

Olin College
2008-2009
Sustainability Plan

July 23rd, 2008

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INTRODUCTION

Olin College has already done an exceptional job in initiating Sustainability on campus. They are currently in the process of obtaining LEED certification for Milas Hall. In addition they came in fourth place in the Recyclemania competition for the partial campus Grand Champion category. These initiatives are a great beginning to what will be an ongoing movement to campus sustainability. Our team's objectives are to provide Olin with an effective change management program that will build on what Olin has already achieved. This plan will focus on ways for Olin to communicate their mission and goals, engage the student body, faculty, and staff and further involve the administration in the movement to Sustainability; specifically focusing on environmental, social and economic impact to Olin's operations.

Background

Olin College was opened in the fall of 2002 as a full scholarship Engineering school. Its mission is stated as follows:

Olin College prepares future leaders through an innovative engineering education that bridges science and technology, enterprise, and society. Skilled in independent learning and the art of design, our graduates will seek opportunities and take initiative to make a positive difference in the world.

Olin College also speaks extensively about its vision which has been evolving over the years as technology and society advance. There are four key components to Olin's vision that most of the education programs follow: Discovery, Invention, Development and Test. We believe Olin can also apply this vision to the commitment to become a more sustainable campus. Currently, Olin has taken on or participated in several sustainability programs and further commitment on that front will only help. Our

team has studied Olin's current situation and has come up with thoughts on how Olin can continue to move towards a more sustainable campus.

LEED Certification

It is our understanding that Olin College is currently working toward LEED-EB Certification for the Milas Hall building on campus. Andy DeMelia is leading the certification process for Milas Hall. Given that the results of this process are positive, we suggest continuing the LEED certification process for other buildings on campus as time and economics permit.

There are four different levels of LEED certification: certified, silver, gold and platinum. The certification requires a minimum of 34 points while platinum requires at least 68 points. Olin should continue to evaluate which levels are most attainable based on improving sustainable operations for energy, waste and water in the buildings. If Olin is eventually able to get most buildings certified that would be an integral part in the change management process. Furthermore, this could eventually lead to a reduction in overall operation costs across the campus.

Recyclemania

Recyclemania has taken off over the past few years at universities and colleges around the country. The competition for 2008 was completed in the spring of this year. Olin College placed fourth in the Grand Champion category for the partial campus category. This is a remarkable achievement considering the competition had more than four hundred participants and that Olin put minimal planning into this initiative. If feasible, Olin may want to think about joining the whole campus competition and strive

to set an example for other colleges and universities around the country as it did in the partial campus competition.

In general the number of participants has grown rapidly in the past years (see Appendix A). This certifies the legitimacy of the Recyclemania competition. If Olin continues to place well in the competition, it can act as a differentiator to other engineering schools that it may compete with for students.

CHANGE MANAGEMENT

Vision

Our team believes implementing sustainability into Olin's mission statement can help attract and retain future generations of students. Our suggestion for Olin's sustainability vision is as follows:

Olin aims to integrate sustainability in every aspect of its operations, especially student education, to minimize the impact on our natural environment. Furthermore, Olin will pursue activities that will positively impact the environment.

Mission

In the introduction of this sustainability plan, we briefly described the background of Olin College and in particular, its mission statement. By implementing the following minor modification to the mission statement, Olin can further integrate sustainability into its brand.

*Olin College prepares future leaders through an innovative engineering education that bridges science and technology, enterprise, and society. Skilled in independent learning, the art of design, **and sustainability**, our graduates will seek opportunities and take initiative to make a positive difference in the world.*

Organizational Structure

This plan suggests several methods and initiatives to make the Olin College campus more sustainable as a whole. A larger question is how to implement these changes and sustain changes long term while keeping economics and culture in mind. The recommended organizational structure to achieve ultimate sustainable development at Olin College is the development of a Sustainability Steering Committee and a Sustainability Task Force (see Appendix C).

The Sustainability Steering Committee should be responsible for the high-level management of economic and strategic decisions for the college. Members of the Steering Committee should include Olin's top leaders and the Facilities Services Director. The Sustainability Task Force should include faculty, staff, alumni, and students dedicated to sustainability. Ideally the members of the Task Force are volunteers to the cause. Staff from a variety of departments should also be included, such as Purchasing, Facilities, and Information Technology. The task force will work towards the following goals:

- Develop and recommend a sustainability action plan for Olin College using the guidelines set forth in the American College and Universities Presidents Climate Commitment and LEED-EB certification
- Identify and assess campus initiatives to improve sustainability
- Increase campus activities environmental impact awareness
- Provide the Olin community with information about current sustainability efforts and promote action towards environmental friendliness

Olin's leaders should make great efforts to support and promote innovative sustainability and the individual sustainable initiatives existing on campus; specifically in their communications, speeches, and interviews with any parties of interests including students, parents, sponsors, other schools and any media outlet available.

Communication / Marketing

This sustainability plan proposes four communication and marketing activities for the 2008-2009 school year at Olin College:

- 1.** The first initiative is the creation of a sustainability website for students, staff, and professors. Information on the website will include a news section, events, links to other sustainability sites such as “New American Dream,” and a link to the online Sustainability newsletter. The website will also describe all current and future green initiatives at Olin College. For example, it will provide easy tips for “going green;” college’s sustainability leadership and participants; information on recycling on and off campus; a description and syllabus of sustainability courses offered; and all developments in LEED-EB certification. Another important component of the website will be a scorecard on how Olin is doing on recycling and energy consumption on a monthly basis.
- 2.** The second initiative proposed is an online sustainability newsletter to be maintained and emailed to stakeholders every semester. The newsletter will discuss updates on current initiatives, information on new developments in the Sustainability area, and green tips. To promote the newsletter, a college-wide competition will be held to help name and design a logo for the newsletter. This newsletter could also be distributed as part of “Frankly Speaking,” the campus-wide newspaper. Since promoting environmental awareness and sustainable practices is in agreement with their mission, it is suggested that “Greening Olin” help to select information and write short articles for this publication.

3. The third initiative is to continue participation in the Recyclemania competition. Olin should register and start student, faculty, and staff education early on in the school year; the school should also seek the help of other groups within the college in this initiative such as student groups, residential life, etc. Signage around campus, advertising during half-time of sporting events, campus-wide emails, and announcing in the sustainability website and newsletter are great ways to promote this competition.

4. The last suggestion for the 2008-2009 school year is to encourage “Greening Olin” participants to start succession planning for this club. This group has a goal to promote environmental awareness, sustainable practices in the greater community, and to learn more about environmental issues. These goals will help promote campus sustainability at Olin College.

EDUCATIONAL PROGRAMS

Co-Curricular

The co-curricular program is a great way to introduce a spirited competition in sustainable design. One competition that has worked well over the years and created a lot of publicity for the startup companies involved is the MIT 100K challenge. The challenge is a business plan competition for anyone who has an idea for a company and wants to participate. The participants and winners have gone on to run successful companies and created employment for hundreds of people. It is a yearlong competition and is judged by a panel of experts from various backgrounds including venture capitalists, biotechnology executives, attorneys and investors.

As an institution focused exclusively on engineering, a sustainable design competition could be of great value to the school and hopefully to the world in advancing

sustainable design. The competition could be modeled after the MIT 100K but instead of having the categories open to all ideas it would be one category – sustainable design. Olin College has already produced successful sustainable designs; this competition would be a great way to continue to create more innovations in sustainability and design.

Sustainable Design in the Curriculum

Olin College has established itself as one of the leading engineering schools in the country. One of the reasons this school stands out is because its leadership understands the need for efficiency and that constantly changing and evolving is required. In their curriculum overview they state:

Our curriculum will never be a finished product--we'll keep adapting it in pursuit of our vision of continual improvement.

Currently Olin offers courses in sustainable design as electives. Growing the course offerings and possibly making it a requirement would prepare students for jobs in sustainability after graduation. It is a fair assumption that many new jobs will be created in the area of sustainable design considering that over the past several years the world has become more conscious about the triple bottom line: economic, social and environmental sustainability. In order to adapt to this trend in society and business, implementing additional sustainability courses into the curriculum will advance Olin College's place among top engineering schools. More importantly, the knowledge and designs that are a result of the new curriculum could go on to make real change in the world in terms of sustainability.

RECOMMENDED INITIATIVES

Compost Program

The United States buries over 30 million tons of food waste per year in landfills, where it decomposes and releases a methane-rich gas. This gas is twenty three times worse for global warming than CO₂. Many emerging companies have a simple solution - provide supermarket and restaurant locations with on-site waste-processing systems that convert previously discarded food waste into a source of renewable energy and organic fertilizer.

This solution has been implemented at Laurene Candle Co and could be implemented at Olin College. The co-founder and CEO, Shane Eten, is a full-time Babson MBA student. Prior to Babson, he launched an eco-conscious consumer product line for Laurence Candle Co. Shane could act as a great contact in regards to implementing environmentally conscious food disposal systems at Olin.

The company is looking for partnerships, collaborations or affiliations. The company has an exclusive licensing agreement with an anaerobic digestion technology provider.

Contact - Feed Resource Recovery Inc.

Headquarters: Boston

Employees: 4

Founded: 2006

Web: www.feedresource.com

E-mail: shane@feedresource.com

Phone: 617-913-0599

The purpose of this initiative is to divert the waste from landfills and groundwater streams. The key component to the success of this initiative is creating awareness among the staff and students. If people are aware they will think twice about taking an excessive

amount of food and also disposing of it properly. The compost created by this activity could also involve local farms which could, in turn, promote Olin around the community. Farmers can use the compost because the process can turn it into highly rated natural fertilizers and the gas can be used for energy. The proper disposal and reuse of food compost then turns into a win-win for all parties involved.

Recycled Paper Initiative (and Paperless Initiatives)

In this day and age we have to reduce, reuse and recycle paper. Recycling now will help save trees and money long term. Olin has done an outstanding job so far with its recycling efforts, most notably placing fourth in Recyclemania. Olin can now spread the recycling efforts to places like the printing labs. Another way to reduce paper use is to promote an academic system of virtual “black boards.” This is the next new hot area in academic technologies. Students should be creating wikis, blogging, and sharing information in these virtual sites rather than using paper. In general, all academic projects and papers should be uploaded to a virtual drop box. All students and staff should be trained on how to print files and models too big for upload to PDF. These virtual file exchanges have double edged benefits.

Most importantly, it is the academic institution’s responsibility to train staff and students on how this technology works and stay up to date on the facilitation of the technology. This is the fiduciary responsibility of the school, not only to the students to increase education value but to the environment to eliminate unnecessary waste from the landfills. Furthermore, the use of virtual exchanges should reduce overhead administrative costs for the school in the long term.

A couple tips on how to reduce paper use in the printing labs are: make sure all printers are set to double-sided printing, maximize the use of power point presentations and electronic copies, buy only recycled paper and place recycling bins at every associate's desk. Once these tips are implemented it will become part of the culture and spread like wildfire!

Some more tips to keep in mind:

- Without paper, make sure you are backing up files.
- Realize that a paperless office does not happen overnight.
- You will need to rearrange your office — a good thing.
- “Paperless” often really means “less paper.”
- Everyone has to buy in.
- Realize that less paper is just the beginning of the payoff (Virtual filing cabinets increase productivity).

Power Management and Power Down Project

An important initiative in this sustainability plan is ultimate power management. This program will be designed to decrease the amount of greenhouse gas emissions produced by Olin's campus, save energy and reduce the overall energy costs. Olin has already made substantial efforts to power down the campus during school breaks. It is now time to get the entire student body and faculty on board. By involving all relevant parties in the initiative and educating them on ways to conserve energy it will create awareness and embed sustainable practices to be used all the time – not just on school breaks. As an educational institution, Olin already has the voice to reach many people willing to listen and learn. Energy conservation should be at the core of the school's mission and curriculum.

The Sustainability Task Force at Olin will create awareness campus-wide by promoting the Power down initiative. Flyers (see Appendix B) can be created and posted

in appropriate places all around campus stating the goals of the program: Turn off and unplug computers, printers, fax machines, cell phone chargers, and other equipment and electronics - or simply turn off the power strip into which they are plugged. Reminders can also be sent via email once a month. This program is not just for semester breaks, it should be a constant practice.

Computer Power Management in Dorms, Office and Computer Labs

It is recommended that Olin make it a requirement that all computer labs/clusters at the college campus be permanently set to “power save” mode so that in idle time energy is not wasted. Since it is not enforceable for the college to require all students to practice this with personal computers, the Sustainability Task Force should also take an initiative to encourage and promote this in all dorms, campus stores and faculty offices.

All school-owned computers should be converted to use LCD monitors. LCD monitors can be purchased for less than \$180.00 and will quickly demonstrate an energy and cost savings. Active CRT monitors use approximately 73 watts while LCDs only use 34 watts. This sustainable investment should also be promoted to the students and faculty to persuade their personal purchase choices.

Sustainable Transportation

One option is to make a free shuttle available to all students to and from local drop off points for trains, buses and commuter rails. The use of public transportation over individual vehicles by students and faculty will dramatically reduce the carbon footprint of the campus as a whole. Although the cost upfront for purchasing the vehicles is significant, the long-term savings for the students and faculty will be recognized.

An online network set up through Olin's website can act as a center of communication for commuters and other students who may be traveling home for the weekend or to other city destinations. The Sustainability Task Force can create an internal network for students or use a web-based application, such as GoLoco to set up groups for shared transportation. The application provides an easy way to set up local groups for students without any burden of additional overhead.

On top of efforts to reduce vehicular transportation, the transit and bicycle/pedestrian infrastructure is also very important. Olin is a small campus so walking and biking should act as the main mode of transportation. Providing a safe and easy place to walk or bicycle will encourage the use of these alternative means of transportation. Setting up bike racks at parking stations in key areas of the campus will make students feel safe leaving their personal means of transportation (i.e. bikes, skateboards, scooters, etc.). With gas prices at an all time high, alternative means of transportation should be an easy sell to college students. The responsibility of marketing and promoting alternative means of transportation would be the responsibility of the Sustainability Task Force.

Student Waste and Energy Reduction Challenge

Each semester the Sustainability Task force should organize a "Student Waste and Energy Reduction Challenge." The competition will last for one month with the intent to encourage students to practice and learn sustainable behavior. The major goal is to engage students living on campus in activities that reduce their environmental footprints - in particular, energy and water use.

Each of the dorms will compete as a team working to reduce their per capita energy and water consumption. The usage results of the month long competition will be compared to their buildings average usage from the past three years. The building that reduces their energy and water consumption the most will win a cash prize to their hall fund and a plaque to be displayed in the lobby of the building.

This competition will create awareness and demonstrate the difference such efforts can really make. The students will come out with feelings of reward, not only because of the prizes, but because of a sense of accomplishment and pride. The metrics of their efforts for energy conservation will be positive reinforcement and embed permanent knowledge for sustainable practices. The hope is that students will carry on the practices they learned while at Olin to their future residences, homes, and places of employment.

METRICS, MEASURES & BENCHMARKS

Thinking back to the Change Management section of this report, Olin College must first change the culture from the top down. They must then choose which suggested projects they intend to pursue. The top of the organization must make strategic objectives clear. The point here is to focus on cross-functional processes. Each step of this process is to make the school more environmentally-friendly which is something everyone can feel good about. The basic premise behind this idea is to conserve and ultimately become more efficient which will eventually lead to economic savings. Finally, it is a crucial step to have a way to measure the success of the initiatives put forth for sustainability. Lack of measurement and accountability is like a ship with no rudder. This poses quite a challenge on newly emerging practices because there are currently no standard metrics or benchmarks yet.

Unfortunately, there is no magic equation that will give you the insight you require to know if you are successful. However, this is also a time of excitement and innovation. This is an opportunity to **set your organization ahead of the rest of the pack**. This metric methodology could even become the industry standard.

Common Denominator

A metric must have a common denominator so you can create apples to apples comparison across all functions of a business. You also want to select a common denominator that can be compared easily to your competition. Simplicity is paramount; metrics have to be transparent and measurable.

For Example: In asset management the common denominator is, of course, assets. Hypothetical: Fidelity Investments has \$74.13B under management in (Contrafund) and \$36.27B under management in (Growth Company). These two mutual funds behave almost identically. However, total management compensation per a year for Contrafund is \$100M and \$75M for Growth Company. At first you think it costs a forth less to pay the team running Growth Company. It actually costs substantially more in the world of investment management.

Contrafund: $\$74.13\text{B} / \$100\text{M} * 10,000 = 13.49$ basis points

Growth Company: $\$36.27\text{B} / \$75\text{M} * 10,000 = 20.68$ basis points

(7.19) basis points more

This metric is comparable across funds no matter which company we are talking about. The lower the management firm can keep the basis points for operation, the more revenue they can keep. The common denominator is the most important part of a good metric. Research Associates will get hired and fired on this meaningful metric. In the

world of education, the simple and most accurate denominator is the number of students in the school.

Proposed Metrics

Given the suggested initiatives, the following are some metrics that are good candidates for tracking success and decision making. These are only a few ideas and each organization will ultimately have to decide what is right for them.

Compost Program

Cost of Rubbish Removal / Number of Students

Pounds Composted Materials / Number of Students

Recycled Paper / Paperless

Pages Printed in the Computer Lab / Number of Students

Number of Electronically Submitted Projects / Number of Students

Power Management

Kilowatt Hours / Number of Students

Sustainable Transportation

Student Ridership / Number of Students

Metrics with meaning can now be used to drive organizational behavior. On the “sustainability website,” a “Green Report” (See Appendix D) can be created tracking all of these metrics monthly. It might even belong right on the home page. Tracking the progress of your project over time gets everyone involved in the process. As students see monthly changes, this will increase their excitement and engagement. Targets should be set and as time moves forward and goals are met there should be community rewards.

These changes will not happen overnight, you might even hardly be able to see them at all. This is why it is absolutely essential to accurately measure them over extended periods of time. In many cases, it will be the only real proof any changes are happening at all.

In the appendix there is an example of a possible “Green Report.” All facts and figures have been exaggerated for the purposes of aesthetics. The first year of the initiatives, little change will be seen. However, over a few years real exciting results will be seen. Everything good takes time and patience. With management’s buy in and initiatives set forth, you now have a feedback instrument and information to motivate the community. The point of these metrics is to build community accountability, because no one can take on this task alone. This is no job; this is a community responsibility.

CLOSING REMARKS

We hope our plan provides a guideline to Olin College staff and students. We believe the most important aspect of moving to a more sustainable campus is to continue to spread the word about sustainability to the community through the Task Force. The path to sustainability will take a long time, but as with most things having a solid foundation in place, will help achieve future sustainability goals. We hope the Task Force can be successful in continuing to communicate this way of thinking to the Olin College community.

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“MIT Entrepreneurship Competition – MIT \$100K” www.mit100K.org

What is Sustainability? PowerPoint Presentation. Waltham, MA: Bentley College

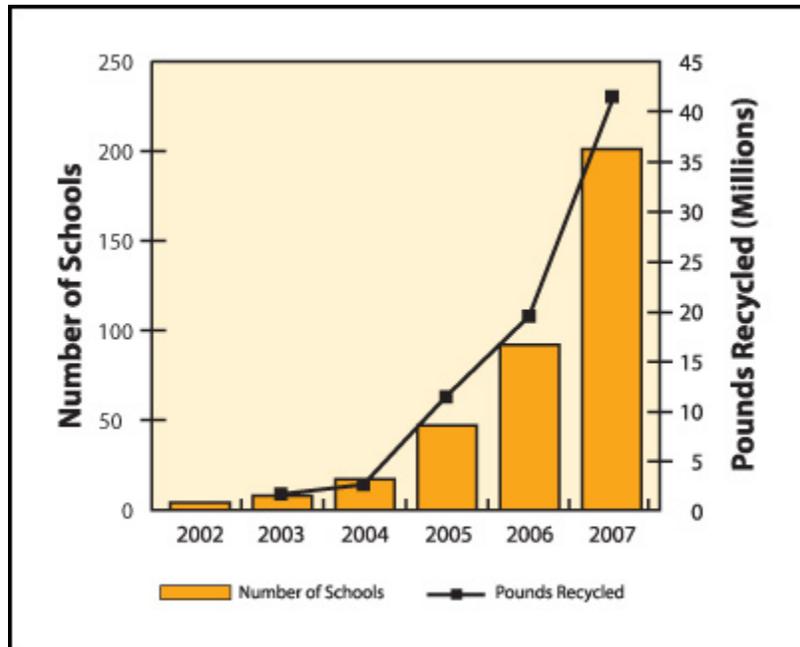
“What is Sustainability?” <http://www.sustainableunh.unh.edu/whatisustainability.html>

“What is Recyclemania?” www.recyclemaniacs.org/overview.htm

APPENDIX

Appendix A

Recyclemania – Participating Schools



Source: www.recyclemaniacs.org/overview.htm



Appendix B

Powerdown Flyer

ENGINEERS CREATE EFFICIENCY
FOR THE WORLD.

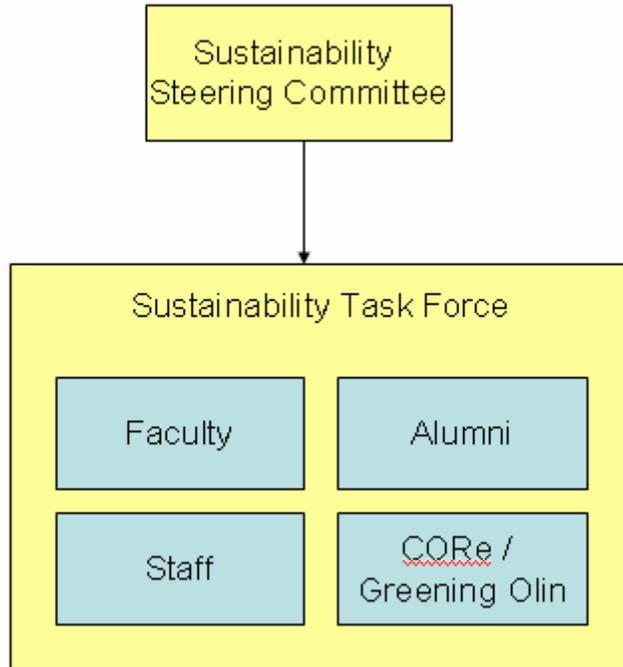
BE EFFICIENT, BE AN EXAMPLE, BE
SUSTAINABLE: POWERDOWN.

Help make Olin College be a leader in sustainability. In your office, residence hall, & apartment, turn off & unplug your:

- Computers
- Printers
- Fax machines
- Photocopiers
- Televisions
- Cell phone and iPod/MP3 chargers
- Other equipment and electronics.

Appendix C

Sustainable Organizational Structure



Appendix D

Olin College “Green Report”

