

Sustainability Committee Minutes 11 Nov 2009
Sharples Room 4, 8:30 am – 9:30 am

Attending:

Ralph Thayer, Eric Chiang, Evelyn Strombom, Nicole Lewis, Maurice Eldridge, Kendall Johnson, Carr Everbach, Linda McDougal, Nadine Kolowrat, David Burgy, Joy Charlton, Mark Davis, Amanda Bayer, Rebecca Ringle (LCI), Elan Silbertblatt-Blazer (EL), Jacob Socolar (EL), Margerie Herbert (GF), Camille Robertson (GA), Hannah Jones (GF, GA)

While members obtained breakfast items and assembled, Carr asked whether students on SusCom would be interested in providing a summary of activities of student environmental groups as a part of each meeting. The alternative is to have the student groups' representatives themselves provide that summary during the (every other) open meetings. Evelyn offered that summaries provided by SusCom student members would be more concise and geared toward the Committee's needs. Our open meetings would deal with the issues that arise from the student groups anyway.

Ralph Thayer presented a list of 5 possible projects for funding by the Green Revolving Loan Fund, which he re-christened as "Renewing Fund for Resource Conservation" since that is a more accurate description of its purpose (Ralph's document, annotated by Carr, is appended to these minutes, below). Reviewing these ideas is the main agenda item for today's meeting.

Nicole confirmed her understanding that any funded project would not save the College money while it was in "payback" mode, since any savings would be used to repay the Fund. After the break-even point, projects should have a long "tail" of usefulness because the monetary savings begin to accrue thereafter (the carbon savings would be immediate).

Ralph's Suggestion 1, replacing the 6-watt wagon-wheel incandescent bulbs in Sharples would save money not only on the electric bill (1.9-watt LEDs), but also on replacements (now every 6 months, we must completely replace all the bulbs) and labor (2 days work for a 4-man crew). The total price tag, \$48,000, is high however, and more than the \$43k available from the Fund. A partial measure would be to replace every other bulb, which also would partly ameliorate the difference in bulb color (reddish versus bluish). On the other hand, the cost for scaffolding to re-lamp is considerable and this would have to be done again when the other half of incandescent bulbs is replaced. This would be a highly visible change that students would know is made possible by their Student Council money.

Ralph's Suggestion 2 is to convert 40-watt ceiling florescent lights (T-12) with 28-watt T-8 bulbs (no change in fixtures). Facilities has been replacing these already from its budget but there are still thousands of bulb replacements to go. Carr asked if students minded their money going to something already underway and Rebecca said that she spends more time under the T-12 lights in classrooms than in Sharples,

so she doesn't mind. The payback time is very short, and the cost is estimated at only \$10,000, so the Fund would be replenished quickly to be used for other projects. However, the changes will be nearly invisible to the College community.

Ralph noted that Toyota sponsors a "treasure hunt for energy savings" among its employees, and we could do that, too. Rebecca noted that students could be trained to report energy-inefficient systems.

Ralph's Suggestion 3 is to put daylight sensors (\$180 each) near windows on hallways that receive natural light, so that the hallway lights turn off when there is sufficient daylight. Jacob noted that it is often hard to figure out which hallway switch operates which lights. Rebecca noted the terrible overlighting of hallways at night, especially in the Science center, that would not be addressed by Ralph's daylight sensors. Nicole and Amanda recommended publicizing which light switches turn off which lights via improved signage. EarthLust could conduct a survey of where such signage would be best located.

Ralph's Suggestion 4 is for occupancy sensors (\$80 each) in bathrooms. Jacob commented that many bathrooms have lights that can't be turned off at all, especially in the Science Center. Amanda again noted the utility of proper light switch labeling and signage, and the advisability of EarthLust's conducting a survey of such signage in campus bathrooms. Mark and Carr discussed whether high or low traffic bathrooms are the best candidates for motion sensors. Hannah raised the issue of instilling personal responsibility and modifying the wasteful habits of the public versus technological fixes such as occupancy sensors. She agreed with the importance of a signage study but felt an awareness campaign is also warranted. Amanda agreed, and noted that people can be taught to pay attention to light switches (a lesson she learned as a child). We are an educational institution, and so occupancy sensors miss the opportunity for public education on this issue.

It was noted that Faculty/Staff should be part of the awareness campaign too and there was general agreement on this point. Nadine noted that the College is "persnickity" about signage, however, and EarthLust should work with Jan Semler (Facilities) on sign design and not just implement their own. It would be a shame if signs were removed by EVS staff because they were not College-sanctioned. Hannah asked how we could engage faculty/staff. For students, engagement comes from direct interaction in the dorms and via the Green Advisors digest left in bathrooms. Mark suggested using the College email digest, which goes to faculty/staff. Maurice added that an invitation from students to join them in turning off bathroom and hallway lights might go in the faculty/staff digest and be beneficial.

Ralph's Suggestion 5 was improved insulation on subterranean steam and hot water pipes. This is short payback but very costly, and completely invisible to the public.

There was a discussion about the idea that SusCom might fund several partial projects, in order to diversify our investments and raise public consciousness about the projects. As certain projects replenished their loans then new monies would be

available for other projects or new ones. For example, the \$43,000 might be divided this way: Suggestion 1 (\$24,000), Suggestion 2 (\$10,000), Suggestion 3 (\$5000), Suggestion 4 (\$4000). If payback estimates work out, we'd replenish quickest from Suggestion 1 and 2 and could either fund the rest of Suggestion 1 (another \$24k) or do more of Suggestion 3 and 4, or come up with something else entirely. There was also discussion about the possibility that alumni or the President might wish to someday supplement the "Renewing Fund for Resource Conservation" (RFRC, or "RIF-rick") so that we could save even more money/resources in the long run.

Jacob asked about other energy-saving ideas not on Ralph's list, such as having the ceiling-mounted projectors in classrooms time out if left on. Mark replied that they do, and that he would check to find out the time-out interval. Jacob noted finding the projector in SC101 on late at night, though the beam was covered. Mark will check on this and report back.

Camille asked about "vending misers," devices to turn off the lights of vending machines, which have (she thought) a one year payback. Carr will contact Alice Balbierer (Facilities) to find out about this possibility given our contract with vendors.

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Jacob then initiated a discussion of GreenBox suggestions that EarthLust could implement immediately with SusCom support.

The first category is Consumption and Trash, issues that unite student environmental groups, especially Environmental Justice (since campus solid waste goes to the Chester incinerator). Included would also be expanding composting, since recycling has appropriate bins and labels but composting does not. A public education campaign is something EarthLust could undertake immediately. Paper and printing waste (ITS) is endemic on campus and could be reduced without expensive print-release software/hardware. Students would like an opt-out option for Career Services and other paper newsletters; indeed, it would be good to phase out the practice of mailbox stuffing in favor of RSD, various listserves, and posters. Many newsletters could be electronic rather than paper, including the glossy gallery announcements for the List Gallery (Linda mentioned that Dining Services had requested that fewer of these be sent for posting in the Dining Hall, but in vain). [N.B.: Carr later discussed the matter with Andrea Packard of the List Gallery, and Andrea is willing to come to a future SusCom meeting to explain. There are many issues of which the Committee and student groups are unaware.]

Jacob requested bigger signs in coffee bars advertizing "bring your own mug." He asked SusCom to institutionalize GreenMarch and similar activities year-round, as well as events, speakers, and movies. He offered a plea for SusCom to continue to find ways to shape the curriculum in advance of opportunities for hiring new faculty. He thought SusCom should identify and push for one or two high-cost recommendations. When Carr asked which high-cost recommendations EarthLust wanted to push, Jacob replied that a Sustainability Director is on the top of the list, then wind power, then future building planning (LEED or better).

As regards a timetable for these efforts, Jacob called for a published plan for action items, with timetable, send out to President Chopp and the campus newspapers. GreenBox suggestions should be revisited and the annotations updated (many are now stale). Facilities should consider shutting off heat in buildings during breaks when students are here (this is already done for breaks when students are absent).

In summary, Jacob pointed out that student environmental groups can provide a lot of manpower. SusCom should advertize what we are doing and especially the successes that arise from collaboration with the student groups. They'd like to start right away.

Carr and Nicole addressed the issue of recycling bins being paired with trash cans, or even compost bins forming triplets on campus. EarthLust was given the go-ahead to start the light switch sign survey (halls and bathrooms) and identify lights left on all the time. They were also given the OK by Linda to make larger signs for "bring your own mug" at coffee bars.

Hannah asked SusCom again to endorse the institutionalization of the GA program, a recommendation that went un-enacted last Spring. She noted that last year Green Advisors typically had 5 people attend meetings; this year it is 20, with frosh excited and energized. The Green Advisors program is doing well on a volunteer basis, but if paid positions, would be easier to keep going at a high level.

Carr reminded everyone that the next SusCom meeting is to discuss alumni funding of sustainability initiatives. Jacob noted an offer by an alumnus at his frosh Lax conference to donate to the wind power campaign. It was decided that that meeting would be an *open* meeting with representatives of student environmental groups in the discussion.

The meeting adjourned around 9:30 am.

Respectfully submitted,

Carr Everbach

Monday, November 16, 2009, 11:30 am-12:30 pm Lang Center Keith Room: open meeting for SusCom discussion, Lisa Lee and Geoff Semenuk (Alumni) and Don Cooney (Development) are invited to discuss Sustainability fundraising issues.

Wednesday, November 25, 2009, 8:30-9:30 am Sharples Room 4: open meeting with EarthLust, Good Food, EJ, Green Advisors, or any other group who wants to attend.

Wednesday, December 2, 2009, 8:30-9:30 am Sharples Room 4: closed meeting for SusCom discussion of finalists in Green Revolving Loan Fund proposals received Tuesday, December 1

Wednesday, December 9, 2009, 8:30-9:30 am Sharples Room 4: open meeting with EarthLust to discuss preliminary ranking of Green Revolving Loan Fund projects.

Monday, December 14, 2009, 11:30-12:30 Lang Center Keith Room: meeting open to the public for final tallied voting by SusCom members on Green Revolving Loan funding of projects.

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Renewing Fund for Resource Conservation (from Ralph Thayer)

Projects:

1. Sharples Dining Hall – LED Lighting Retrofit

The project would eliminate the 6 Watt decorative lamps in the “Wagon Wheel” architectural fixtures and replace them with 1.9 Watt LED Lamps. Based on preliminary figures, the payback would be 5.5 years. Cost: \$48,000 if all bulbs replaced.

- Advantages: Highly visibility area
Immediate reduction in kW and kWh costs
Opportunity to gauge effectiveness of LED lighting
Improved Lumen level

- Disadvantages: High Initial cost of LED lamps
Uncertainty of lamp life.

2. Retro-fit of T-12 fluorescent fixtures

The project would identify remaining T-12 , 40 watt fluorescent lamps and retrofit them with T-8, 28 Watt fluorescent Lamps and ballasts. Based on preliminary figures, payback would be less than two years. Cost: \$10,000.

- Advantages: Reduction in kW and kWh costs
Improved light quality
Fixture can be retrofit with no modification to lamp holders.
F40-T12 lamps are being phased out of production.

- Disadvantages: Very slight reduction in initial lumen levels (2750 vs. 3000) which is offset by the T-8’s retention of higher lumen level over the life of the lamp.

3. Installation of light sensing switches

The project would identify hallway/foyer areas with large window openings that would be suited to interrupting light switches when ambient light from windows is sufficient. Payback is undetermined as it depends on location and other variables. Cost: \$180 each.

Advantages: Reduction in kW and kWh costs
Automatic response vs. someone noticing the need to turn off the lights.

Disadvantages: May reduce light levels on cloudy days below a level deemed suitable

4. Installation of Occupancy Sensors in All bathrooms

The project would identify bathroom areas in the older buildings that do not have occupancy sensors and retrofit them. Payback is variable depending on the frequency of use for a particular room and lighting levels in that space.

Advantages: Reduction in kW and kWh costs
Automatic response vs. someone noticing the need to turn off the lights.

Disadvantages: Reinforces the “hands off” approach to resource management rather than reinforcing personal responsibility.

5. Replace Aged and Damaged Pipe Insulation.

The project would identify areas where pipe insulation has been compromised and augment or replace the insulation. The initial concentration would be steam piping as it is estimated the payback could be as little as twenty four months. Insulating jackets for steam valves would be included as part of the project.

Advantages: Reduction in heat losses and increase in fuel savings.
Increased comfort levels in areas adjacent to mechanical rooms
Increased safety for workers.

Disadvantages: High initial cost, especially for valve jackets.