Sustainable Cornell: Plugging into Green Energy

What is Green Energy?

Green energy refers to renewable energy sources that include solar, wind, geothermal, small hydroelectric, wave energy, landfill methane, sustainably harvested and clean-burning biomass and fuel cells. Unlike fossil fuels, renewable energy is a low to zero emission energy source. Increasing consumption of renewables reduces the amount global warming pollution in the atmosphere as well as other pollutants that are capable of degrading the environment and threatening public health. While the impact of fossil fuels on our health may not be immediately obvious, it is substantial. The World Health Organization reports that 3 million people now die each year from the effects of air pollution,[1] most of which is generated by the combustion of fossil fuels to power our homes and run our cars. An added benefit of renewable energy is that is can be produced locally. Many locations in Upstate NY are ideal for wind farms and several, such as Maple Ridge, are already in operation. The increased demand provided by Cornell students for more renewable energy will help create jobs, foster economic growth, and increase the cost-competitiveness of clean energy.

At a Glance: Energy Use at Cornell

In 2004, Cornell consumed 234,000 MWh of electricity. Of that, 199,000 MWh were purchased from the New York electric grid[2]. Fossil fuels are the predominate fuel used to generate Cornell's electricity, with coal the current fuel utilized at our on-campus power plant. To reduce the negative impact of our energy usage, students have several courses of action at their disposal:

Buy it for your home: New York State Electric & Gas Corporation (NYSEG) customers have the ability to choose to have their electricity generated from clean, renewable resources[3]. One student purchasing 667kwh of wind power at a cost of $5/semester, would reduce CO_2 emissions equivalent to planting 487 trees or not driving 7,777 miles annually.[4]

Buy it for campus: Supporting a referendum to allocate $5/semester towards clean energy purchases would result in undergraduates replacing over 4.5 million kWh or 2.3% of coal and other fossil fuel based energy with wind energy.[5]

Ask Cornell to build it: Opportunities are available on campus and on local land owned by the University for the development of renewable energy sources. Ask the administration to consider and invest in these efforts.

Green Energy at College Campuses

Many college campuses in the United States are already doing their part to support the greater use and development of clean, sustainable energy sources. Below is a sample of some of the more recent student led initiatives:

- In a student referendum, 82% of Harvard students voted to support a $10 fee to fund renewable energy for campus use. Approximately 76% of the student body voted for the fee to be optional while 59% supported an opt-out mechanism.[6]
- Duke University purchases over $10 million annually in green energy by matching student donations of $25 or $50 for green energy purchases on campus.[7]
- At Connecticut College, students voted to set fees at $20/person for green energy purchases.[8]
- In addition, at least 33 colleges or universities have installed wind generators and at least 91 have installed photovoltaic panels on their campuses including Stanford University, Georgetown University, UC Berkeley[9]

Cornell's Commitment to Reducing Greenhouse Gas Emissions

In April 2001, Harold D. Craft Jr., Vice President for Administration and Chief Financial Officer of Cornell University, committed Cornell to reducing greenhouse gas emissions by 7% below 1990 levels.[10]

"I hereby commit Cornell University to do everything within its ability, consistent with the university's obligations for teaching, research, service and extension, to implement the Kyoto Protocol standards."

Due to the efforts of Cornell's Utilities Department, students and the administration, the University is currently on target to meet the Kyoto goals. Energy efficiency improvements and a proposed Combined Heat and Power (CHP) plant are the primary reasons for this. This potential success, while impressive, remains only a first step. Cornell should not stop at the Kyoto Protocol but instead move beyond it towards even greater reductions in greenhouse gas emissions.

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[1] Air Pollution Fatalities Now Exceed Traffic Fatalities by 3 to 1. www.earth-policy.org/Updates/Update17.htm
[2] test.utilities.cornell.edu/doc/CU_EnergyFastFacts2004.pdf
[3] www.nyseg.com/nysegweb/shopatnyseg.nsf/New%20Wind%20Energy?OpenForm and www.conedsolutions.com/NYSEG/default.htm
[4] "Catch the Wind: FAQ." NYSEG. www.nyseg.com/nysegweb/webcontent.nsf/residential/PrdCtwFaq
[5] Estimated at a bulk rate of 1.5 cents/kWh. This is currently the lowest available cost premium over fossil fuel based energy.
[6] "Wind Power Referendum Sails On." The Harvard Crimson. 10 Dec. 2004. www.thecrimson.com/article.aspx?ref=505015
[7] "Duke Green Power Challenge." www.duke.edu/web/env_alliance/challenge/
[8] "Harnessing Alternative Energy." National Wildlife Federation. 19 Sept. 2005. www.nwf.org/campusecology/files/chat4transcript.pdf
[9] www.aashe.org/resources/energy.php
[10] "Administration reaches accord with Kyoto Now!" Cornell University News Service. 17 April 2001. www.utilities.cornell.edu/Kyoto/KyotoNowPressRelease.htm

Referendum for Green Energy Purchases at Cornell[11]

As an institution, Cornell has committed not only to the emission reduction targets entombed in the Kyoto Protocol but more broadly to achieving sustainability. Moving towards greater reliance on renewable energy is one way to bring us closer to that goal. Our tremendous resources, financial and otherwise, necessitate taking an active role in setting the standard for sustainable energy practices. For less than $1/month, undergraduates could replace more than 2% of dirty fossil energy with clean renewable energy. By supporting the enactment of a $5/semester Student Activity Fee for renewable energy purchases, we are honoring our duty to protect and preserve the natural environment.

Below is a draft referendum promoting the acquisition of renewable energy funded by the undergraduate student body:

$5/Semester Renewable Energy Fee Referendum

Whereas Cornell University has committed itself to the concept of sustainability, which means meeting the needs of the present without compromising the ability of future generations to meet their own needs, and

Whereas students at Cornell University have traditionally been national leaders in promoting energy efficiency and clean energy at institutions of higher education, and

Whereas students on many other campuses have organized successful initiatives to increase renewable energy use at their institutions, and

Whereas students should have the option of furthering the cause of renewable energy and promoting its accompanying economic, environmental, health, and national security benefits by paying a renewable energy fee that would allow Cornell to meet a portion of its energy demand with renewable energy, and

Be it therefore resolved that the Student Assembly place a referendum on the Spring 2007 election ballot asking the following:

Question 1. "Should the Student Activity Fee include an option to pay a $5/semester renewable energy fee?"
- **a. Yes**
- **b. No**

Question 2. "If implemented, should this fee be:
- **a. Mandatory**
- **b. Optional**

Question 3. "If optional, should this fee be:
- **a. Opt-in**
- **b. Opt-out**

N.B. The funds so collected would go toward purchasing and developing renewable energy for Cornell University through the Kyoto Task Team, a University committee composed of students, staff, and faculty.

Respectfully submitted,

Matt Perkins '08
Kyoto Now!

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Chairman of the Student Assembly Environment Committee

[11] www.uc.fas.harvard.edu/council.web/legislation/files/23f/23F-39.pdf