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**University of Texas at Austin
Austin, Texas
Spring 2008, Energy**

BACKGROUND

Campus Profile

The University of Texas (UT) at Austin is one of the largest public universities in the United States. Founded in 1883, UT has grown from a single building, eight teachers, two departments and 221 students, to a 350-acre main campus with 21,000 faculty and staff and 50,000 students in 16 colleges and schools.

With an enrollment of 11,000 students and more than 3,500 master's and doctor's degrees awarded annually, the graduate school is a national leader in graduate degrees awarded and one of the largest graduate schools in the nation. More than 8,700 bachelor's degrees are awarded annually in more than 170 fields of study and 100 majors. UT is a diverse learning community, with students from more than 100 countries and with 32 percent of enrollment being of African American, Hispanic and Asian American heritage.

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GOALS AND ACCOMPLISHMENTS

Goals

As our campus continues to grow, we need to manage more efficiently and effectively campus-wide energy usage. Our goal is to reduce our total energy consumption and our carbon footprint through a variety of measures. To improve efficiency, our on-campus cogeneration power plant—using natural gas and steam power to heat and cool the campus—has undergone numerous upgrades. These efforts have won wide acclaim, including a 2008 Texas Environmental Excellence Award. The other, perhaps most effective, means to achieve our goal is through demand-side energy reduction.

Setting targets for decreasing usage and conservation in such a diverse institution with so many different academic and research interests and needs requires a strategy to secure buy-in. In September 2007, the Demand Side Energy Management and Conservation (DSEMC) program was launched to help create a culture of sustainable energy conservation and management at UT. DSEMC seeks to help meet the needs of the campus community, while reducing consumption and offsetting rising energy and water costs for the university. To engage the academic side, the Environmental Science Institute works with students in the Campus Environmental Center on projects that involve different stakeholders to help change behavior and thereby promote energy conservation.

Accomplishments

Retrofits and upgrades of all inefficient fixtures will be completed by December 2008. Upgrades based on lighting, water and steam-trap audits were made to 140 buildings on the main campus and at the J.J. Pickle Research Campus; and 193,000 light fixtures were replaced. Throughout every phase of this project we sought to reduce waste, so all the boxes, packaging, lamps, ballasts and metal fixtures were recycled. Simultaneously, teams developed educational campaigns to shift student, faculty and staff behavior away from wasteful actions toward measures that minimize resource use and waste. About 10 percent of our energy use comes from computers, so turning off computers, monitors and speakers when not in use can have a big impact. The outreach efforts of DSEMC are called UTakeCharge, and are outlined on the UT website at <http://www.utexas.edu/utakecharge/>.

In October 2007, the Environmental Science Institute and Campus Environmental Center hosted the first annual Dorm Energy Challenge with the theme “Do it in the Dark.” Working with the Division of Housing and Food Service and with Facilities Services, the program was extremely successful. We evaluated resident engagement based on the number of students who pledged to participate. Each resident was asked to complete an online pledge stating what five things they personally planned to do to reduce energy consumption. They each printed the pledge and hung it on their door. We counted the number of students who pledged to participate, and had one dorm with 100 percent participation. We evaluated reduction in energy use based on the comparison of energy use in each residence hall during the month of October with the previous three October averages for that hall. Nine out of the 13 dorms saw a reduction in energy use ranging from .6 percent to 31 percent with an overall average of 8.5 percent reduction. The energy projects of the Environmental Science Institute can be found on the Campus Green Light website: <http://www.esi.utexas.edu/greenlight/>.

Challenges and Responses

We are very proud of our accomplishments, and we received a lot of support from numerous groups whose collective efforts made these projects possible. One challenge is designing educational and promotional material that will reach everyone in our large campus community. We conduct the outreach via electronic, verbal and written tools and materials, and we plan to evaluate and expand our outreach efforts in the future. Another challenge is getting everyone to buy into and support these programs, and

with improved educational efforts we hope to increase the number of people involved in these projects. Many individuals are interested in participating in projects, but have difficulty finding the time to commit. We overcame this by designing protocols, surveys and projects that offer choice and simplicity.

ENGAGEMENT AND SUPPORT

Leaders and Supporters

On each of these projects we worked with numerous individuals and departments. Their combined efforts were critical to our success. We worked with staff of Facilities Services and the DSEMC program, including Al Lewandowski and Rusty Osborne, and several people in the Division of Housing and Food Service, including Doug Gerrard and Peter Rivera. The Environmental Science Institute and the Campus Environmental Center contributed significant time and resources, and people involved included Dr. Jay Banner, Dr. Eric James, Rob Borowski, Julie Raish and Karen Blaney. Sustainability Coordinator Chelsea McMellen was also involved. Student workers and volunteers were huge supporters, and we had large numbers of students participating in these projects, including Anna Pierce, Nicole Leung and Jacob Bintliff, as well as Lucia Simonelli, Leah Yngve, Barbara Eckhart and Tammy Hong from the University Residence Hall Association (URHA). The interest and support of UT leadership for these efforts is acknowledged and further encouraged through the establishment of the Center for Science and Practice of Sustainability by UT Executive Vice President and Provost Steven Leslie and the Task Force on Sustainability by UT President Powers in 2007.

Funding and Resources

The DSEMC program is funded by the university through Campus Planning and Facilities Management. The Environmental Science Institute received a grant from the State Energy Conservation Office (SECO) for energy projects, including the Dorm Energy Challenge. SECO funds were used to employ students, to print educational materials, and for prizes. The Campus Environmental Center, which is an agency of Student Government, and URHA, also contributed financial support to the project.

Community Outreach and Education

DSEMC established the University Conservation Action Team to help with community outreach efforts. DSEMC is working on expanding its website and creating interactive components to help with education and outreach. They also used university-wide emails to inform people about the projects. The Dorm Energy Challenge used posters, emails and EcoReps, who volunteered in each of the residence halls to help educate students and encourage participation. In the future, we have plans expand the Dorm Energy Challenge to include a Green Greeks component in which fraternities and sororities will compete against one another to reduce energy. We also hope to have competitions and an audit system for staff members in their offices.

Campus Climate Action: Your School's Carbon Footprint

We are calculating our campus carbon footprint, and we hope that continued efforts to reduce energy demand will foster lasting behavioral changes that will help shrink it and contribute to reductions in greenhouse gas emissions.

National Wildlife Federation's Campus Ecology® Program

NWF's Campus Ecology Program provides a resource for campuses. Sharing information about campus programs is a critical component of expanding learning experiences and cultivating successful programs across the country in all areas of sustainability.

CLOSING COMMENT

We recognize that there is no silver bullet in energy management and conservation—we must work on

multiple levels and along multiple pathways to reach our energy-use reduction goals. Working with numerous stakeholders can be a challenge, but lasting and meaningful change stems from inclusive projects that allow for campus-wide participation. We are constantly looking for ways to include more members of our community in energy conservation efforts, because we need the full support and active participation of the whole community to achieve the largest reductions.

Furthermore, these projects are constantly evolving and expanding as we add thousands of new students, faculty and staff members to our campus community each year and as technology and attitudes change. We strive for long-term behavioral changes so that this work has lasting effects on sustainability across the campus and beyond. Effecting behavioral change toward more sustainable practices takes time and patience, but by inculcating energy conservation in everyday activity and establishing environmental stewardship and sustainability as part of the Longhorn tradition, we can create a sustainable campus for future students and visitors to enjoy and a model that supports the motto “what starts here changes the world.”