**Sustainability at University Housing**

**Overview:**

The Student Sustainability Committee (SSC) seeks to establish a partnership with University Housing (Housing) to integrate sustainability into all aspects of the Housing experience at Illinois. Housing is the home of more than 8,000 undergraduates every year, more than 25% of all Illinois undergraduates. A large majority of all freshmen spend their first year with Housing. As such, Housing represents a tremendous opportunity for students to be exposed to everyday sustainability, to integrate sustainability into their educations, and to learn best practices that they take with them as part of their careers and communities. Thus, the SSC seeks to invest funds in collaborative projects with Housing that will transform the Housing experience and build capacity to undertake future projects.

**History:**

The Student Sustainability Committee was established in 2007, as the successor entity to the Energy Subcommittee of the Committee on a Sustainable Campus Environment, and has a rich history of collaboration with Student Affairs (of which Housing is a part). During the majority of the Committee’s existence, Student Affairs served as the parent unit for the SSC. The Committee has supported projects with Student Affairs units such as the Illini Union and Campus Recreation, such as energy audits, lighting retrofits, water use reduction retrofits, occupancy sensors and building re-commissioning. Student Affairs was the first entity to commit support toward helping the SSC initiate its Revolving Loan Program. Finally, Student Affairs / the Illini Union have agreed to host a staff position funded by the SSC, in support of its activities. However, the SSC has not directly supported an initiative at University housing up to this time. SSC grant funding in support of the student farm as well as the Illinois Biodiesel initiative have been in collaboration with Dining Services, which is part of Housing. This semester, the SSC has provided grant funding to establish a pilot eco-reps program based at Allen Hall/LAR.

**Objectives:**

The SSC wishes to collaborate with Housing to carry out a broad set of projects ranging from operational to education-related. We are willing to offer Housing $300,000 to finance these projects and programs, enumerated as follows:

1. Sustainability Coordinator - $75,000
2. Composting - $100,000
3. Residence Hall produce gardens - $25,000
4. Loan to Student Farm (indirect support) - $20,000
5. Sustainability Education Coordinator - $50,000
6. Living Learning Community facilities upgrades - $5,000
7. Eco-Reps - $25,000

In addition, the Committee is working on projects to disseminate information about campus and building energy consumption through the use of energy displays, as well as an initiative to deploy 25 small solar arrays on campus buildings over the next five years. If these initiatives prove successful, the Committee would seek to have these displays installed in all residence halls, as well as deploy at least five of these solar arrays at Student Affairs buildings, including existing Housing buildings. This could represent an additional $300,000 in grant funding toward University Housing.

We look forward to establishing a successful, transformative partnership with University Housing, as part of an overall goal to make the campus a national leader in sustainability.

**Sustainability Coordinator:**

A sustainability coordinator in Housing/Dining could advance sustainability in all aspects of the unit’s operations, and seek out funding opportunities for these initiatives. The sustainability coordinator could also advance Housing towards the commitments made in the University’s Climate Action Plan, including a large scale food composting system by 2012, use of dining hall waste for bio-fuels, and the energy/waste reduction goals.

The University of Virginia, Colorado State, UCLA, and many other institutions have sustainability coordinator positions in their Housing/Dining units. At the University of Virginia, the dining sustainability coordinator established a system to promote reusable bag and container use in dining halls. Boston University’s sustainable food coordinator, an Illinois graduate, established a

waste oil-to-bio-diesel system much like the one established by our students. At Stanford, the dining sustainability coordinator established a student run farm and smaller gardens whose produce is harvested for the dining halls.

The University received around $1 million in funding from the stimulus, all of it directed to Facilities and Services, because only F&S applied for the funds; Housing too could have potentially benefited from this opportunity if staff was available. A sustainability coordinator could seek out funding from federal, state and other sources to fund retro-commissioning projects in housing facilities, the student farm, and other sustainability related projects that would benefit Housing’s overall operations.

The SSC would be willing to provide $75,000 in funding, over three years, to see this position established, with expectation that Housing would completely incorporate this position into its budget in the future.

**Composting:**

Food waste from housing represents some 10%-12% of the total campus municipal waste stream (1000-1250 tons), and some 20%-25% of landfilled waste originating from this campus. The landfilling of this waste and subsequent generation of methane contributes to campus carbon emissions – additionally diversion of this waste will be a key component in raising the campus’s overall waste diversion to 75% by 2020 – a campus wide goal adopted in the Climate Action Plan. Housing pays over $150,000 annually for disposal of all waste, a significant amount of which could be avoided by food waste composting. This compost has the potential to be a valuable campus resource.

Currently, a pilot program (established with grant funding from Dining Services and students) collects and composts approximately 5% - 10% of this waste at a facility on the south farms. While this pilot has proven the feasibility of composting food scraps, the current facility cannot handle more than a two-fold increase in material. Programs at other universities have proven that all food scraps can be collected and composted for no more than what the residence halls pay to have the waste land-filled. Furthermore, sale of finished compost to other University units or the public has the potential to offset many other costs.

Seed funding of $100,000 from the SSC will be used to train staff, prepare the composting site, purchase needed capital equipment, and launch the campus-wide program. Soon thereafter, the program should achieve financial sustainability with disposal payments from Dining Services and outside compost sales. The Environmental Change Institute has staffed the pilot program, and is being approached regarding funding the first year’s program staffing needs.

**Residence Hall produce gardens:**

While the student farm has provided a valuable new source of local, organic produce for use on campus, it is physically far away from campus, which detracts from its ability to engage students. The Committee seeks to provide support to Housing/Dining to establish small produce gardens for students to use to grow vegetables that may be usable by Dining Services. While their food production may be small, the gardens will engage students in understanding where their food comes from, and will simultaneously help source a volunteer pool that can assist a the student farm. Setting up small (~5,000 – 10,000 sq. ft) gardens should be feasible for $5,000 per garden. The Committee will provide funding for five such gardens to be established. Management of the gardens will be carried out in conjunction with the student farm.

**Loan to Student Farm (indirect support):**

The student farm has requested $20,000 as a zero-interest loan for staffing purposes, to be used over calendar year 2011. While this does not directly involve University Housing, this program is a key component of Housing’s sustainability efforts, and generates approximately 20,000 pounds of produce annually, used by Dining Services. Our loan funding will help the farm become financially self-sustaining, “produce more produce” for use by Dining Services, and help the farm transition away from needing grant support from Dining Services.

**Sustainability Education Coordinator:**

A sustainability education coordinator would have two-fold responsibilities – creating, programming for and marketing a sustainability-themed Living-Learning Community, and managing the Eco-reps in Housing.

The School of Earth, Society and Environment (SESE) has expressed interest in partnering to create a sustainability-themed LLC, acting as the academic unit sponsor, and is willing to put forth funding to support hiring a coordinator. Schools from the University of Michigan to Azuza Pacific University have environmentally-oriented living learning communities. The administration section of the College Sustainability Report Card asks about the availability of a “green” themed living and learning community. The existence of such a community will help University Housing attract students to the campus, and retain them in Housing past their freshmen years. Students living in the LLC may also choose to relocate to other residence halls in the future, to staff the Eco-reps program.

The Lincoln Avenue Residence Hall (LAR) seems like the ideal location for a new sustainability LLC, due to its proximity to Allen Hall (overlap in programming/offering, especially for the first few years), the existence of the Field of Greens program in the cafeteria at LAR, and the potential for attracting/retaining students in a building that is transitioning to a co-ed living structure. The Student Sustainability Committee will commit $25,000 for 2011-12, supplemented by funds from the School of Earth Systems, Society and the Environment, to hire a program developer/coordinator. A further $12,500 per year is available for 2012-14, to allow the funding mechanism to transfer to collected fees from the LLC students (total of $50,000). Strong demand exists for such a campus program; it could start out as one or two floors, and then expand.

**Eco-Reps:**

Since students often learn best through peer interactions, many schools have established peer-to-peer sustainability education programs (often called Eco-Reps). Student peer-to-peer sustainability outreach programs were first established at the University of Vermont, Tufts University and Harvard University, and have since spread across the country. Generally, these programs work in the residential areas of campus and are sponsored by a campus department (such as Recycling, Residential Life, or the campus sustainability office). A list of 50 institutions with such programs, including almost every member of the Ivy League as well as public institutions such as the University of Missouri, the University of California at Berkeley, the University of Texas at Austin and the University of Kentucky can be found at http://www.aashe.org/resources/peer2peer.php

Illinois would be the first of the Big Ten schools to offer such a program, positioning us a leader among our peer group, on sustainability. The SSC, and the Office of Sustainability have provided pilot funding for a program based in LAR / Allen Hall this year.

Student educators in such a program can offer a variety of services. First and foremost, they will be expected to model sustainable behavior for other students such as recycling, using bicycles and public transportation, minimizing their energy and resource consumption and engaging in service activities. They can organize floor-wide or building-wide campaigns to promote recycling and energy conservation, and to support food-waste composting and student room weatherization programs, which will help University Housing reduce its energy consumption and overall costs. Eco-reps will be expected to connect other students with sustainability education opportunities (formal and informal), organize activities related to sustainability and an appreciation of nature, lead service activities (such as at the student farm, or campus clean-ups), and get students involved in the many campus Registered Student Organizations that work on sustainability issues. Longer-term activities for Eco-reps could include working to identify operational efficiencies in Housing and Dining operations, and being responsible for establishing and caring for student vegetable gardens and or native plant restorations in proximity to residence halls.

The sustainability education coordinator would be the ideal person to coordinate and support this program. The SSC funds would be sufficient to support the hiring of 100 eco-reps over three years (representing 20 reps in FY 12, 30 reps in FY 13 and 50 reps in FY 14). Housing would be expected to pay for additional eco-reps, transition the program to internal funds, and cover miscellaneous and training expenses. We anticipate somewhere between 80-100 eco-reps being needed to staff all undergraduate halls in University Housing.

**Living Learning Community facilities upgrades:**

As part of creating a sustainability living learning community, certain facilities improvements will be needed to actually create a more sustainable living environment. The Committee will provide $5,000 in matching funds for capital improvements at the LLC such as occupancy sensors, water efficiency use retrofits, native landscaping and so on, identified by Housing. Furthermore, initial installations of capital improvements suggested in the following sections could be directed toward the residence hall hosting the LLC. Accepting and utilizing this capital funding will reduce Housing’s costs for energy and water, and allow for the pilot installation of energy conservation strategies that could be utilized at other residence halls.

**Future Opportunities**

**Energy Display Initiative:**

The Committee is seeking to support (with F&S), an initiative to make real-time campus energy consumption information available and prominently displayed on campus. With the Facilities and Services retro-commissioning program, upgraded buildings are being installed with smart meters that can provide energy use data in real time. We are seeking to fund development of the IT infrastructure, software, and deployment of low-energy use flat-screen displays that can show off this information to campus building users.

Energy displays do not directly reduce energy consumption, but they would certainly encourage energy saving habits. If people can see how much energy they are using and the carbon footprint it leaves, then they will be more motivated to practice energy conservation. The advantage to displays in residence halls is that this is where individuals have the greatest control over their personal energy use. Graphs comparing use between halls could serve organized conservation competitions that would further reduce energy use.

Should this initiative be successful, the SSC would seek to support the deployment of such displays in all Residence Halls.

**Illinois Student Solar Initiative:**

The Student Sustainability Committee (SSC) at the University of Illinois at Urbana-Champaign seeks to launch an initiative to install 500kW of new on-campus solar photovoltaic generation on existing campus buildings by 2015. This initiative represents part of the Committee’s work to support the campus goal to source 5% of total campus energy and 5% of campus electricity use from renewable sources by 2015. The Committee will seek to support the installation of 25 solar arrays on 20 campus buildings as part of this initiative, and will underwrite this effort by committing $1.25 Million to this initiative, through annual allocations of $250,000 to this program. We will seek contributions toward the remaining cost of the initiative from State incentives, grant money, units applying for solar arrays, and any interested parties. Student Affairs units, such as University Housing, Campus Recreation and the Illini Union will be specially targeted to host five such installations due to the high level of student engagement at these sites.