

## **Environmental Advisory Group (EAG) 2008 Update**

The Environmental Advisory Group (EAG) was formed in 2000 to advise the president and college community on issues related to the environmental stewardship of the campus and region. We believe this has been a successful year in raising awareness about ongoing environmental initiatives and promoting environmental consciousness. We hope you find this report informative.

### **2007-08 Membership**

Douglas Terp	Tom Tietenberg	Dave Firmage
Russ Cole	Pat Murphy	Dale DeBlois
Bruce McDougal	Anna Barnwell '08	Kiira Heymann '08
Amanda Theberge '08	Steve Erario '10	Justine Scott '08

### **Governor's Carbon Challenge**

- Colby set goal of reducing emissions per square foot 9% by 2010; Colby **achieved a 27% reduction** in emissions per square foot by 2007.

### **American College and University President's Climate Commitment**

- College and University initiative to exercise leadership by modeling ways to integrate sustainability into campus operations, reduce global warming emissions, and providing students with knowledge and skills to achieve climate neutrality.
- Key elements:
  - Develop comprehensive plan to achieve climate neutrality
  - Institutional structure to guide development and implementation
  - Complete Greenhouse Gas Emissions Inventory within 1 year
  - Develop Action Plan within 2 years
  - Tangible Actions (at least 2 while working on comprehensive plan)
  - Make Action Plan, inventory, and progress reports public
- **Colby has joined effective May 15, 2008.**
- EAG will:
  - Support development of a **comprehensive action plan** for review by President and Board **by fall, 2009.**
  - Serve as institutional advisory panel to assist development, coordination, and implementation of Action Plan.
- Colby has been maintaining **Emissions Inventory since 2004**
- Tangible Action items **already** implemented include:
  - **100% renewable electricity since 2003**
  - Co-generated electricity – now 10% of annual use – since 1998
  - Numerous energy efficiency projects (e.g., windows, lighting, vendamizers) have been completed
  - Purchasing Energy Star rated and other high efficiency products

## **Representative Environmental and Sustainability Initiatives**

### **Dining**

- Sustainable and local purchasing initiatives – special events (e.g., harvest dinners); organic items in Foss, local salad section in Roberts.
- Use of bulk supplies to reduce packaging waste.
- Catering plates and bowls converted to 100% recycled content.
- Just-in-time cooking reduces food waste by 80%.
- Composting 80 tons per year of pre- and post-consumer waste, reducing water consumption, sewer volume, and utility costs by \$20,000 per year.
- Conversion to induction burners reduced energy consumption.
- Cooperative efforts with MOFGA to increase purchasing and availability.

### **Physical Plant**

- 100% renewable electricity since fall, 2003.
- Green cleaning products.
- Six project managers certified as LEED Accredited professionals.
- LEED construction and renovation projects:
  - Schair-Swenson-Watson Silver 2005
  - Diamond Certified 2007
  - Cotter/Pulver/Bookstore Pending 2008
- Conducting biomass feasibility study.
- Two hybrid and two electric vehicles; improved mileage with new vehicles.
- Regular investment in energy efficiency projects (mechanical, electrical, lighting) including participation in the Efficiency Maine Rebate program.

### **Recycle Everything Save Colby's Usable Excess (RESCUE)**

- Collects unwanted items from student rooms at the end of each year.
- Donates clothes to local charities.
- Makes basic household items available to students at low cost in the fall.
- Reduced landfill waste by 525 cubic yards in 2007 and saved \$6,500 in fees.

### **Green Graduation**

- Local and organic foods at Honorary Degree Dinner.
- Increased recycling, composting, and biodegradable flatware.
- Programs and invitations revised to use less material and will be printed on 100% post-consumer recycled paper, manufactured with alternative fuels, and soy ink.
- "Green Team" volunteers to staff information tables and help guests identify appropriate recycling and waste containers.
- Education booths on sustainability initiatives.
- Alaina Clark '08 initiative with support from Communications, Dining, Physical Plant, Scheduling, Campus Life, and President's Office.

### **Communications**

- Changed to 100% post-consumer recycled papers manufactured using alternative fuels.
- Savings include nearly 2,600 trees and more than 900,000 gallons of water,
- 415,000 pounds of greenhouse gases averted.
- More than 120,000 pounds of solid waste removed from waste stream.

## Emissions Inventory

Colby emissions tracked annually since 2004 and 1990 baseline using modified Cool Air, Clean Planet calculator.

Calculations include:

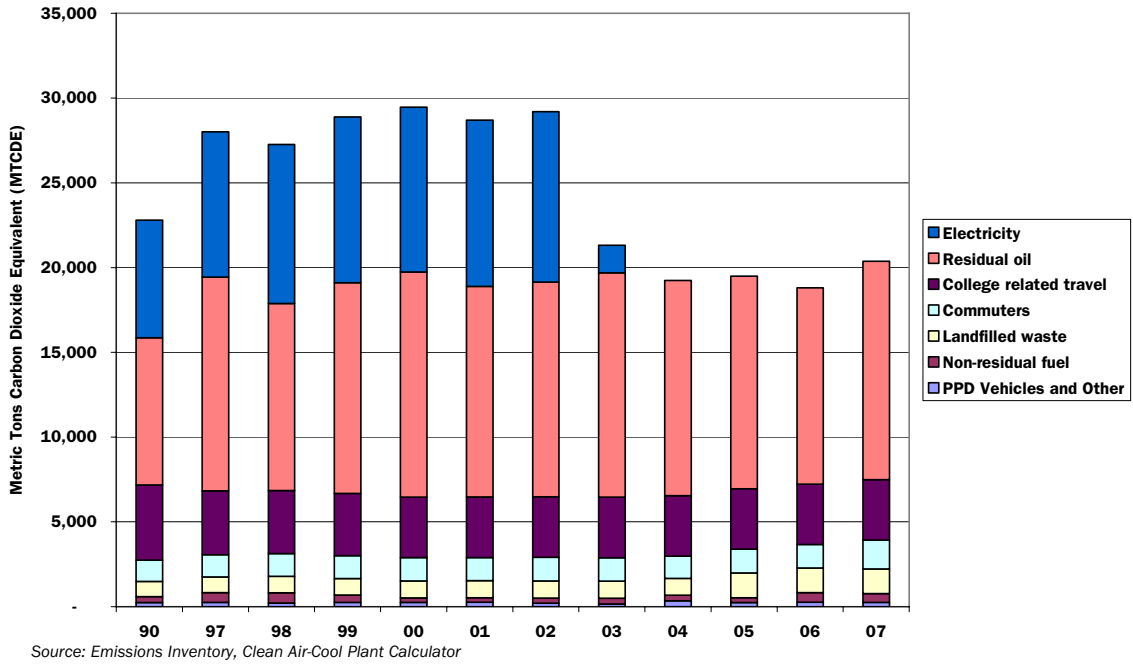
- Actual electrical and oil consumption
- Estimated solid waste and travel

Maintenance of Calculator by student researchers with faculty mentorship. 2006 and 2007 inventories conducted by Jamie O'Connell '08 (Honors Thesis adviser Tom Tietenberg) and Sarah Sorenson '11.

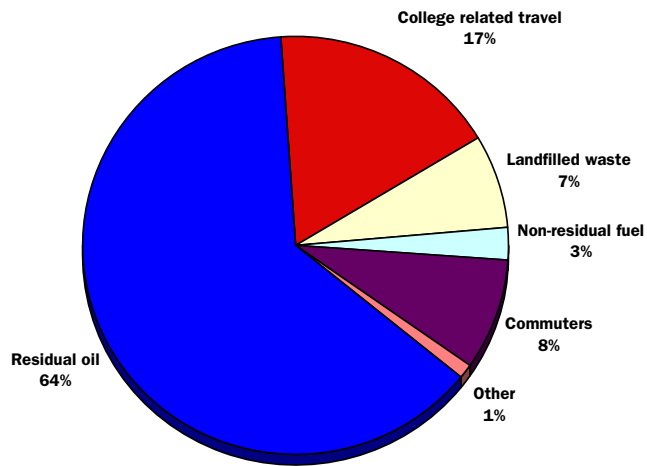
Preliminary findings:

- Colby responsible for about 18,700 Metric Tons of Carbon Dioxide Equivalent (MTCDEs) in 2007 and commuters added 1,700 MTCDEs.
- Residual oil – used in the central heating plant – accounts for 64% of all greenhouse gas emissions.
- 2007 overall total represents a 10.5% decrease in gross emissions and a 27% decrease in emissions per square foot from 1990 levels.
- College-sourced gross emissions decreased 13% and emissions per square foot decreased 29.6% from 1990 levels.
- Reduction possible due to
  - 100% renewable source electricity (since 2003)
  - Ongoing investments in energy efficiency projects
  - Increased efficiency of new and renovated buildings, including LEED buildings (Schair-Swenson-Watson and Diamond).
- Potential opportunities to further reduce impact:
  - Biomass feasibility study underway. Biomass is an organic material – such as wood chips – that can be used as fuel for the central heating plant. Preliminary review suggests possibility to reduce oil consumption by 80% or more, resulting in dramatic reduction of emissions
  - Landfill provider exploring methane recapture and electricity generation facility
  - Recycling and waste reduction initiatives
  - Retail carbon offsets for college travel

**Colby College  
Greenhouse Gas Emissions  
Fiscal 1990 - 2007**



**Colby College  
Greenhouse Gas Emissions by Source  
Fiscal 2006-07**



**20,367 Metric tons Carbon Dioxide Equivalent (MTCDEs)**