

## VIRGINIA TECH SUSTAINABILITY INITIATIVES

President Charles W. Steger had declared “campus sustainability has strong support among university leadership and Virginia Tech will become a leader in campus sustainability issues.” This information paper will highlight some of our many university sustainability initiatives.

a. Establishment of the Energy and Sustainability Committee. On April 30, 2007, the University Council authorized and President Steger approved the establishment of the Energy and Sustainability Committee. The committee is part of the university system of shared governance and membership includes students, staff, and faculty. The committee’s mission is to review and provide advice to the university administration on broad policy issues relating to the university's energy supply and use, and resource conservation." The committee held its first monthly meeting on January 28, 2008, and meets on a monthly basis throughout the academic year. It reports to the Commission on University Support which reports to the University Council.

b. Policy 5505, Campus Energy and Water. The purpose of this policy is to guide the operations of the university to achieve the highest standards in energy and water usage with consideration on the impact on environmental quality and economic performance. The benefits of this policy include protection of ecosystems, improvement of air and water quality, reduction of waste, and conservation of resources. The policy was initially approved in 2006 and is currently under revision by the Energy and Sustainability Committee.

c. Virginia Tech Climate Action Commitment and Sustainability Plan. President Steger has charged the Energy and Sustainability Committee to develop a campus sustainability plan and climate action commitment that is specific to our university. The committee will prepare a draft plan for presentation to the president and the Commission on University Support by the end of the Fall Semester 2008. Once approved by the commission, the draft plan will be submitted to the University Council with the goal of formal adoption of the plan approval by the end of the Spring Semester 2009. Utilizing the university governance system in the approval process will secure support of the entire university community. For more information please see: <http://www.vtnews.vt.edu/story.php?relyear=2008&itemno=374>

d. Executive Order 48 (2007) “Energy Efficiency in State Government.” On April 5, 2007 Governor Timothy M. Kaine signed Executive Order 48. Since Virginia Tech was one of only 17 agencies that achieved the 10% energy savings goal established for 2006 in Executive Order 54 (2003), Executive Order 48 (2007) requires the university to "reduce costs of non-renewable energy purchases by an additional 15% of fiscal year 2006 expenditures by fiscal year 2010. The university reported energy costs of \$15.4 million for fiscal year 2006 (baseline), and is in the process of implementing a series of energy projects that will ensure it achieves its Executive Order 48 (2007) reduction goal of \$2.31 million.

e. Air Emissions. The university recently completed construction on a \$5.85 million Boiler Pollution Controls project which added a bag-house and acid gas scrubber to Boiler #7 (older coal fired boiler). These controls are expected to reduce the particulate emissions from the Central Steam Plant from 42

tons per year to 2 tons per year, as well as reduce sulfur dioxide emissions from 460 tons per year to 110 tons per year. Boiler #10 is currently being retrofitted with new low NOx burners and air controls which will reduce nitrogen oxide emissions and improve efficiency. Boilers #8 and #9 will be retrofitted in a similar manner later this calendar year.

f. Recycling. The university has reinstated the paper recycling program. Virginia Tech Recycling hired three employees, purchased a new recycling vehicle and several hundred recycling bins and accessory equipment. Collection services have been established with all colleges and virtually all academic and administrative buildings. During 2007 Virginia Tech Recycling collected 100 more tons of paper than in 2006. The increase in paper recycling, coupled with the removal of old metal piping and communications cable from the steam tunnels (see paragraph g.6. below), and the removal of old runway asphalt material, has resulted in the university's recycling rate for 2007 increasing by over 10% for a total of 34%.

g. Recently completed and ongoing Energy Conservation Projects:

1. Retrofitted light fixtures in Wallace Hall, Whittemore Hall, and Hahn Hall, the Vet Med Facilities, and the Human Resources Annex are estimated to save over \$120,000 annually. Retrofitting light fixtures in Fralin and Hancock Halls is an ongoing project.

2. A campus-wide water audit of all water consuming systems on the main campus identified approximately \$322,000 in annual savings. Water conservation measures have been implemented in McBryde Hall, Pamplin Hall, and the Sterrett Facilities Complex with an estimated savings of 2.1 million gallons of water annually.

3. The installation of energy saving occupancy sensors for 146 classrooms will be completed this summer and will result in over \$10,000 annual saving in electricity costs.

4. The new Life Sciences Building has a vegetated (green) roof.

5. The university and its consultant will be developing a detailed hydrologic assessment of the campus, a calibrated model, and recommendations on areas where existing buildings can be retrofitted to manage storm water more effectively.

6. The installation of new steam distribution piping with new insulation across campus will greatly improve efficiency and reduce heat losses. This upgrade will allow the university to meet its programmed steam and hot water demands through 2015 with the existing Central Steam Plant.

h. Student Initiatives. Approximately 50 students in the Urban Affairs & Planning Program in the College of Architecture and Urban Studies conducted an inventory of the Virginia Tech and Town of Blacksburg energy use and greenhouse gas (GHG) emissions. Students participated in RecycleMania 2008, a ten-week college and university competition sponsored by the U.S. Environmental Protection Agency. The student group Environmental Coalition (EC) planned and executed "Focus the Nation," and one-day teach-in to discuss global warming solution for America, and "Earth Week 2008." An EC student organized an environmental group "Green Team" with the goal to educate all Hokies on how to live a more informed and sustainable life.

i. Sustainability Recognition and Awards.

1. Virginia Tech's Transportation Program is nationally recognized. It received a "Best Place for Commuter's Silver Level Award" from the U.S. Environmental Protection Agency and the Department of Transportation. Over \$400,000 in federal enhancement grants have been received to build bike trails, lanes and related amenities. The Sustainable Endowments Institute's College Sustainability Report Card gave the university an "A rating" in the transportation category citing numerous alternative transportation initiatives successes to include the Blacksburg Transit public transportation which is available to students, faculty and staff.

2. Sustainability Week 2007 received the Governor's Environmental Excellence "Bronze Award" in the government program category. To promote sustainability awareness and education, and to support positive actions with practical results, Virginia Tech, the Town of Blacksburg, and the local citizens group Sustainable Blacksburg formed a "green partnership" and sponsored a week-long event in October that included over 30 activities, guest speakers, fairs and tours. The award was presented to the partnership by Virginia's Secretary of Natural Resources L. Preston Bryant, Jr., during the Virginia Environmental Symposium 2008 held at the Virginia Military Institute in Lexington, Virginia.