU become a carbon-neutral campus. The university has signed the American College and University Presidents Climate Commitment, which puts the campus on a timeline for achieving sustainability through a variety of actions, such as purchasing or producing at least 15 percent of BSU's electricity from renewable sources.

"We've been part of Otter Tail Power Company's **TailWinds** wind energy program since 2005. More than 5 percent of our purchased electricity comes from wind," said Bailey-Johnson. "Otter Tail Power Company also has made generous contributions to our sustainable campus endowment and has provided valuable expertise on solar and other alternative energy sources."

A community effort

The City of Bemidji not only supports BSU's efforts, it has signed the U.S. Conference of Mayors Climate Protection Agreement. "Bemidji has made a commitment to being a greener city," said Bailey-Johnson. "With the City's involvement we have a lot of opportunities to do larger projects with renewables such as wind or biomass."

BSU and the City of Bemidji understand that encouraging energy-saving habits can help to build the foundation for long-term sustainability.

"Bemidji has made a commitment to being a greener city. With the City's involvement we have a lot of opportunities to do larger projects with renewables such as wind or biomass."

Bailey-Johnson



From classrooms to streetlights

Otter Tail Power Company will select entire college campus to receive 2010 energy-efficiency overhaul

Otter Tail Power Company was excited to hear about—and share with our readers—the Bemidji State University story. It shows the creativity and energy-saving commitment that comes from educational institutions in our region. And it provides a taste of what we expect to come from our 2009 campus energy-efficiency overhaul!

Picture the students, faculty, staff, and administration of an entire college campus working together to reduce on-site energy use—implementing energy-use changes that will impact every facility from administration buildings and classrooms to residence halls and recreational areas. That's what Otter Tail Power Company envisioned when we designed our Minnesota Conservation Improvement Program (CIP) for 2009 and 2010. Approved by the Minnesota Office of Energy Security in November, the plan includes a large pilot project for retrofitting an entire college campus.

Working together to achieve energy savings

“To our knowledge, nothing like what we envision has been done for an entire campus,” said Kim Pederson, Otter Tail Power Company's Manager, Market Planning. “It's a unique way to help people understand that the energy choices they make and the technologies they use impact everyone. We're facing serious energy challenges, and it will take teamwork to solve them.”

Similar to the Bemidji State University project, our campus energy-efficiency overhaul will focus on improving the efficiency of the energy-using systems typical to colleges and universities. Campus housing facilities, which are one portion of this pilot project, will see emphasis on lighting and plug-load, or phantom-load, reductions. These loads include computers, TVs, and chargers that draw energy even when they aren't in use. One of the primary goals for the campus overhaul is to impact students' everyday energy-use habits.

The pilot project also includes a comprehensive review of all campus facilities with an emphasis on the efficiency of indoor lighting and outdoor security lighting, commercial-sized refrigeration and cooking equipment, premium-efficiency motors and high-technology electric motor controls, and systems associated with heating, ventilating, and air-conditioning. We also will provide engineering expertise related to operating existing equipment as efficiently as possible, which helps to address our goal of impacting the everyday energy-use habits of those working on campus.

“We've developed criteria for screening colleges that might be a good fit for the pilot project,” said Pederson. A team will finalize the selections and announce the winning college in 2009 and complete the project in 2010. “What makes this so exciting is the role that young people will play,” said Pederson. “The success of the campus energy-efficiency

“The success of the campus energy-efficiency overhaul will rely on the enthusiasm and influence of students. That's one of the reasons we were so pleased to see the Bemidji State University project and the momentum the students created.”

Kim Pederson
Otter Tail Power Company
Manager, Market Planning

overhaul will rely on the enthusiasm and influence of students. That's one of the reasons we were so pleased to see the Bemidji State University project and the momentum the students created.”

Meeting statewide conservation goals

Minnesota's Next Generation Energy Act of 2005 calls on utility customers to reduce electrical use significantly beginning in 2010. Accordingly, Otter Tail Power Company's 2009-2010 CIP was designed to help customers achieve the most aggressive energy-efficiency goals we've ever set. In addition to a couple of large pilot projects, including the campus project, our CIP offers individual homeowners and businesses many options, including increased rebates for efficient products such as residential demand control, air-source and geothermal heat pumps, lighting, commercial refrigeration and cooking equipment, and premium-efficiency motors. “Our increased commitment to reducing energy use only can be achieved through customer willingness to invest in technologies that will help lower their energy use and decrease their electric bills,” Pederson said.

All utilities in Minnesota are subject to a 1.5 percent energy-savings goal that takes effect in 2010, which means that utilities must develop and implement plans to help their customers reduce the utilities' energy sales by 1.5 percent annually. Otter Tail Power Company's 2009-2010 plan was one of the first CIP utility plans reflecting this goal to be approved by state regulatory agencies. The goal represents a substantial increase in our long commitment to energy efficiency. “Our Minnesota CIP underscores our commitment to delivering electricity reliably and economically with a balanced mix of resources,” Pederson said. “Conservation through energy efficiency and demand-side management, renewable energy, and coal technologies all are important elements in that balance.”

Through the campus energy-efficiency overhaul and other projects, Otter Tail Power Company continues to educate customers about the value of energy-saving habits and the difference that each of us can make.

Contacts



Mark Remer
Senior Industrial
Services Engineer
Fergus Falls
218-739-8967
mremere@otpco.com



Paul Aasgaard, P.E.
Senior Industrial
Services Engineer
Fergus Falls
218-739-8492
paasgaard@otpco.com



Jeremy Rham
Senior Industrial
Services Engineer
Jamestown
701-253-4708
jrham@otpco.com



Scott Sigette
Energy Management
Representative for Rugby,
Langdon, and Devils Lake areas
701-662-4876 ext. 740
ssigette@otpco.com



Ken Johnson
Energy Management
Representative for
Crookston and Bemidji areas
218-281-3634 ext. 6103
kjohnson@otpco.com



Brad Nelson
Energy Management
Representative for
Milbank area
605-432-4713 ext. 6602
bnelson@otpco.com



Bob Sitzmann
Energy Management
Representative for
Jamestown, Oakes,
and Garrison areas
701-253-4703
bsitzmann@otpco.com



Craig Farstad
Energy Management
Representative for
Fergus Falls area
218-739-8342
cfarstad@otpco.com



Bill Klyve
Energy Management
Representative for
Morris, Wahpeton,
and Milbank areas
800-630-7358
bklyve@otpco.com



Terry Stallman
Economic Development
Consultant for
Minnesota and
South Dakota
800-630-7965
tstallman@otpco.com



Don Frye
Economic Development
Consultant for
North Dakota
701-320-0373
dfrye@otpco.com

Business Services
Energy use is an important component of most businesses. Take advantage of our programs and services to optimize your energy-related decisions. Visit us at www.otpco.com.

OTTER TAIL
POWER COMPANY

215 South Cascade
Fergus Falls, MN 56537

Make It Electric provides information for industrial and commercial customers interested in energy efficiency, increased productivity, and new technologies. Industrial Services
Otter Tail Power Company
215 South Cascade
Fergus Falls, MN 56537
800-493-3299
Fax: 218-739-8941
www.otpco.com