



Recent Climate Actions at Mason

Energy Saving Contract with Siemens

Mason is saving about \$1 million every year in utility costs with the help of an energy-efficiency contract with Siemens Building Technologies initiated in 2004. Energy-efficient lighting and water-conserving devices and fixtures were installed at Mason's campuses in 2005-2006; boilers and chillers were upgraded; the energy management system was expanded so that inefficient buildings can be easily targeted for improvement; and new policies for energy and water efficiency were put in place.

The payoff is lower utility bills today and into the future, and fewer greenhouse gas emissions. For example in 2007 alone, Mason:

- avoided the use of 15,343,249 kWh of electricity, 697,943 Therms of natural gas, and 64,495,000 gallons of water.
- reduced our CO₂ emissions by over 29 million pounds, and our emissions of SO₂ and NO_x by 133,333 and 76,716 pounds, respectively.

New Green Building Standards

Mason now has policies that all new buildings will be built to green standards. Two new buildings are currently being built to green standards: the Volgenau IT&E building at Fairfax and the new building at Arlington. Mason has also has six new projects in the pipeline registered to be "LEED certified." (LEED stands for Leadership in Energy and Environmental Design, as defined by the U.S. Green Building Council.) Mason's goal is to build all new buildings to the "LEED Silver" standard.

LEED certified buildings are typically 50% more energy efficient than standard buildings. This reduces greenhouse gas emissions and saves Mason money.

New Pro-Active Transportation Department

In August of 2005 Mason established a new Parking and Transportation Department that is dedicated to pro-actively managing parking demand, overseeing campus shuttles, and encouraging public transportation, carpooling, and bicycling options.

- CUE bus trips taken by Mason students and employees have increased from 250,000 to 368,000 in the last three years. (Mason community members ride the CUE bus free)
- New shuttles take campus members to and from the Vienna Metro for free.
- Mason employees can receive \$115 a month for commuting by Metro or other public transit.
- Relocation of the freshman parking lot to the West Campus reduced the number of freshmen applying for parking in 2007-2008 by 25%.



Current and Future Climate Actions at Mason

Completion of Greenhouse Gas Inventory and Climate Action Plan

The Facilities Department has undertaken and plans to finish a Greenhouse Gas Inventory by September 2008. After this baseline has been completed, we will seek out help from the campus community to identify the most effective ways to reduce our emissions.

Expansion of Central Heating and Cooling Plant

Mason's Fairfax campus has a central heating and cooling plant that allows for much more efficient heating and cooling of buildings than would be possible with individual systems for each building. Currently the central plant is being expanded, and Mason will capture efficiency improvements possible with newer equipment. Since this equipment is "shared" in the central system, these improvements will pass through to all buildings on campus.

Efficiency Competitions

Mason's first Energy Challenge between residence halls was completed this Earth Day. We plan to extend such competitions to other buildings on campus, encouraging all of the campus community to become involved in finding creative ways to reduce energy and water use.

Switch to Recycled Paper

Mason is in the process of switching over to 30% post-consumer recycled paper. Testing of the paper has just begun, to ensure no adverse impact on existing equipment. Using recycled paper saves the following resources: 929 trees per year; 67MMBtus of energy; 338,633 gallons of water; 43,000 pounds of waste; and 81,500 pounds of CO₂.

Increased Use of Electric Vehicles

The Facilities Department already uses many electric vehicles on campus for maintenance activities, but more are on the way. Larger electric vehicles now available are expected to replace the short-trip high-emissions trucks used by the shops to make service calls.

Installation of Bike Lanes on Campus

All new roads constructed on campus will include dedicated bike lanes. Bike lanes are also planned for the interior of campus.

Vanpool, Carpool, and Shuttle Additions

The Parking and Transportation Office will be expanding the availability of vanpools to more of the Mason community. Faculty and staff who seem to be clustered in certain areas will be offered new vanpools. Formalized carpooling programs are being developed. Future shuttles may be added to provide service to local neighborhoods, nearby attractions, and VRE train station.

Green Roof on SUB II

During the renovation of SUB II in 2008/2009, a green roof will be installed on the roof outside of where Ciao Hall now resides. The roof will be an opportunity for education in three distinct ways: first, as a study lab for various academic departments and students; second, as a pilot test for the Facilities Department for potential future use; and third, as a general campus community tool for sustainability education.