

# **C.W. Post C.A.R.E.S**

**Climate Awareness**

**Responsibility**

**Education**

**Sustainability**



**GGR 29: Human Dimensions of Climate Change**

**Class Project**

**Prof. Scott Carlin**

**April 22, 2009;**

**Revised June 2, 2009**

## **C.W. Post C.A.R.E.S (Climate Awareness Responsibility Education Sustainability)**

*“C.W. Post Campus is a Green Energy leader and will be carbon neutral by 2040.”*

by Stephanie Patino

C.W. Post is a place that C.A.R.E.S. about its environment, students, faculty, staff, the future, and *our* Earth. Long Island University’s vision is to “manage natural resources in an environmentally-responsible, sustainable fashion.” Now C.W. Post will step up to the plate and commit itself towards developing a green campus.

C.W. Post will be a place where students, faculty, and the administration work together towards change. We will create an Office of Sustainability to help organize and carry out the mission and goals of C.A.R.E.S.

Goals of C.A.R.E.S Office of Sustainability:

- Awareness: Conduct a campus energy audit.
- Responsibility: Develop an environmental code of conduct that would be adopted by staff, faculty and students.
- Education: Hold seminars and educate students, faculty, and the community about environmental sustainability and carbon emissions.
- Sustainability: Establish a campus energy policy.

C.W. Post will lower carbon emissions and ultimately be carbon neutral by 2040. C.W. Post will lower emissions by:

- Conserving energy with motion sensors and awareness campaigns;
- Installing LED lighting systems and efficient “Energy Star” appliances;  
Installing more efficient heating controls for classrooms and education buildings;
- Using renewable energy sources, including geothermal heat, photovoltaic cells;
- Investing in high-efficiency green buildings, green roofs, and using fewer cars.

With these changes, C.W. Post will become a place that does not contribute carbon into our atmosphere. C.W. Post will be a place with a totally revamped infrastructure and a new eco-friendly thought process. C.W. Post will become a leader on Long Island in contributing to a greener and cleaner environment. C.W. Post will commit itself to the goals laid out by C.A.R.E.S and will lead the way for the rest of Long Island University. Most importantly, C.W. Post should be a place that C.A.R.E.S, a place where people have melted the ice in their hearts and joined the movement against global climate change. C.W. Post will contribute to making *our* Earth a better place.

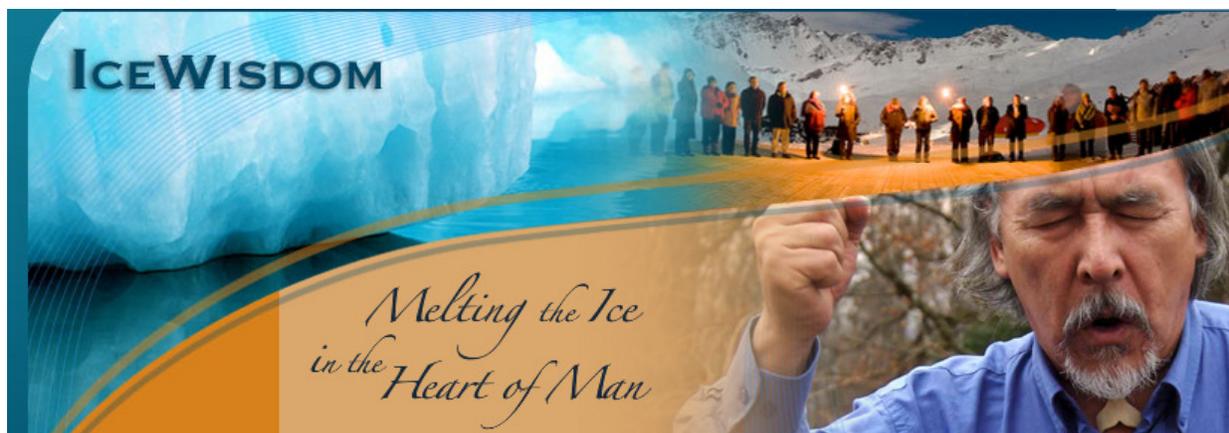
## Vision Statement

By James Ridgway

By melting the ice in our hearts we can solve the problem of the melting glaciers. The largest problem of our generation is global climate change. Climate change will cause many devastating consequences including massive forest fires, flooding, drought, increased hurricane intensity, decreased biodiversity, and rising sea levels.

At Powershift 2009, a climate change conference of over 12,000 college students in Washington, D.C., we learned that we must “melt the ice in our hearts” to solve the climate crisis. This statement was made by Angaangaq, an Inuit from Greenland, who first experienced the melting ice in 1962 and was the first Eskimo to address the United Nations on climate change. It is time for C. W. Post to shift its energy policies; we are the ones that must live with the consequences of our decisions.

As students on and of the Earth, we must realize that we are at a pivotal point in our history. We can no longer live our lives without thinking about the future or the future of our planet. It is time to embrace the idea of melting the ice in our hearts. It is time to let go of our addictions to technology and fossil fuels. To do this we must have a complete shift in our ways of living and thinking.



We are a species that has lost its sense of place in the world. Humans are the only organism that has the ability to pollute the entire planet, creating drastic and irreversible changes. This is an awesome responsibility that we have not taken seriously. We need to think multiple generations ahead, a practice of many native cultures.

As we begin to allow ourselves to feel the pain that we cause to one another and the environment, we will be compelled to make the correct decisions for the fate of future

generations and for the fate of our Earth. Selfishness and greed need to be thrown to the wayside and replaced with empathy and caring.

Change must come from scientific and technical advances. But technical advances require vision, passion, and emotional commitment - feelings of love and compassion, as well as fear and anger. We need to think and feel our way forward to better this world – empowerment begins with a change of heart.

It is time to challenge the status quo and fight for an environmentally friendly and carbon neutral world. This can be seen as an overwhelming challenge. C.W. Post, however, has an unparalleled opportunity to make these changes. This is a time to take action and to seize the moment to become a part of – and help lead - a global transformation. The time to make this change is now and the place to start is here at C.W. Post by making this campus a leader in a carbon neutral world.

#### References

<http://www.icewisdom.com/>

<http://www.powershift09.org/>

## C.W. Post: A Plan to “Go Green”

By Christopher Jackson

### The Early Years:

**Our recommendation is that C.W. Post begin its program with easy to implement, low cost, effective, strategies. Here are two ways to start:**

1. **An Energy Audit** is an effective way to identify areas of potential energy savings to reduce costs and decrease our carbon footprint thus allowing us to go “green” for less “green.” The audit will document in detail the present condition of all the building systems including their overall energy rating efficiency. The audit will look at things that are sometimes ignored or overlooked such as lighting, leaky faucets, and wasteful toilets. In so doing, it assesses the energy effectiveness for the entire building for the year, season, or even for a month, making recommendations on what implementations are best for reducing energy usage. The energy audit report establishes the needs for metering and monitoring, enabling the school to be more cost conscience, saving money for years to come.

### 2. **Conserve Energy:**

Bates College in Lewiston Maine has a guide to campus ecology it details low cost effective strategies for energy conservation. At CW Post we think similar ideas could be very helpful short term solutions. The following is modeled after Bates “little green book.”

#### **Lights**

- Use natural lighting instead of electric lighting whenever possible.
- Turn off unused or unneeded lights.
- Install dimmer switches.
- Install occupancy sensors that can turn room lights on and off automatically.
- Install key operated light switches that can be controlled by authorized personnel only.
- Replace incandescent light bulbs with compact fluorescents.
- Install timers and light sensitive devices to control exterior night lighting.
- Eliminate halogen floor lamps from campus buildings. These lamps waste energy and may pose a safety risk.

#### **Heating and Cooling**

- Dress appropriately for the season and keep thermostats at 68 degrees in the winter and 76 degrees for air-conditioned spaces in the summer.
- During the heating season, open blinds, drapes, and curtains to let sun in or, if there is no sun, close them to keep the heat in. During the cooling season, close blinds, drapes, and curtains to block sun.
- Use hot water sparingly, e.g. take shorter showers, select cold water for washing clothes, etc.

- Install lockable thermostat covers to prevent non-authorized raising and lowering of the room's temperature.
- Repair all leaky faucets, water coolers, and toilets and add water flow limiters.
- Check insulation on hot and cold water piping- add or repair as necessary.
- Check insulation on air conditioning ductwork- add or repair as necessary.

### **Windows and Doors**

- Unless you are handicapped, do not use automatic handicap doors.
- Keep windows and doors closed in heated and air-conditioned areas.
- Close vestibule and corridor doors when they are propped open.
- Seal all gaps around windows and doors to prevent air infiltration.
- Add door sweeps to the bottoms of doors.

### **Computers**

- Turn off computers and printers when they are not in use.
- Use power strips to ensure that all computers and peripherals are powered off.
- Buy low wattage equipment certified by the EPA's "Energy Star" program.
- Minimize the use of screen savers and instead enable power management features so your computer equipment will go into a low power (blank screen) "sleep mode" when not actively in use.

### **Other Equipment**

- Purchase only energy-efficient models.
- Turn off all energy consuming office, dorm, and research equipment when not in use, e.g. copiers, TVs, stereos, etc.

## **The Future:**

In April of 2008 the University of Austin Texas passed a new Campus Sustainability Policy. C.W. Post could really benefit from a similar plan. The text below relies upon the language adopted by Austin.

1. **Academics:** The University will strive for excellence in education and research by integrating sustainability concepts into the curriculum, supporting interdisciplinary scholarships for students and research by faculty that deepens awareness of sustainability. The University will aim to produce scholars who are literate in environmental issues, research that illuminates and advances the "war" on climate change, and graduates who will carry the mission of sustainability into the state, the nation, and the world.
2. **Operations:** The University will comply with all relevant environmental laws and regulations. They will aspire to go beyond compliance by integrating values of sustainability and resource conservation into its activities, services, and hiring procedures. The University will engage in pollution prevention activities and develop and promote practices and minimize harmful effects of operations and activities on

the surrounding environment. The University will assess the environmental impacts associated with its activities and measure its progress with monitoring protocols. The University's goal is to maximize the efficiencies of its operations and services while minimizing its wastes and environmental footprint.

3. **Implementation:** The University will establish long term procedures and mechanisms, including an oversight structure, to review the status of each element of this policy and to ensure its implementation with the goal of integrating informed and evolving practices for sustainability consistent with the University's mission for excellence.

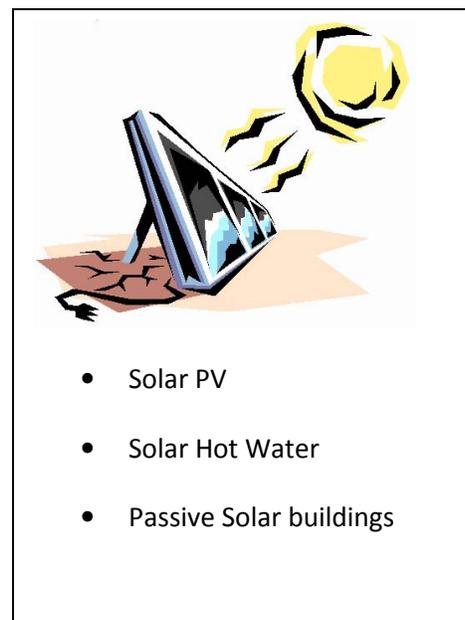
## **Goals:**

### **1. Introducing a Renewable Energy Plan**

Developing a renewable energy project for C.W. Post is a long-term process that requires commitment, leadership, and funding. Many successful projects develop when teachers, administrators, and community leaders work together to secure funding and to integrate these energy systems into the new curriculum programs. On Long Island, SUNY Farmingdale has a whole program devoted to renewable energy systems.

Reducing energy use by implementing energy efficient strategies is often cost-effective, with short payback periods for the initial investment. Existing buildings can be made more energy efficient by updating and implementing proper maintenance of the major mechanical systems, the overall building's exterior skin or envelope (roofs, windows, doors, etc.) and the lighting system. The mechanical systems known as HVAC include the heating, ventilation and air conditioning. It can be a good investment for schools to replace HVAC equipment because the energy savings are very large and have a relatively short payback period. New windows and doors also improve energy efficiency and the HVAC equipment doesn't have to work as hard, saving more money. New computer controls can monitor the building's systems 24 hours a day, increasing efficiencies. Some boilers can operate on both gas and fuel oil. This can save a lot of money because prices for each fuel can vary a lot from season to season.

Two popular solar energy options are solar electric (photovoltaic) and hot water systems. A third option relies on building architecture; a passive solar design orients a building's construction to maximize the buildings ability to absorb warm sunlight in the winter months and be shaded from sunlight in the summer months. Many schools are investing in photovoltaic panels. These panels should face south to take advantage of the greatest amount of sunlight. These panels should be located where shade from trees or



buildings will not block the sun, especially during the peak midday hours.

Solar Electricity Panels can be installed as an awning over a window or doorway, located along the edge of a building roof, or mounted on a pole, called a solar flag that is located at ground level away from the building. A small solar electric system is usually connected to the utility grid, but could remain off-grid, storing power in a battery bank. Life expectancy of a typical system is 40 to 50 years and is almost maintenance free.

A wind turbine is a very appealing renewable energy source. It is cost effective and can be used on college campuses. Long Island University installed a wind turbine on its Southampton campus and the Long Island Power Authority hopes to install wind turbines in the Atlantic Ocean. Many newer wind turbine designs are making wind power most efficient and cost effective even for smaller homes. Since C.W. Post has a large campus with a lot of open spaces, this technology could work very well for our campus.

Geothermal is another cost-effective energy source. C.W. Post recently installed a geothermal system for its main administration building. "Ground source (or geothermal) heat pump systems can both increase comfort and decrease operating costs" for schools according to a Wisconsin publication. "By circulating fluid through underground piping, these systems use the relatively constant temperature of the earth to both heat and cool buildings. Many schools prefer this technology because the environment in individual classrooms and activity areas can be controlled separately, and air duct systems are greatly simplified." This technology works well for buildings that use both heat and air conditioning. Geothermal works best for new buildings because the costs are a lot lower that way.

Following a model developed for Wisconsin schools, the first step toward installing a renewable energy system is to organize an Energy Team. The Provost office would select someone to lead the team, such as an engineer familiar with LEED (Leadership in Energy and Environmental Design). The team could then select a few priority projects for C.W. Post.

## **2. Creating a Campus Sustainability Commission**

*To reduce environmental and climate change impacts, C.W. Post needs to create an office of sustainability. This initiative must be a collaborative effort between the many departments, offices, academic disciplines, and student groups. Environmental sustainability presumes that the planet's resources are finite and should be used conservatively, wisely, and equitably. It centers on finding ways to use resources that do not undermine the integrity of the environment and do not compromise the ability of future generations to use those same resources. There are many colleges moving in this direction. The following text comes from Augustana College, a small college in Illinois. Their program could provide a model for C.W. Post. Like Augustana, we recommend that C.W. Post initiate a program that will:*

(1.) Provide analysis of sustainability issues regarding future development and expansion of college grounds.

- (2.) Provide analysis of sustainability issues regarding campus construction projects (new buildings and renovations of existing buildings) using building materials such as paints and adhesives that minimize volatile organic compounds (VOC's).
- (3.) Facilitate campus-wide input on sustainability issues.
- (4.) Raise campus awareness of environmental and sustainability issues through community events as well as other programs.
- (5.) Coordinate, promote, and expand campus recycling waste management plans with Facilities Services to reduce the amount of material being land filled.
- (6.) Coordinate and promote student awareness of personal environmental responsibility within the Office of Residential Life.
- (7.) Provide recommendations to the administration regarding future campus environmental and sustainability policies.
- (8.) Provide leadership in helping to build a consensus within the community for creating a smaller environmental footprint and educating the community about how to achieve that goal.

### **3. A Carbon Neutral Campus**

Carbon neutrality means emitting no net carbon dioxide into the atmosphere which is our ultimate goal. It is not something that can happen overnight. There is a long road ahead of us but if everyone does their part being a zero emission campus can become a reality.

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<http://www.augustana.edu/x10365.xml>

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<http://www.bates.edu/Prebuilt/Bates%20Little%20Green%20Book.pdf>

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University of Wisconsin - Stevens Point, Introducing Renewable Energy into Wisconsin Schools, [http://www.uwsp.edu/cnr/wcee/keep/Renewable\\_Energy\\_Education/Ren\\_schools.pdf](http://www.uwsp.edu/cnr/wcee/keep/Renewable_Energy_Education/Ren_schools.pdf)

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## Yale, Buffalo, and Colgate: Three Schools Going Green

By Dave Brenseke

### Yale University

Yale's strategy to shrink its carbon footprint calls for a mix of conservation measures, the use of renewable energy on campus, and direct participation in carbon offset projects. Yale has achieved its 17% reduction in emissions to date through projects and policies that include:

- Installation of more efficient heating and cooling systems in 90 buildings,
- New automated controls for heating, cooling and lighting,
- Replacement of windows, new and modified power plant equipment,
- Achieving LEED Silver or better certification for all new buildings and major renovations, and
- The use of ground water for cooling.<sup>1</sup>

Yale achieved a 10% yearly reduction in electricity consumption through a variety of measures. This included "the installation of a new cogeneration power plant, the adoption of sustainable building design and construction standards, the use of hybrid vehicles and other sustainable transportation measures, and use of solar and wind power on campus."<sup>1</sup>

According to Yale's Office of Public Affairs, "The good news is that we've reduced our carbon emissions by 43,000 metric tons in the first two years of our program," President Richard C. Levin said. "That's a 17% reduction from our 2005 levels. This rapid progress has given us confidence that we are going to achieve our reduction well before our 2020 deadline."<sup>1</sup>

Students are employed by the Office of Sustainability, the Yale Sustainable Food Project, and the recycling department. "The Student Task Force for Environmental Partnership employs more than 25 students to act as sustainability educators and coordinators in the residential system."<sup>2</sup> The College Sustainability Report Card program, a national initiative, awarded Yale a B+ for their efforts. Yale has certainly done a decent job of cutting down on its carbon emissions.

Yale's overall strategy for 2020 is to cut carbon reduction by 10% below 1990 levels. They have already reduced emissions by 17% in only 4 years! This may prove to be a very useful strategy for C.W. Post. Their strategy has worked so efficiently because they were not afraid to spend the money to make these changes. Also, the students on campus worked together in a team effort to implement this plan.

## Suny Buffalo

“University at Buffalo President John B. Simpson has committed the university to taking a leadership role in fighting global warming by signing the American College and University Presidents Climate Commitment. According to the University’s President, ‘with the signing of this commitment,’ he added, ‘the university is making a serious promise to our students, faculty and staff, to the communities of Western New York and ultimately to the rest of the world that we will be a relevant and respectful environmental steward.’”<sup>3</sup>

The campus is recognized as a leader in reducing energy costs through “extensive and innovative conservation measures” and in promoting alternative energy sources, steps that are helping to reduce the university's contributions to climate change. “The U.S. Environmental Protection Agency last year named UB one of its Top 10 College and University Green Power Partners in recognition of the fact that it is the largest purchaser of wind energy generated in New York State. Since the 1970s, UB has instituted more than 300 small and large energy-conservation projects that to date have resulted in more than \$100 million in energy-cost savings.”

“A \$17 million comprehensive energy-conservation project was also begun by the University in 1997. The project has reduced UB's total energy-related air pollution by 15 percent and cut its carbon dioxide emissions by 31,000 tons annually. That's a level of emissions equivalent to the amount that 6,000 cars generate every year.”<sup>4</sup>

“Overall, energy conservation on SUNY Buffalo’s campus saves state tax dollars and reduces environmental impacts associated with energy production and consumption. It is the University’s policy to provide comfortable conditions in support of the University’s educational mission while maintaining UB’s energy conservation efforts. These policies seek to balance customer service, cost-efficiency and environmental concerns.”<sup>4</sup>

“Some Energy Conservation Tips for SUNY Buffalo include turning off unused or unneeded lights, using natural lighting instead of electric lighting, and not using incandescent and halogen fixtures. SUNY Buffalo also keeps their thermostats at 68 in the winter and 76 in the summer. Thus, they keep their doors closed in air conditioned and heated areas.”<sup>4</sup>

The computers at SUNY Buffalo are also off unless they are in use. Some computers also are kept on “sleep mode” during non-use. Other energy efficient equipment has also been purchased.<sup>4</sup>

### **Student involvement:**

University of Buffalo developed a system called the UB Engineers for a Sustainable World that enables students to come up with different solutions to solve the environmental and emission projects on campus. These students are currently working on developing biodiesel fuels in the fleet vehicles on Buffalo’s campus.

### **SUNY Buffalo: 15 goals<sup>4</sup>**

1. “Organize a campus environmental committee (or task force) with participation of key faculty, staff and students;
2. Secure top level campus administrative support;
3. Try to obtain resources for starting new programs and increasing participation in existing ones. This includes office space, telephones, access to office equipment, start-up capital for a specified program and, if possible, a guaranteed line in the campus budget.
4. Form a network of "environmental contacts" who represent the various departments and offices on campus, and assign a network coordinator. This provides an effective way to reach all segments of the campus community;
5. Get the Facilities department on board since it is critical to campus operations;
6. Seek the appointment of an energy officer and recycling coordinator, staff members who have the know-how, enthusiasm, resources and authority to make energy conservation and recycling improvements happen;
7. Hold regular committee meetings and conduct regular follow-up with network members (by the coordinator). Circulating a newsletter can help maintain momentum;
8. Conduct a campus environmental audit to identify impacts and conservation measures;
9. Develop, obtain administrative approval for, implement and publicize campus environmental policies;
10. Create awareness programs which take the "moral high ground" and continually publicize the environmental benefits of your work to the campus community;
11. View your campus as a learning lab for students interested in studying and reducing campus environmental impacts;
12. Since campus energy consumption represents one of the major environmental impacts of your institution, an aggressive and comprehensive campus energy conservation program should be a central "green campus" objective (without it few will take your program seriously);
13. A first-class fully institutionalized recycling program is also critically important, given its environmental impact, campus visibility and high levels of participation;
14. Document savings and demonstrate to administrators how waste reduction measures save money;
15. Strenuously defend your energy and environmental programs against apathy, inertia and very real threats like those associated with electric deregulation.”

### **Other useful information:**

The University of Buffalo has developed new technology in 2005 for snow mobile engines that the campuses use during the winter. These low carbon engines are in the process of being developed to further cut down campus emissions.

### **Colgate University**

The following information was found at Colgate's website.<sup>5</sup> In the fall of 2008, Rebecca Chopp signed the American College & University [President's Climate Commitment](#). This charges Colgate with taking actions towards achieving carbon neutrality. The climate Commitment States many different rules that Colgate must follow (see Table, next page).

The Colgate University Cruiser shuttle buses are equipped with EPA-approved low-emission diesel engines. In addition to student use, Colgate has opened the shuttle route to the community, further reducing local car and bus emissions.

Also, Colgate signed an agreement with Clean Air-Cool Planet in 2004, agreeing to complete a greenhouse gas emissions inventory, raise awareness about the importance of addressing climate change within the campus community, adopt an emissions target, and develop a plan to reach that target.

Colgate University is now one of 590 universities that have officially recognized the role of greenhouse gases in causing global warming. They have also recognized the need to reduce these emissions by 80% by 2050 and the call for immediate action by signing the Commitment. The University also pledges to complete an emissions inventory, take immediate short term action to reduce greenhouse gas emissions, make "sustainability" a component of the academic curriculum, and create a two year step-by-step plan with measurable goals including a target date for reaching carbon neutrality.

Bob Turner, professor of economics and environmental studies and Director of the ENST Program, is currently compiling the data that has been collected using the Clean Air Cool Planet carbon calculator. The data collection was begun by three seniors in the Environmental Studies seminar in the fall of 2002. This group performed the first comprehensive greenhouse gas inventory, following protocols established by the Clean Air-Cool Planet calculator.

The green report card for Colgate however was a D + since they were rather weak with their money management.<sup>6</sup> Thus, the campus could not afford some of the same things they wanted. Even though Colgate's emissions are small compared to other college campuses, they are determined to lower them by whatever means necessary. They are compiling their CO<sub>2</sub> data on a regular basis and working to lower emissions.

## **American College & University Presidents Climate Commitment**<sup>7</sup>

1. Initiate the development of a comprehensive plan to achieve climate neutrality as soon as possible.
  - a. Within two months of signing this document, create institutional structures to guide the development and implementation of the plan.
  - b. Within one year of signing this document, complete a comprehensive inventory of all greenhouse gas emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter.
  - c. Within two years of signing this document, develop an institutional action plan for becoming climate neutral, which will include:
    - i. A target date for achieving climate neutrality as soon as possible.
    - ii. Interim targets for goals and actions that will lead to climate neutrality.
    - iii. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
    - iv. Actions to expand research or other efforts necessary to achieve climate neutrality.
    - v. Mechanisms for tracking progress on goals and actions.
2. Initiate two or more of the following tangible actions to reduce greenhouse gases while the more comprehensive plan is being developed.
  - a. Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.
  - b. Adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.
  - c. Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by our institution.
  - d. Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution
  - e. Within one year of signing this document, begin purchasing or producing at least 15% of our institution's electricity consumption from renewable sources.
  - f. Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution's endowment is invested.
  - g. Participate in the Waste Minimization component of the national RecycleMania competition, and adopt three or more associated measures to reduce waste.
3. Make the action plan, inventory, and periodic progress reports publicly available by providing them to the Association for the Advancement of Sustainability in Higher Education (AASHE) for posting and dissemination.

## Summary

Overall, in order for C.W. Post to adapt to other schools ideas and alternative energy uses, there needs to be a short term plan of different ideas and strategies. Our main goals on campus include conserving energy, and audit to identify energy use, and the main priority, the future. Some of our future plans include using academics, environmental regulations, and implementation.

The different strategies these three schools have shown us are very useful to C.W. Post. For instance, Yale's endowment is among the largest in the United States. C.W. Post does not have those same resources. Yale represents the "gold" standard of college sustainability programs. C.W. Post should try to emulate their work, but on a smaller budget. We can also learn from other schools. Strategies from Colgate and SUNY Buffalo are strong and can be adapted on a smaller scale for our University.

Universities	Strengths	Goals	Costs	Value for C.W. Post	Rank <sup>8</sup>
Yale	Rapid progress of their program in 4 years	10% Reduction of Emissions by 2020 since 1990	4 million dollars to construct 13 new buildings	Easy to adapt similar ideas of emission reduction, since Yale is small and within C.W. Post's budget.	1
SUNY Buffalo	Much diversity in plans for the future under a strong, implemented, and well managed program of energy conservation. SUNY Buffalo is largely concerned with electricity conservation for their campus.	Many different goals according to USLF (University Leaders for a Sustainable Future)	14 million dollars (est.) for this plan yearly	Post can form an energy conservation project on a smaller scale budget wise	2
Colgate	The use of hydro electric energy, and wind power for the University.	80% reduction of Emissions by 2050	Varies on what the University will ultimately do in forming a committee, and the type of alternative uses for electricity	C.W. Post can also use hydro electro energy	3

## References

<sup>1</sup> Yale University, <http://opa.yale.edu/news/article.aspx?id=6275>

<sup>2</sup> Yale University, Green Report Card. [www.greenreportcard.org/report-card-2009/schools/yale-university](http://www.greenreportcard.org/report-card-2009/schools/yale-university)

<sup>3</sup> SUNY Buffalo, <http://www.buffalo.edu/news/8503>

<sup>4</sup> Wynn Calder, ‘Operations: Energy Deregulation Meets Campus Greening at SUNY Buffalo,’  
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<sup>5</sup> Colgate University, <http://www.colgate.edu/DesktopDefault1.aspx?tabid=3693>

<sup>6</sup> Green Report Card, <http://www.greenreportcard.org/report-card-2008/schools/colgate-university>

<sup>7</sup> American College & University Presidents Climate Commitment,  
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<sup>8</sup> <http://www.greenreportcard.org/report-card-2009/schools/>

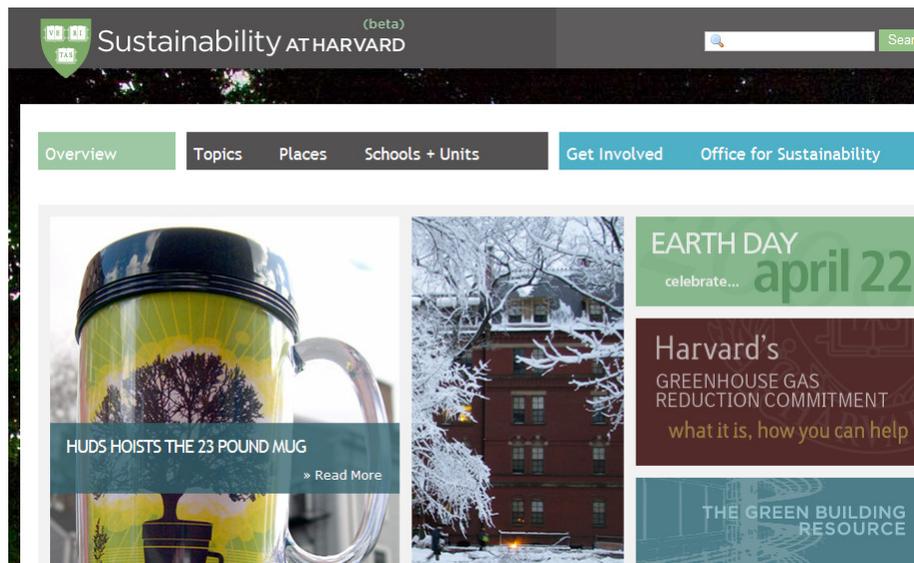
# Harvard, Vermont, and Arizona: Pioneering Green Programs

by Michael Schramm

## Harvard University

What distinguishes Harvard from other schools is that they want to incorporate their whole community – involving faculty, students, staff, and the larger community. Many different academic programs participate. For example, the School of Design is giving a conference on ecological urbanism to find new ways to urbanize and be energy efficient at the same time.

Programs at Harvard are managed by their Office of Sustainability. Harvard first started taking emission readings in 2000 and they have not missed a year to date. They have been able to find out how much emissions a student is producing in a given year. They are also monitoring the types of appliances students use. Harvard has many different courses to offer students on reducing waste, using nontoxic chemicals, and conducting greenhouse gas inventories. Other programs focus on LEED certifications. If you are a business contractor interested in becoming LEED certified, Harvard offers a few different classes you can take.



The Office of Sustainability has a set of principles to help them plan their programs and goals. The text is adapted from Harvard University and its Office of Sustainability.

**Policy Development:** This includes “advocacy, and the development of accountability frameworks.”

**Accountability & Reporting:** Harvard will set GHG reduction goals and report on its progress using a “formal reporting framework to ensure accountability to the President's Office.”

**Communications:** This includes internal and external communications to “foster information sharing amongst University stakeholders.”

**Best Practices:** Promote the use of the best management practices and technologies.

**Education & Training:** Training programs to support their goals.

**Culture change:** “Promote culture change by developing university-wide outreach and education campaigns, programs, and incentives.”

**Staff and Faculty:** Leverage campus expertise to meet Harvard’s goals.

**Innovation:** “Foster an innovative & entrepreneurial spirit across the University. ”

Harvard is not the only leader in the United States. Many other schools are developing interesting programs that can serve as a model for C.W. Post:

- **Arizona State University**  
ASU has started a new School of Sustainability. It hopes to be one of the most elite in the country. ASU is also building green buildings on campus. They have just spent over \$88 million on a co-ed dorm on campus. They were also recently ranked as the greenest college in the United States by Princeton Review.
- **University of Vermont**  
In 2008 the University of Vermont started building only LEED certified buildings as well as renovating existing buildings to pass LEED inspections. They are also finding exciting ways to get the students involved. One example is Greek Life’s events to see how much energy students can save. This is a great way to get the community on board and make it fun and interesting at the same time.

### **References:**

Harvard University, <http://www.greencampus.harvard.edu/>

Yale University,

<Http://www.yale.edu/sustainability/necsc/Building%20Standards/Environmental%20Design%20in%20New%20and%20Renovated%20Buildings.pdf>

Arizona State University,

<http://www.nwf.org/campusEcology/docs/Arizona%20State%20University%20Building%20Design%20FINAL.pdf>

## **C.W. Post C.A.R.E.S. Survey Results**

By: Ilyssa Adelman, Nicole Bischof, Leanne Casella, and Alessandra Manero

As part of C.W. Post C.A.R.E.S., a survey was conducted to determine students' awareness and knowledge on the topic of climate change and global warming. Over the course of two weeks, over 150 students were asked to answer a variety of questions on topics which included personal opinions, campus changes, and the distribution of campus funds. The survey yielded surprising results and interesting feedback. C.W. Post students may not agree on much, but they all seem to admit to the fact that global warming education is lacking.

The first question asked, "How familiar are you with the issue of global warming?" 91% of students were somewhat familiar or very familiar with this topic. Students were then prompted to explain what impact they see global warming having on their lives. Many students see global warming as a future problem, not a current one. They are able to admit it will alter future generations but are unable to see that they can make a difference by making changes now. While students believe the future is in question, they do want to learn more in the present.

44% of students agreed with the notion that "Global warming is a serious and pressing problem, and we should begin taking steps now even if this involves significant costs." 41% felt that global warming should be addressed, but gradually and at a low cost. Only 1% students believed no steps should be taken and 11% declined to comment (see Survey Question #6).

Students have called for the campus to pay more attention to global warming than it currently does. Of the students surveyed, 78% are calling for a larger effort. (See Survey Question #3.) One student remarked, "If people actually pay attention, it will have a large impact on everybody."

Most students know they are lacking the knowledge they need on this topic. They want to know more about sea level rise, future changes in rainfall and drought, and renewable energy. (See Survey Question #5.) They also want to know what they can do that will make a difference. The most popular answer (on Question 5) was renewable energy. C.W. Post students also wish to devote more time to environmental issues in required classes, like College 101. If all students are required to take a course, it should address the most pressing matters of the time, one of which is global warming. It is obvious that more must be done about global warming both in the classroom and out. (See Survey Question #7.)

Survey question #4 asked students “How much money should the University spend on solar panels per year?” 66% said C.W. Post should spend \$50,000 or more each year. Many felt that any amount of money invested would be well spent. Some people remarked that investments in wind power would be just as helpful. 10% of students thought investments in alternative energy sources should be put off until a later date.

**These answers show us that C.W. Post students do care about what is going on.** Some students worried that global warming posters are harmful because of the wasted paper. A growing number of students want the campus to go paperless – why use paper if it harms the environment? **At the very least, recycling is a major issue which must be expanded and improved.** Whether it is the products offered or the services available, the campus cannot claim to be environmentally friendly when it does not promote good programs.

Students were given the opportunity to choose their favorite alternative form of transportation which would be provided by the campus (see question #8). 61% of students would like to have access to campus bicycles. When asked, 25% liked the idea of campus horse and buggy service. These two choices show that students want to see alternatives to cars on the campus. The majority of people would be willing to change their lifestyle, even slightly, if it was provided.

When it comes to our nation, C.W. Post students are able to understand what reducing global warming will do. The most popular responses include saving species from extinction, providing a better life for future generations, improvements in health, and more government regulation. Whether students know it or not, by realizing these outcomes they are admitting the changes global warming could possibly inflict. Students know this problem is real and it is not going away.

Responses to our final open-ended opinion question are provided below. As one can see, this survey yielded diverse responses due to the diverse spectrum of students who answered. The fact that the majority of students were able to agree that C.W. Post must change, speaks volumes. Students would like to see some real changes at C.W. Post. Ultimately, students, faculty, and administration should band together and make these changes a reality.

Notable quotes from the surveys:

- In response to Q. 2 **“How large an impact will global warming have on your life? Please explain.”**
  - “I want to live in a giant snow globe.”
  - “Well, if the world is supposedly coming to an end then I will be dead... very big impact!”
  - “The polar bears are dying!”
  - “I try to be green, I drive a small car.”
  - “If people actually pay attention it will have a large impact on everybody”
  - “It will affect not just myself but everyone. I’m also a big nature advocate and feel terrible for the animals that are suffering.”
  - “Sea levels rising. Salinity levels of oceans decreasing, destroying marine life.”
  - “My home would be under water.”
  - “The world could blow up.”
  - “Living on Long Island, a rise of sea level could present serious problems especially in the event of a hurricane.”

- "I don't like UV rays."
- "If the planet suffers, we as humans suffer too because the Earth is our home."
- In response to Q. 4 **"How much money should the University spend on solar panels per year?"**
  - "They make so much they should spend at least \$1 million."
- In response to Q. 8 **"Which alternative forms of transportation would you be in favor of, if provided by the campus?"** Students were asked to provide other ideas for transportation.
  - "Teleportation device."
  - "On campus monorails run on solar panels."
  - "Cars?"
  - "Buses/Vans"
  - "Roller blades, Ice skates, Teleportation."
- In response to Q. 10 **"What kinds of changes would you like to see at C.W. Post re: promoting energy efficiency and conservation in classrooms and dorms?"**
  - "No air conditioning- people will have to sweat!"
  - "Those save energy light bulbs, stop wasting paper and email essays, classes outside would be nice."
  - "More of a promotion to commuters not only dorm students. Try and get the commuters involved."
  - "There should be a go green Hooters on the Great Lawn, funded by our tuition and all the money made will go to green research."
  - "Recycling bins, people who live here DO NOT need to drive to class, healthier food."
  - "No class! No tuition!"
  - "More awareness and local involvement for community service. Network with clubs and Greek organizations to involve the student body and educating about global warming. Also bring real aspects of global warming to the campus → what will directly affect us."
  - "More recycling bins, places to bring used batteries."
  - "Shut the computers and lights off at night, buy hybrid vehicles for campus."
  - "I would like a higher focus on green jobs."

- “Less class time so the lights can be turned off to save power.”
- “Inform more students, your average student really doesn’t know that much about the topic.”
- “More environmentally related classes, energy efficient heating/cooling systems, sustainable grown food products, recycling all over campus, more initiative on the part of the staff.”
- “Promote recycling, timers on classroom lights, public safety and ‘grounds keepers’ should be required to turn their vehicles off when not in use.”
- “More knowledge, more student participation, go green campaigns.”
- “The dorms need to have better climate controls so that the students don’t have to keep the windows open to keep from over heating.”
- “The creation of an office of sustainability.”
- “Use of solar water heaters, etc.”
- “We need to at least have recycling bins on campus for bottles and cans not only paper.”
- “I think C.W. Post should use solar power as our energy source. Initially it will be expensive to buy the panels but then we would be saving money (which we could use for better food on campus).”



## Statistical Data Gathered from the Survey

Below is the survey included in tonight's report. Next to each letter choice is the percentage of students who chose the response. The survey was conducted over a two week period and resulted in the completion of 153 surveys filled out by the students of C.W. Post University.

### C.W. Post CARES GLOBAL WARMING SURVEY

1. How familiar are you with the issue of "global warming"?
  - a. very familiar, 41%
  - b. somewhat familiar, 51%
  - c. not too familiar, 7%
  - d. or not familiar at all 1%
  
2. How large an impact will global warming have on your life? Please Explain
  - a. Very Big impact 23%
  - b. Big Impact 24%
  - c. Measurable impact 35%
  - d. Little Impact 17%
  - e. No impact at all .7%

Explain:
  
3. How much attention should C.W. Post pay to global warming?
  - a. A lot of attention 22%
  - b. More attention than we currently do 56%
  - c. I think we already devote the right amount of attention to this issue. 14%
  - d. Less attention. 5%
  - e. It is not something we should focus on. .7%
  
4. How much money should the University spend on solar panels per year?
  - a. \$0 10%
  - b. \$25,000 20%
  - c. \$50,000 25%
  - d. \$100,000 19%
  - e. \$150,000 12%
  - f. More than \$150,000 10%
  
5. What do you want to learn more about at C.W. Post? (Answer each Y/N below)
  - a. Sea Level Rise and its impacts? (Yes/No) 58%
  - b. Drought and rainfall impacts? (Yes/No) 56%
  - c. Health impacts like new diseases? (Yes/No) 75%
  - d. Renewable Energy? (Yes/No) 74%
  - e. What can students do to make a difference? (Yes/No) 71%
  - f. Other: 97%
  
6. Please tell me which statement comes closest to your own point of view. Please check the box which applies.

Until we are sure that global warming is really a problem, we should not take any steps that would have economic costs	The problem of global warming should be addressed, but its effects will be gradual, so we can deal with the problem gradually by taking steps that are low in cost	Global warming is a serious and pressing problem. We should begin taking steps now even if this involves significant costs	Not sure/ Decline
3%	41%	44%	11%

7. What kinds of changes to C.W. Post would you like to see re: classes on global warming? (Answer Yes/No for each below.)
- a. Should all students be required to have a better understanding of this issue? (Yes/No) 68%
  - b. Should College 101 devote more time to environmental issues? (Yes/No) 62%
  - d. Should there be posters on campus that educate us on how C.W. Post is going green? (Yes/No) 85%
  - e. Do you want to see in the cafeteria? (Yes/No) 57%
- Explain:
8. Which alternative forms of transportation would you be in favor of, if provided by the campus? (Students gave multiple answers)
- a. Bicycles 61%
  - b. Horse and buggy 25%
  - c. Skateboards 13%
  - d. Razor scooters 12%
  - e. Other: 2%
9. If our nation takes steps to reduce global warming, it will. . . (circle each bullet that you agree with)
- Help free us from dependence on foreign oil 78%
  - Improve people's health 78%
  - Create green jobs and a stronger economy 76%
  - Save many plant and animal species from extinction 81%
  - Save many people around the world from poverty and starvation 58%
  - Provide a better life for our children and grandchildren 74%
  - Prevent the destruction of most life on the planet 84%
  - Cause job losses and harm our economy 31%
  - Lead to more government regulation 35%
  - Cause energy prices to rise 36%
10. What kinds of changes would you like to see at C.W. Post re: promoting energy efficiency and conservation in classrooms and dorms?



**C.W. Post CARES GLOBAL WARMING SURVEY**

1. How familiar are you with the issue of "global warming"?
  - a. very familiar,
  - b. somewhat familiar,
  - c. not too familiar,
  - d. or not familiar at all
  
2. How large an impact will global warming have on your life? Please Explain
  - e. Very Big impact
  - f. Big Impact
  - g. Measurable impact
  - h. Little Impact
  - i. No impact at all

**Explain:**
  
3. How much attention should C.W. Post pay to global warming?
  - j. A lot of attention
  - k. More attention than we currently do
  - l. I think we already devote the right amount of attention to this issue.
  - m. Less attention.
  - n. It is not something we should focus on.
  
4. How much money should the University spend on solar panels per year?
  - o. \$0
  - p. \$25,000
  - q. \$50,000
  - r. \$100,000
  - s. \$150,000
  - t. More than \$150,000
  
5. What do you want to learn more about at C.W. Post? (Answer each Y/N below)
  - u. Sea Level Rise and its impacts? (Yes/No)
  - v. Drought and rainfall impacts? (Yes/No)
  - w. Health impacts like new diseases? (Yes/No)
  - x. Renewable Energy? (Yes/No)
  - y. What can students do to make a difference? (Yes/No)
  - z. Other:
  
6. Please tell me which statement comes closest to your own point of view. Please check the box which applies.

Until we are sure that global warming is really a problem, we should not take any steps that would have economic costs	The problem of global warming should be addressed, but its effects will be gradual, so we can deal with the problem gradually by taking steps that are low in cost	Global warming is a serious and pressing problem. We should begin taking steps now even if this involves significant costs	Not sure/ Decline
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7. What kinds of changes to C.W. Post would you like to see re: classes on global warming? (Answer Yes/No for each below.)
- aa. Should all students be required to have a better understanding of this issue? (Yes/No)
  - bb. Should College 101 devote more time to environmental issues? (Yes/No)
  - cc. Should there be posters on campus that educate us on how C.W. Post is going green? (Yes/No)
  - dd. Do you want to see in the cafeteria? (Yes/No)  
Explain:
8. Which alternative forms of transportation would you be in favor of, if provided by the campus?
- ee. Bicycles
  - ff. Horse and buggy
  - gg. Skateboards
  - hh. Razor scooters
  - ii. Other:
9. If our nation takes steps to reduce global warming, it will. . . (circle each bullet that you agree with)
- Help free us from dependence on foreign oil
  - Improve people's health
  - Create green jobs and a stronger economy
  - Save many plant and animal species from extinction
  - Save many people around the world from poverty and starvation
  - Provide a better life for our children and grandchildren
  - Prevent the destruction of most life on the planet
  - Cause job losses and harm our economy
  - Lead to more government regulation
  - Cause energy prices to rise
10. What kinds of changes would you like to see at C.W. Post re: promoting energy efficiency and conservation in classrooms and dorms?