

Association for the Advancement of Sustainability in Higher Education

Serving the Campus Sustainability Community

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University of Illinois at Urbana-Champaign

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Governance & Administration

In the past two years, the University of Illinois at Urbana-Champaign has made a substantial and systemic commitment to sustainability. This commitment is expressed in our strategic plan, in the development of a campus Sustainability Council, a new Office of Sustainability, and in a host of other ways that impact our curriculums, physical design, and our daily practices.

The Campus Strategic Plan (March, 2007) emphasizes sustainability stating, "We will transform the campus into a learning laboratory for demonstration of sustainable technologies while we develop curricula to prepare students with skills required to tackle the challenges of a sustainable society. We will provide leadership to the state of Illinois to become a recognized leader in research, education, and practices to promote sustainable utilization of energy, water, and land."

During the past year, Chancellor Richard Herman established a sustainability structure with two new campus leadership entities, the Campus Sustainability Council and the Office of Sustainability. These two entities operate in an integrated fashion to provide leadership for the

extensive efforts across campus. The scope of their activities is comprehensive, encompassing the academic functions of education, research, and engagement, and operations of the campus physical infrastructure.

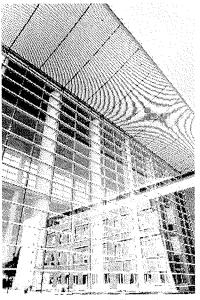
The Campus Sustainability Council, chaired by Chancellor Richard Herman, provides strategic direction and oversight for sustainability initiatives. The Council fosters campus sustainability initiatives to empower tomorrow's leaders, reengineer the campus infrastructure and practices, create knowledge and technology, and engage with external constituents. Council members include senior campus leaders and representatives of students, faculty, and the local community. In addition to being represented on the Campus Sustainability council, the Student Sustainability Committee is responsible for allocating two student fees to support sustainability efforts on campus.

The Office of Sustainability provides operational leadership to campus sustainability efforts. The Office works with colleges and other campus units, e.g., the Environmental Council and student groups, to develop and promote opportunities for engaging faculty and students with the critical environmental, social, and economic issues of sustainability. The Office also is linked to the physical operating arm of the campus, where the Sustainability Coordinator within Facilities and Services develops and leads the physical infrastructure enhancements on campus-wide sustainability programs.

In accordance with our recently revised Facilities Standards, future construction, remodeling, and renovation projects of \$5 million or greater shall be LEED® (Leadership in Energy and Environmental Design) Silver Certified or greater. New construction, remodeling, and renovations less than \$5 million will comply with the Illinois Facilities Standards, and the LEED Silver requirements to the greatest extent practical.

Our campus is a member of AASHE, USGBC, and the National Council for Science and the Environment. In

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The Business Instructional Facility, opening August 2008, is expected to achieve LEED® Gold Certification. The forward-looking sustainable design elements and environmentally-friendly features of the building set new standards for

addition the University is a signatory to the American College & University Presidents Climate Commitment, and we are on pace to achieve the goal of instituting a plan to achieve climate neutrality.

Operations

In the past year, we have enacted policies concerning campus operations that emphasize sustainability. We now have policies requiring that we build, at a minimum, LEED® Silver buildings. We have a new Energy Policy that rewards conservation. We have made mass transit easy and universally accessible on campus, started a bike-share program, and are working on a number of other initiatives.

Our buildings are growing green. The new Business Instructional Facility, opening August 2008, is expected to achieve LEED® Gold Certification. The new University Student Dining and Residence Hall Project will pursue LEED® Silver Certification. The renovation of the 100-year-old Lincoln Hall has been designed to achieve LEED® Silver. Five other projects in the planning stage will achieve at least Silver Certification.

Our campus is publicly committed to reducing energy consumption by 10 percent in three years and 20 percent in seven years. Major energy efficiency projects include lighting upgrades and retro-commissioning. In a significant effort to stimulate energy conservation, we have changed our accounting procedures. Colleges and administrative units will receive bills for their energy consumption, creating a tangible financial incentive to conserve energy. In preparation for this change, meters were repaired, replaced, and upgraded, and shadow bills were sent to units.

We are engaged in a number of efforts to use renewable energy. We are purchasing a utility-scale wind turbine, which will provide roughly 1 percent of the University's energy needs. A Miscanthus-fired boiler, which will provide steam and electricity to the Veterinary Medicine Basic Sciences Building, is in the design stages.

We have made mass-transit affordable and accessible. The student transportation fee provides faculty, staff, and students unlimited access to the Mass Transit District (MTD) bus services. In addition, the MTD SafeRides Program is available during hours when regular bus service is not in operation. Local charter bus companies offer convenient and inexpensive transportation to the Chicagoland area and to major airports.

A pilot bike share program has been established in the College of Applied Health Sciences. All impounded and unclaimed bicycles are donated to the Bike Project.

The University, MTD, and the cities of Champaign and Urbana are collaborating on a car-sharing program that will allow students, staff, and faculty to rent a car for a short period.

Campus Facilities & Services uses many electric and fuel efficient gas-powered maintenance vehicles. In addition to two Honda hybrid sedans, the University Car Pool has ordered three Ford Escape hybrid SUVs and has issued a request for proposals to purchase 24 hybrid sedans.

We are working to proactively reduce consumption and recycle the waste we produce. The Waste Transfer Station recycles or diverts nearly 50 percent of campus waste. Recycled materials include paper, cardboard, aluminum, scrap metal, plastic, landscape waste, and pallets.

Dining Services has a preference for locally produced or processed items, which currently represents 19 percent of purchases. Leftovers that are deemed "safe to eat" are donated to local food banks.

Battery and Printer Cartridge Recycling Reclamation boxes are available in the Illini Student Union.

Curriculum & Research

The University of Illinois at Urbana-Champaign is a place of excellence, innovation, and tradition. More than 2,000 Urbana-Champaign faculty members lead 40,000 undergraduate, graduate and professional students in a process of discovery and learning in 16 colleges and schools. With more than 150 research centers and labs, spending on research and development in science and engineering in 2005 totaled \$499,711,000. The atmosphere of innovation that permeates the Illinois campus is based on a history of interdisciplinary exploration leading to world-changing discoveries.

During AY07-08, 114 different courses were offered that offer a sustainability focus. Examples include: CPSC 336 Tomorrow's Environment: Introduction to interdisciplinary methods of analysis of environmental problems in a finite world.

PS 384 Politics of Globalization: Examines the basic concepts and politics associated with the emergence of the global society.

<u>ATMS 202 Soc Impacts Weather & Climate:</u> The study of how weather and climate phenomena have changed the shape of the United States, particularly with regard to traditionally underrepresented populations

Created by the campus-wide Environmental Council, the Environmental Fellows Program (EFP) is an undergraduate minor for students who are interested in sustainability. The EFP provides University students a unique opportunity to pursue their interests in sustainability through courses that focus on current issues from a multi-disciplinary perspective. A minor in the EFP signifies an environmental understanding of the intersections between the natural world, technology, politics, and culture.

Within our College of Engineering is the new Energy and Sustainability Engineering graduate option. Students enrolled in an existing masters or doctorate program can fulfill the requirements of this option by taking a core course on sustainability, two courses to build depth, and another to build breadth (outside of their home

department).

The University of Illinois is a Research I university with a history of investigation focused on topics relating to sustainability issues. A few examples are described here.

The recently formed Energy Biosciences Institute works to overcome barriers to producing sustainable biofuels from second-generation feedstocks. The Institute is a partnership between the University of Illinois, the University of California at Berkeley, Lawrence Berkeley National Laboratories, and the energy company, BP. Funded at \$500 million over 10 years, it is expected that about 20 percent of the research will be conducted at Illinois.

The Center of Advanced Materials for the Purification of Water with Systems (WaterCAMPWS), is a National Science Foundation Science and Technology Center. The mission of The WaterCAMPWS is to develop revolutionary new materials and systems for safely and economically purifying water for human use, while simultaneously developing the diverse human resources needed to exploit the research advances and created.

The Renewable Energy Initiative explores options, opportunities, and solutions for energy security and sustainability through greater reliance on renewable resources and aims at strengthening collaborative efforts towards an integrated renewable energy system.

The Center for Advanced BioEnergy facilitates the development of cross-disciplinary research and development, education and outreach programs that promote the greater and more efficient use of bio-renewable resources and, more specifically, support the emergence of advanced bio-fuels and chemicals.

Campus Culture

Decentralized decision making is ingrained in the University's culture and is documented in appropriate bylaws and statutes. The efforts related to sustainability that are detailed here emerged from that "bottom-up" culture fueled by the passion and dedication of students, staff, faculty and administrators. Recent organizational enhancements, noted previously, are designed to build upon and enhance the Illinois "we get things done" culture.

The Student Sustainability Committee is responsible for allocating two student fees: the \$2/semester Clean Energy Technology fee and the \$5/semester Sustainable Campus Environment fee. Campus administration and Facilities & Services work with the students to implement their approved projects. Projects receiving funding include a 1.5 MW wind turbine, an energy audit and lighting retrofits for the Illini Union, a biodiesel initiative to convert waste vegetable oil to diesel fuel, the photovoltaic array and green roof for the Business Instructional Facility, and lighting retrofits for the Illinois Sustainable Technology Center.

There are several student clubs primarily devoted to sustainability issues, including Students for Environmental Concerns, Engineers Without Borders, Community Organized Recycling Efforts, Campus Greens, Ecological Design Consortium, Red Bison, Environmental Law Society, and Green Observer.

A multidisciplinary team of students created, *Elementhouse*, as the Illinois entry in the 2007 Solar Decathlon competition on the National Mall in Washington, D.C. That entry, won two of the 10 contest divisions: market viability and comfort zone and placed ninth out of 20 competitors. Immediately after that event, *Elementhouse* was moved to Chicago's Center for Green Technology as part of Greenbuild month in Chicago. Recently an Illinois team was selected by the U.S. Department of Energy to receive a \$100,000 grant and to be one of 20 entries in the 2009 Solar Decathlon.

Facilities & Services is engaged in environmental conservation activities for the purpose of building a sustainable university environment. These activities increase awareness and educate employees on best management and sustainability practices. Two main initiatives are, setting Fiscal Year Goals for the coming academic year and partnering with the Environmental Council to award faculty/student seed grant projects. Some of the faculty/student projects include:

- Greening Green Street
- Littering Campaign
- Green Consumer Workshop
- Green IBook
- Campus Prairie Design
- Bio-cubes
- Green Roof Monitoring

Facility & Services engineers, planners, project managers, and inspectors have undergone LEED® training. Fifteen are LEED® Accredited Professionals. An additional five students and staff at the University of Illinois at Urbana-Champaign are also LEED® Accredited.

The campus' first rain garden was created in April 2007. The garden features native plants and addresses flooding by capturing and filtering storm water. Prior to the addition of the garden, this area regularly flooded, impacting pedestrian walkways and threatening the adjacent red oak tree's vitality. Campus Restoration Ecology classes designed and installed the rain garden with assistance from Facilities & Services, the City of Urbana, and the campus' Housing Services. An industrial design student created the sculptures. Curbless infiltration islands are planned as part of the new campus conference center currently under construction.

Community Service and Outreach

Sustainability efforts extend beyond the boundaries of our campus. Students are involved in improving the sustainability of the local and global community, from the cornfields of Champaign-Urbana to the rural areas of Nigeria, India, and Guatemala.

Recently, we have increased our capacity to engage in discovery and public engagement related to sustainability on a scale perhaps never before seen at a university. The state scientific surveys, the Illinois State Geological Survey, the Illinois Natural History Survey, the Illinois Sustainable Technology Center, and the Illinois State Water Survey have been incorporated into the University as the Institute for Natural Resource Sustainability.

The Institute will take advantage of the surveys' complementary goals and missions of providing the scientific underpinnings for energy, sustainability, environmental policy, and natural resource management, ensuring that the natural environment is developed to enhance the well being of the citizens of Illinois and the state's economic viability. The Institute provides opportunities to build on the synergies between the academic and educational programs of the campus with the state-focused research and outreach programs of the Surveys. The Institute will have approximately 570 full-time equivalent employees.

We are pursuing a number of other efforts that advance sustainability. The Smart Energy Design Assistance Center, sponsored by the Illinois Department of Community and Economic Opportunity, provides advice and analysis that enables Illinois private and public facilities to increase their economic viability through the efficient use of energy resources.

The campus chapter of Engineers Without Borders advances the quality of life in impoverished countries by designing and implementing socioeconomically and ecologically sustainable engineering projects. Notable projects include developing a sustainable source of clean water for several villages in Nigeria and Guatemala, expanding access to renewable energy from bicycle and wind generators, and photovoltaic arrays in India, and converting waste vegetable oil to biodiesel on the Illinois campus.

The student group Community Organized Recycling Efforts (CORE) focuses on improving the environmental habits of community members and businesses. CORE lobbies for expanded access to recycling for Champaign residents and holds a recycling competition among fraternities and sororities. Greening Green Street is a new CORE effort aimed at developing a green business certification program to encourage businesses in this important campus commerce cooridor to become more sustainable.

The previously mentioned car sharing program is an intergovernmental effort planned in concert with the cities of Champaign and Urbana and the Mass Transit District.

The Smart Energy Design Assistance Center (SEDAC) provides energy analysis to Illinois businesses and public institutions. SEDAC also conducts presentations on energy issues across the state and answers questions related to energy on their toll free line.

A University of Illinois Extension researcher is housed at the Chicago Department of the Environment to collaborate on regional environmental sustainability efforts.

Students and employees volunteered at the Earth Day Boneyard Creek and the Salt Fork River clean-up efforts by marking storm drains, removing invasive plants, and picking up trash.

Confirm & Submit Application

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