

U Sustain Progress Report 2009

Prepared by Jeffrey Corbin

Education and Outreach Subcommittee

Co-Chairs: Eli Fanning and Erin Delman (student)

Professor MacManus-Spencer and Shabana Hoosein (Student)

Goals:

This subcommittee focuses on educating the campus community about sustainable living so that the collective efforts of members of the campus community will result in a net reduction in carbon emissions.

- Raise awareness of sustainable living on campus and in the community
- Serve as a hub for environmental groups on campus
- Interface with environmental groups off campus

Current Progress/Initiatives:

- Creation and implementation of sustainability training session in coordination with students in Prof. Cockburn's ENS 460 class
- Incorporation of sustainability training session into first year orientation
- Updated Sustainability Guide for incoming first year students
- New logo – designed by Steven Leung
- Updated U Sustain web site, including a continually updated list of news items
- Planned and participated in Earth Day 2009 events on campus and at Schenectady County Community College
- Organized volunteers for Household Hazardous Waste Collections and Electronics Recycling events

Future Initiatives:

- Fall 2009 campus campaign: "Make This Term your Greenest Term" (education initiatives, sustainability training sessions, pledge drive)
- More off-campus outreach and more contact with other organizations (ECOS: Environmental Clearinghouse of Schenectady, SCCC, etc.)
- Establish liaisons in U Sustain from the Environmental Club, Ozone House, Ozone Café
- Create an online sustainability calendar with information about on- and off-campus events – link on U Sustain web site

Energy and Facilities

Co-Chairs: Fred Puliafico and Erin Delman (Student)

Goals:

- Reduce energy use through conservation, increased energy efficiency, and alternative energy production.
- Coordinate construction and renovations to meet College commitment to LEED Silver (or higher) certification

Current Projects/Initiatives:

- Construction of Wold Science and Engineering Center – LEED Gold certified
- Demonstration Fuel Cell installed in Beuth House – collaboration with PlugPower.
- Installation of motion-sensors in appropriate locations
- Continued lighting improvement (updated fluorescents and changeover to LED in certain areas)
- Have contracted with Novus Engineering for Energy Audit. Report due in September.
- Improvements in Building Management Systems
- Ongoing HVAC System Updates/Improvements

Future Projects:

- Continue implementation of recommendations of Energy Audit
- Renew Wind Credits to offset 25% of electricity consumption
- Examine feasibility and benefits of constructing Co-Generation plant
- Reduce temperature set-points where possible to reduce energy use in Winter
- Overall, reduce energy consumption by 3-5% in next 5 years

Bottom Line: In 2008-2009, natural gas consumption (for heating) was 1.1% lower than year previous, even though there were 7% more heating degree days (=COLDER!). And, electricity consumption was 1.9% lower than year previous. This is evidence of success of current initiatives and conservation efforts throughout campus

Waste and Recycling

Co-Chairs: Terry Miltner and Meghan Haley-Quigley (Student)

Goals:

- Decrease solid waste overall, particularly in peaks of September and January
- Creation of a work-study position for Waste Subcommittee/Terry Miltner to initiate new programs and help maintain current ones.
- Increase composting to Dutch, Upper and Rathskellar
- Increase recycling rate and awareness prior to Recyclemania next year in hopes of better participation.
- Educational campaign raising awareness about our enormous solid waste production, about all of our recycling options, promoting products that are more environmentally friendly and that have less packaging.

Current Projects/Initiatives:

- Participated in Recyclemania, including education campaign to increase recycling and decrease waste production
- Student-run cardboard recycling program has expanded cardboard collection beyond central collection points to include academic and residential buildings
- We are in the process of storing cardboard boxes from the cardboard recycling program that are in good enough condition to be rebuilt and used again for Union's Ship-it-Home program.
- Erin Delman ('12) and Kimberly Floeser ('11) established plastic bag recycling and "borrow a canvas bag" programs at the Union Bookstore to reduce plastic bag use and waste

Future Initiatives:

- We plan to design a simple poster to be hung permanently in several locations, describing the items that we recycle and where, with the hope that our recycling will increase and solid waste decrease.
- We are also looking into other schools recycling incentive programs, Terry recently attended a meeting on Recycling and Waste Management and we are evaluating whether programs at other colleges/universities could be created at Union.
- In terms of composting, we are aware that there is some discussion (not in our group) about the expansion of our program but also banding together with other schools in the area (UAlbany, Skidmore) to attract or interest an outside company that could facilitate our compost program.
- Environmental club is also working on creating a simple recycling instruction guide to be put in the Orientation packets for incoming freshman, and we hope that this can also be a part of Resident Advisor's first floor meeting of the year.

Dining Services

Co-Chairs: Dan Detora and Eliza Duquette (Student)

Goals:

- Increase consumption of local and/or organic food
- Decrease carbon budget associated with dining services
- Decrease waste associated with dining services

Current Projects/Initiatives:

- Moved to bulk condiments
- Moved to single serve napkins
- O3 Marketplace sales doubled from previous year
- Composted almost 3 tons of food waste
- Expanded the garden
- Purchased roughly \$225,000 of local produce
- Purchased a reusable mug and bag for the entire freshmen class

Future Initiatives

- Campus Kitchens to give leftover foods to local food pantries
- Expanding composting program
- Start to use reusable containers for Dutch Hollow
- Move forward with Beef Less Mondays in order to reduce carbon emissions

Transportation

Co-Chairs: Prof. Jeffrey Corbin and Johanna Geoghegan (Student)

Goals:

- Reduce miles driven by employees and students
- Specifically, we hope to encourage each employee to drive (alone) to campus one day less per week, and to end student driving between campus points.

Current Projects/Initiatives

- Established three preferred parking spaces for carpools
- Bikeshare program
- Trolley transports students to points on campus and off.

Future Projects

- Expand number of spots for preferred parking spaces as demand requires
- Trolley Tracking Program will provide real-time, web-based location of trolley to increase usage. (Collaboration between Mechanical Engineering, Electrical Engineering, and U Sustain)
- Development of web-based carpool finder system to increase carpooling by employees and students

Academic Curriculum

General metrics

- Number of students taking classes with a significant focus have increased by more than 2 ½ times in the last 7 years.
- The College has responded to this by increasing offerings, particularly within the Environmental Studies program: ENS-100 (Introduction to Environmental Studies) is offered every term (up from once per year in 2006-2007 and twice per year in 2007-2008); courses in Green Buildings and Hydrology have been added; the State of New York recently accredited a Bachelor of Arts degree in Environmental Policy and a Bachelor of Science degree in Environmental Science; the Environmental Science major includes an Environmental Engineering “track” that takes advantage of the unique opportunities that our Engineering faculty provide; and a new minor in Environmental Engineering is under consideration.

Purchasing

Co-Chairs: Patti Ehrlich and Paul Debiase

Goals:

- Ensure that supplies and equipment purchased will be as sustainable as possible, from the perspective of energy efficiency, waste reduction, and/or utilization of sustainable manufacturing practices
- Increase awareness and use of “green” vendors and their products by campus community
- Increase use of recycled paper on campus while reducing overall use of paper
- Improve the disposition of assets

Current Projects/Initiatives:

- Eliminated the printing press and replaced it with a digital machine which uses vegetable inks. This removal eliminated, petroleum products and hazardous waste and also soiled rags and toxic fumes.
- Will convert Student Handbook to an online version for the 2010-2011 school year. This move results in the following savings:
 - 19 fewer trees harvested
 - 31 million fewer BTU's
 - 4552 pounds lower emissions of of CO2 (greenhouse gas)
 - 15260 fewer gallons of water
 - 1823 pounds less solid waste sent to landfills.
- Introduced of soy toners for laser printers, replacing petroleum-based inks
- Introduced Aupens – refillable dry-erase markers
- U Exchange, a marketplace that enables the campus community to exchange used items

Future Projects

- Will develop training session for double-sided copying in departments across campus
- Collect sustainability policies from new and existing vendors; incorporate into RFPs (request for proposals); With creation of preferred vendor database, include vendor’s sustainability practices (when available); Educate campus community on existence of database and promote its use
- Target departments that use a lot of paper (e.g. Student Activities, Residential Life, Admissions, Bookstore, Printing Center) to partner with and brainstorm on best practices

Presidential Green Grants

Chair: Jeffrey Corbin

President Ainlay and Union College have made the firm commitment to make Union's operations more sustainable and to have a positive impact on the environment. The Presidential Green Grants are one way that we are putting our money where our mouth is.

Green Grant Award Categories:

- Initiatives to make Union College's operations more sustainable
- Support for research projects designed to benefit the environment either regionally or nationally.

Facts:

- Proposal submissions from students, faculty and staff
- Campus projects will make quantitative improvements in our energy efficiency, waste reduction, and sustainable dining choices.
- Research projects investigate alternative energies and green building
- Amounts awarded range from \$500 to \$2000.
- \$16,000 awarded total

Acknowledgements:

- U Sustain and the Green Grants Committee
- Rich Wilk, Holli Frey, April Selley, and Ian Clemente
- President Ainlay and the Hewlett-Mellon Foundation

2009 Green Grant Award Winners:

- Michael Bono – “Fabrication of an aerogel composite catalytic converter”
- Kevin Donovan and Malysa Cheng – “Design and implementation of a micro-wind turbine to assess wind power generation on the Union College campus”
- Kimberly Floeser – “Canvas bags for U”
- Cathy Griffin – “The Union Exchange Website”
- Edward Hancock and Malcolm T. Dennison – “Examination of ocean wave energy through the method of a point absorber wave energy buoy”
- Hugh Jenkins – “Octopus’ Garden Organic Garden expansion”
- Tom McEvoy – “Mugs for Minervas”
- David L. Sanders – “Eco-Friendly Potting Shed”
- Jordan Silletti – “An energy audit of Golub House and Fox Hall”
- Tyler Willey – “Lighting the way to a more environmentally friendly campus”