MASSACHUSETTS STATE SUSTAINABILITY PROGRAM
PUBLIC LEADERSHIP, STEWARDSHIP, COMMITMENT

# MA State Sustainability

Vol. 1: Energy

July/August 2005

This newsletter is one of a bi-monthly series published by the Massachusetts State Sustainability Program, which works to minimize the environmental impacts resulting from state government operations.
For more information on the Program, please visit: http://www.mass.gov/envir/Sustainable

## Green Technology

### New Exit Signs Dramatically Reduce Energy

If you have exit signs that use incandescent bulbs, then you're throwing money out the window! Replacing these signs with new LED exit signs will save you money and reduce your greenhouse gas emissions, all with a payback of just over one year.

Recently, the Department of Correction (DOC) and Springfield Technical Community College (STCC), through funding from the State Sustainability Program, purchased around 375 LED exit signs that use only 0.72 watts. These new signs are replacing signs that used between 17 and 100 watts, resulting in considerable savings.

Purchasing almost 300 new Lithonia signs through the Statewide Contract with Grainger at a cost $30.12 each, the DOC expects to save $154,000 over the lifetime of the signs. Springfield Tech benefited from the same price, and expects their 74 new signs to save more than $43,000 over 20 years.

Switching to these energy efficient exit signs is expected to reduce greenhouse gas emissions by 1086 tons.

The Grainger item number for these LED signs is 3BA31.

The Statewide contract is #FAC28.

| LED Exit Sign Savings @$30.12 each | | | |
|---|---|---|---|
| **Agency** | **Project Cost** | **Estimated Savings** | **Estimated Payback** |
| DOC (~300) | $8.434 | $7,708 | 14 months |
| STCC (74) | $2,229 | $2,091 | 13 months |

Springfield Tech. also purchased 10 Photoluminescent exit signs that use no electrical power and charge themselves from daylight or fluorescent lights. While this technology is currently more expensive (Springfield paid $110 per sign), installation requires no wiring and lifetime maintenance is virtually zero.

To learn more, contact the state sustainability staff or:

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**Andrew.Bakinowski@state.ma.us**
Betty Ann Learned – Springfield Tech CC - (413) 755-4889
**BLearned@stcc.edu**

## Renewable Energy Credits

Buying Renewable Energy Credits (RECs) can be a straightforward and simple way of reducing Greenhouse Gas Emissions that come from electricity consumption, meeting the state's GHG reduction targets, and supporting renewable energy here in New England.

RECs are essentially a small price premium for electricity from renewable energy sources. They can be purchased in two ways:

- Pay a price premium on top of an existing electricity bill to support renewable energy
- Purchase RECs separately to offset a specific amount of Kilowatt usage

The Mass Technology Collaborative offers several local and regional wind and solar options with prices currently ranging from 3- 5 cents per KWh. Hull's wind turbines are one local source of RECs.

Additionally, the Division of Energy Resources and the Operational Services Division, as a result of a $17 million commitment, are establishing a renewable energy procurement program for state agencies to support long-term renewable energy contracts and RECs over the next decade.

To learn more, contact State Sustainability staff or go to www.mtpc.org and search under clean energy.

This 660 kW wind turbine is located in the Town of Hull, Massachusetts, near Boston Harbor.

## Biomass and Efficiency – A Powerful combination at Mount Wachusett Community College

Mount Wachusett Community College (MWCC) was originally built to use electric heat, and by the year 2000, electricity costs had risen to more than $750,000 a year. To reduce these costs, MWCC implemented a series of energy efficiency and renewable energy measures, saving the college over $162,000 annually.

In addition to efficiency measures, virtually all the College's heating needs are now met by a biomass heating plant that uses wood chips from regional lumber producers, which are combusted in a highly efficient, low emission and fully automated conversion unit.

As a result of these comprehensive efficiency measures and first ever state college biomass plant, the College has cut its electricity consumption by 27%, resulting in a reduction of over 500 tons of greenhouse gases. In the fall, the college is expected to install a 15 kW BioMax15 modular biomass combined heat and power unit to serve its new childcare facility.

MWCC received financial assistance from MTC, U.S. DOE, rebates from Massachusetts Electric (National Grid), and financing assistance contracts with NORESCo. and the Massachusetts Division of Capital Asset Management (DCAM).

For more information contact:

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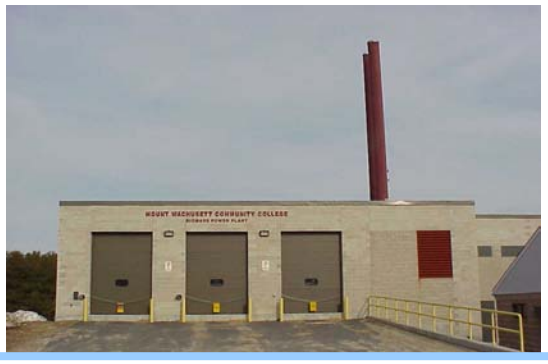
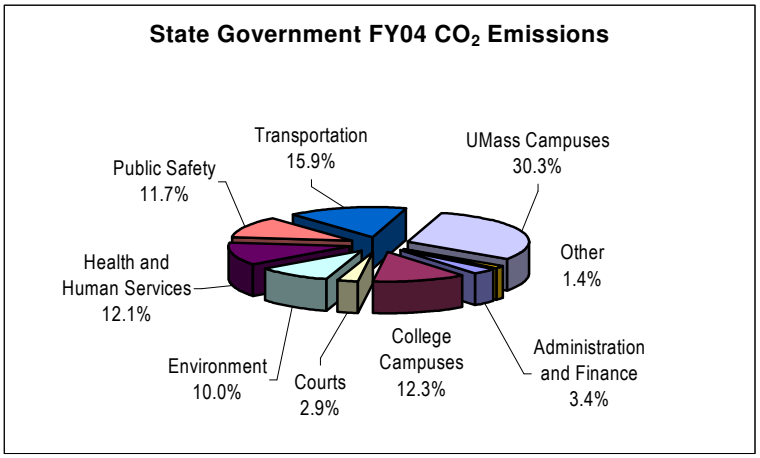


**Above: The Mount Wachusett Community College Biomass Plant**

**Below: Wood chips at Mount Wachusett CC ready to be used for campus heating**




## Massachusetts State Agency Greenhouse Gas Emission Update

With three years of greenhouse gas emissions data finally collected by the State Sustainability Program, work is now underway to develop a long-range greenhouse gas reduction plan to help meet the 25% reduction goal by 2012.

The trends from the past 3 years show that while GHG emissions rose approximately 8% from FY02 to FY03, emissions were essentially unchanged in FY04. Buildings account for over 92% of agency emissions with transportation contributing the rest.

## Energy Hot links:

**MTC** How to purchase Green electricity page:
www.masstech.org/cleanenergy/cando/purchase.htm
**Mt. Wachusett Community College** Biomass Information:
www.mtpc.org/cleanenergy/facilities/profiles/biomasswachusett.htm
**Umass Dartmouth** Solar Home project page:
http://www.umassd.edu/solar/

## Upcoming events:

**State Sustainability Council Mtg.**
September 13th – 100 Cambridge St.
October 11th – 100 Cambridge St.

**EPP Vendor Fair**
November 2nd, Worcester

The State Sustainability Program Newsletter is published by the Executive Office of Environmental Affairs, Stephen Pritchard, Secretary. For more information, contact Eric Friedman, Director of State Sustainability, eric.friedman@state.ma.us or Ian Finlayson, State Sustainability Program Manager ian.finlayson@state.ma.us.