Energy and Sustainability Committee Minutes
February 25, 2008
2:00 – 3:00 p.m.
210 Burruss Hall

Present: Sherwood Wilson, Melinda West for Dwight Shelton, Michael Coleman, Scott Hurst, Kim Briele, Bruce Ferguson, Ben Myers, Denny Cochrane, Rob Lowe, Jack Lesko, Sean McGinnis, Annie Pearce, Tom Tucker, Jeff Beeby for Mike Cutlip, Sue Ott Rowlands, Brian Perkins, Lauren Ashley Hamm, Natalya Hallanan, and Diliana Hirt

Guests: Larry Bechtel, Erik Olsen

Absent: John Randolph, Lisa Wilkes

1. Introduction of Mike Coleman and Natalya Hallanan

The chair, Sherwood Wilson, called the meeting to order and commented that he was encouraged with the energy initiatives on campus. He introduced Mike Coleman who is the new Associate Vice President for Facilities. Natalya Hallanan, President of Environmental Coalition, was introduced and asked to talk about the Environmental Coalition.

2. Adoption of Agenda

Sherwood Wilson recommended the second agenda item under New Business, Review Energy and Water Policy 5505, be moved to the first item. A motion was made and seconded to adopt the agenda as revised.

3. Approval of January 28, 2008 Minutes

A motion was made and seconded to approve the January 28, 2008 minutes. Tom Tucker suggested in the future that to be sustainable the Committee members print their own minutes. This was agreed upon.

4. Old Business

a) "Focus the Nation" was an educational initiative on global warming solutions for America that occurred at more than 1,000 colleges and universities on January 31, 2008. The Environmental Coalition at Virginia Tech hosted this event for Virginia Tech and did a marvelous job in the planning and execution. Natalya Hallanan provided an overview of the individual events.
b) Sherwood Wilson told the Committee that President Steger is still reviewing the President's Climate Commitment. He reminded the Committee that President Steger will not sign a document unless he is confident the university can commit to it. If President Steger decides he will not sign the President's Climate

Commitment, Sherwood Wilson said he would like for this Committee to draft a Virginia Tech Climate Commitment. He will discuss this further with President Steger prior to our next meeting.

5. New Business

a) The members were asked to introduce themselves for the benefit of those absent at the last meeting.
b) Sherwood Wilson announced that he would like for Denny Cochrane to become an ex officio member given his role as the Energy and Sustainability Coordinator.
c) Denny Cochrane has been informed by the President's Office that they are reviewing all university governance membership lists given the recent change with the Office of the Executive Vice President and Chief Operating Officer.
d) Bruce Ferguson, a former member of the Energy Committee, gave an overview of the Campus Energy and Water Policy 5505 (see Attachment A). The Energy Committee was an operational committee established several years ago by the then Vice President for Business Affairs. The Energy Committee produced Policy 5505 which was approved in September 2006. Bruce Ferguson suggested that some substantive and some housekeeping changes need to be made to Policy 5505. A motion was made and seconded to establish a sub-committee to review the policy. Those volunteering to serve on the sub-committee were Annie Pearce, Scott Hurst, Mike Coleman, Ben Myers, Tom Tucker, Brian Perkins, and Natalya Hallanan. Tom Tucker noted that since there are several Facilities Department individuals on the sub-committee he will approach Mike Cutlip to see if he could replace Tom on the sub-committee. The Committee received a copy of the Governor's Executive Order 48 (2007), "Energy Efficiency in State Government," (see Attachment B) as it has replaced Executive Order 54 (2003) cited in Policy 5505.
e) Larry Bechtel, the Virginia Tech Recycling Coordinator, was introduced and gave an update on the university recycling program, focusing on the reinstatement of the paper recycling program. For fiscal year 2007-2008, the university provided three FTEs, the salary, and sufficient operating funds to purchase a new recycling vehicle, recycling containers, and other associated equipment. To date, six of the eight colleges are fully participating, and work is underway to bring the remaining two on board. Larry Bechtel provided a handout summarizing his activities (see Attachment C). This is a real success story and Larry deserves tremendous credit. Sherwood Wilson provided some insight on Larry's background stating that in 1990 he hired Larry Bechtel, an English Professor at the time, to create the first university recycling program.
f) Planning is underway for Earth Week which is scheduled for April 21-25, 2008. The Environmental Coalition will be the primary host for Virginia Tech, and Natalya Hallanan gave a brief preview of events they are planning and agreed to provide a detailed update at the next meeting.
g) Denny Cochrane has prepared the Annual Report on University Sustainability Initiatives which will be presented to the Board of Visitors for the March 31, 2008 meeting. He will provide a copy to all committee members at the next meeting.

h) Professor John Randolph, Urban Affairs and Planning Program, College of Architecture and Urban Studies, has had approximately 50 of his students involved in conducting an inventory of the Virginia Tech and the Town of Blacksburg energy use and green house gas (GHG) emissions. Denny Cochrane informed the Committee that Professor Randolph's goal is to provide the results in a presentation at the next meeting.

6) Future Meeting

The future meetings this semester are March 24 and April 28 at 2:00 p.m. in Room 210, Burruss Hall. Any agenda items should be emailed to Denny Cochrane at denniscc@vt.edu .

7) Adjourn

It was moved and seconded to adjourn.

Virginia Polytechnic Institute and State University **No. 5505 Rev.: 0**

Policy and Procedures **Date: September 26, 2006**

Subject: Campus Energy and Water Policy

1. Purpose

The purpose of this policy is to guide the operations of the university in order to achieve the highest standards in energy/water use with consideration of their impact on environmental quality and economic performance. To accomplish this goal, the university will establish procedures to consider energy/water use in the design and operations of university facilities in the most economical and environmentally friendly manner possible, educate the university community on the use of energy/water, and consider energy/water use in purchasing decisions and transportation.

2. Policy

University facilities should, to the extent possible, be designed, constructed, renovated, operated and maintained in accordance with the latest energy/water efficiency standards and in a manner consistent with the US Green Building Council's LEED™ Building Rating Systems.

2.1 Billing

- The university's records concerning energy/water usage should be consolidated and current.
- Utility billing and payment processes for Educational and General (E&G) centralized facilities and investments in utility conservation measures occur through a combination of external and internal systems and entities. The University's internal utility billing systems will continue to operate in the existing manner, and the Assistant Vice President for Facilities is assigned the responsibility for the payment of these utility charges, where appropriate using centrally managed funds for each utility (electricity, gas, steam, chilled water, potable water, domestic hot water and propane). In additional to these central systems, the University processes several utility bills from external parties for service to outlying parts of the campus as well as off-campus operations. These billings are processed in a decentralized environment by the operating units involved with the provision of utilities, and those billing processes and funding commitments will remain the responsibility of the decentralized operating units.

2.2 Conservation

- The university should comply with the Governor's Executive Order 54 requiring Virginia state agencies to reduce energy and water consumption.
- Through the coincident consideration and evaluation of current building technologies as well as the operation and use of building systems, cost effective strategies to reduce energy demand will be identified, evaluated and when practical, implemented.
- In a further effort to address the demand for energy, Virginia Tech will consider the development and implementation of strategies, such as information dissemination and incentive programs, to encourage full participation of building occupants in an energy cost avoidance program. The university will develop and promote energy conservation awareness strategies whenever possible and practical.

2.3 Design

- New buildings or significant renovations should be properly "commissioned" prior to substantial completion.
- This policy incorporates the Virginia Tech *Design Guidelines and Construction Standards* which, in turn, should incorporate the latest energy standards and codes.
- Unless otherwise referenced in this policy and whenever feasible, all energy consuming equipment should be Energy Star rated in efficiency or better.
- The university should review its numerous control systems with the objective of establishing the ability to communicate with each other and with the goal of reducing energy costs.
- Flat roofs should have as high a solar reflectivity as practical for the situation and application.
- Plans for construction, renovation, and maintenance of university owned facilities and the installation of equipment within those facilities should be submitted to and reviewed by the Campus Energy Manager at each stage of the design and prior to finalizing bid documents.
- Building lighting, heating and cooling systems will be designed, renovated, and operated to align space use and occupancy patterns with a goal of reducing energy use during unoccupied periods.
- Decisions concerning investments for renovations or new construction of all facilities at Virginia Tech should be made based on lifetime owning costs or life cycle cost analysis.

2.4 Operational

- The nominal temperature targets for occupied facilities should be 68°F in the winter and 74°F in the summer.
- Outside windows and doors should be closed when heating and cooling systems are in operation.
- It is strongly encouraged that all computers at the university should be Energy Star rated, have Liquid Crystal Display (LCD) monitors/screens set to default to sleep mode after a period of 30 minutes or less of disuse, except in those cases where specific research, instruction, or office mission requirements demand otherwise.
- A goal has been established to install occupancy sensors to de-energize room lighting after a period of 15 minutes or less of non use in all private offices, meeting rooms, classrooms and other spaces used sporadically. For all spaces not controlled by occupancy sensors (for reasons of practicability), the occupants should take responsibility for turning out the lights when the space is not in use.
- All portable electric space heaters and window air conditioners should be of a type approved by Environmental Health and Safety Services.

2.5 Renewables

Virginia Tech should evaluate and compare alternative energy sources for short and long-term costs while considering future projections for availability and price escalation of all energy sources. Virginia Tech should identify and attempt to implement those sources identified as being available and least costly.

2.6 Transportation

- The university should strive to achieve a passenger fleet vehicle average fuel efficiency of 30 miles per gallon.
- The university should continue to promote the use of carpooling and alternative modes of transportation, including, but not limited to, utilizing Blacksburg Transit, bicycles, walking and alternatively fueled vehicles.

3. Procedures

3.1 Point of Contact

- The Campus Energy Manager (reporting to the Director of Utilities) is the point of contact for this policy.

3.2 The University Energy Committee

- The University Energy Committee is an operational committee that has been established to assist the Campus Energy Manager, the Assistant Vice President for Facilities, and the Vice President for Business Affairs with the development and implementation of the Campus Energy and Water Policy.

3.3 University Departments and Regulatory Agency Contracts

The Campus Energy Manager's office should work with other university departments and outside regulatory agencies to develop and implement procedures to ensure full compliance of the design and execution of the work with applicable codes, standard permitting requirements and other university concerns. These contacts should include, but are not limited to:

- Office of the University Architect (OUA)
- Capital Design and Construction Department (CDCD)
- Physical Plant Operations
- Contracts and Campus Renovations Services (CRS)
- Utilities Department
- Virginia Tech Electric Service (VTES)
- Office of Transportation
- Environmental Health and Safety Services (EHSS)
- Student Programs
- Residential and Dining Programs (RDP)
- Athletics Department
- Recreational Sports
- University Unions and Student Activities (UUSA)
- Virginia Department of Environmental Quality (VADEQ)
- Virginia Department of Mines, Minerals and Energy (DMME)

3.4 Implementation and Compliance

Each department head or supervisor should take the following actions:

- Communicate this policy to everyone under his/her supervision by providing access to the policy and discussing with his/her employees.
- Designate an energy/water conservation representative to serve as liaison between the organization, unit or building and the Campus Energy Manager's office.
- Identify all training requirements in this area that may apply to those individuals working in the organization and inform supervisors of the need for appropriate training.

4. Definitions

ASHRAE: American Society of Heating, Refrigeration and Air Conditioning Engineers

Commissioned: (Known as commissioning) The process of ensuring that systems are designed, installed, functionally tested, and performing in conformity with the design intent. For existing buildings, retro-commissioning applies to a systematic process for improving and optimizing a building's operations and supporting those improvements with enhanced documentation and operator training.

Energy Star®: A program of the US Environmental Protection Agency including rating of appliances and equipment for energy/water efficiency.

Facility: Any portion of a building, structure or area, including the site on which the building, structure or area is located, wherein specific services are provided or activities are performed. This includes all utilities, systems and building service equipment associated with the facility.

HVAC: Heating Ventilating and Air Conditioning.

LEED™: Leadership in Energy and Environmental Design is the US Green Building Council's building rating system which is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Three versions of rating systems may be considered for project design at Virginia Tech: LEED-NC (New Construction), LEED-EB (Existing Buildings), and LEED-CI (Commercial Interiors).

Maintenance: Work performed to a facility or the fixed systems and building service equipment therein, for the purpose of maintaining quality and function.

Portable: HVAC equipment used within a facility but without permanent connection to the building's utility services.

Renovation: Any work to a facility or the fixed systems and building service equipment therein which is done to improve the existing level of quality and function, or to accommodate a change in the nature of the use of a space within a building or facility.

Repair: The reconstruction of or renewal of any part of an existing facility for the purpose of maintenance or restoration of its state.

Utilities: Energy (electricity, steam, chilled water, domestic hot water, natural gas, and propane) and water (potable water/sewer).

5. References

ASHRAE 90.1 (Energy Standard for Buildings except Low-Rise Residential Buildings)

EPA Water Conservation Plan Guidelines, Safe Drinking Water Act, USC 42

National Energy Conservation Policy Act, Public Law 95-619

National Appliance Energy Conservation Act, Public Law 100-12

Virginia Tech "University, Design Guidelines and Construction Standards"

Governor's Executive Order 54, State of Virginia 2003

6. Approval and Revisions

Approved September 26, 2006 by Vice President for Business Affairs, Kurt J. Krause.

COMMONWEALTH OF VIRGINIA

OFFICE OF THE GOVERNOR

Executive Order 48 (2007)

ENERGY EFFICIENCY IN STATE GOVERNMENT

Importance of the Initiative

Commonwealth agencies and institutions spent over $290 million in fiscal year 2006 for facility and transportation energy. It is critical that the Commonwealth use energy in the most efficient manner possible to save taxpayer money and provide leadership to all Virginians in using our natural resources wisely. Improvements in energy efficiency and protection of our priceless natural resources are inseparable goals. Reducing the amount of energy we consume will reduce the emission of greenhouse gases that are largely responsible for global climate change. State government has the capacity and responsibility to save taxpayer money while protecting our climate and natural resources for future generations.

The Commonwealth's citizens, businesses, and governments are also faced with managing the effects of more costly and less reliable supplies of energy, as well as the environmental effects of energy production and consumption. In response, the General Assembly enacted into law in 2006 a state energy policy and directed the Department of Mines, Minerals and Energy to develop the Virginia Energy Plan. This requires coordination of energy activities among many private organizations and state agencies and institutions.

By the power vested in me by Article V of the Constitution of Virginia, and Section 2.2-103 of the *Code of Virginia*, and subject always to my continuing and ultimate authority and responsibility to act in such matters, I hereby direct the Governor's Secretaries and all executive branch agencies and institutions to reduce energy

consumption and costs in state government operations in the executive branch. I also set forth a process for coordinating energy policy development within the executive branch.

Agency Energy Management

All agencies and institutions shall provide adequate management support to their energy-savings activities. In order to ensure agencies have sufficient expertise in energy management, every Agency Energy Manager for an agency or institution with energy costs exceeding $1 million shall be certified as an energy manager by the Association of Energy Engineers by June 30, 2008.

State Agency and Institutions Energy Savings Goal

I hereby set a goal for executive branch agencies and institutions to reduce the annual cost of non-renewable energy purchases by at least 20 percent of fiscal year 2006 expenditures by fiscal year 2010. Any agency or institution that can demonstrate to the Senior Advisor for Energy Policy that they met the 10 percent energy savings goal established for 2006 in Executive Order 54 (2003) shall reduce costs of non-renewable energy purchase by an additional 15 percent of fiscal year 2006 expenditures by fiscal year 2010.

In order to meet this goal, agencies and institutions shall aggressively pursue (i) all energy-savings activities whose costs are recoverable in one fiscal year, such as use of screw-in fluorescent and other high-efficiency lighting in place of incandescent bulbs and other less efficient lights; (ii) energy-savings performance contracts that are in compliance with Section 4-4.01v of the Appropriations Act; (iii) other funded capital energy-savings improvements; (iv) alternate procurement techniques for energy; (v) renovations of existing buildings consistent with LEED (including the use of Virginia forest products with alternate certifications) or Energy Star requirements as provided for in this executive order; (vi) the transportation energy use requirements provided for in this executive order; or (vii) purchases of renewable energy. Further, after having complied with requirements regarding roof repair or replacement and deferred maintenance projects in accordance with Section 4-4.01c of the Appropriations Act, agencies shall aggressively pursue maintenance reserve projects leading to energy conservation.

Agencies shall report their progress towards the energy-savings goals as part of the Governor's Management Scorecard, Resource Stewardship objective. Such progress shall also be reported to the public on the Department of Mines, Minerals and Energy's website.

New and Renovated State-Owned Facilities

All agencies and institutions constructing state-owned facilities over 5,000 gross square feet in size, and renovations of such buildings valued at more than 50% of the assessed building value which have not advertised for architectural and engineering services by the effective date of this order shall be designed and constructed consistent with the energy performance standards at least as stringent as the U.S. Green Building Council's LEED rating system (including the use of Virginia forest products with alternate certifications) or the United States Environmental Protection Agency/Department of Energy's "Energy Star" rating.

The Senior Advisor for Energy Policy shall periodically assess the cost effectiveness of incorporating a photovoltaic power system or a green roof in any roof renovation for buildings over 5,000 gross square feet in size. If the Senior Advisor for Energy Policy finds that the projected energy savings over a 15-year period can pay for the additional cost of installing a photovoltaic or green roof system, then the Department of General Services shall require that any roof replacement design address that option. Agencies and institutions shall incorporate the option if it meets the 15-year payback limit for that replacement.

Leased Facilities

When a Commonwealth agency or institution is to lease space in a metropolitan area where public transit is available, it shall seek to lease space within a quarter mile of a bus, trolley, Metro, or commuter rail stop. The Commonwealth shall encourage the private sector to adopt energy-efficient building standards by giving preference when leasing facilities for state use to facilities meeting the U.S. Green Building Council's LEED rating system (including the use of Virginia forest products with alternate certifications) or the United States Environmental Protection Agency/Department of Energy's "Energy Star" rating. The Commonwealth shall also provide a preference when leasing facilities for state use to facilities that are pedestrian and bicycle accessible. The Division of Real Estate Services of the Department of General Services shall consider these preferences in approving new leases or extensions of current leases.

Transportation Energy Use

The Department of General Services, by Executive Order 89 (2005), is responsible for developing a consistent, efficient, and cost-effective fleet management program for all vehicles owned by the Commonwealth. Therefore, the Department of General Services shall include in its policies and procedures requirements for the purchase of fuel-efficient, low-emission state-owned vehicles. In addition, the Department of General Services

shall include in its policies and procedures for leasing vehicles requirements that give a preference to compact, fuel-efficient, and low-emission vehicles.

All agencies and institutions shall maximize biodiesel and ethanol use in state fleet vehicles except where use of biodiesel will void warranties or incur unreasonable additional costs to the agencies. The Department of General Services shall make available, at selected sites based upon the locations of state-owned flex-fuel and diesel vehicles, E85 and B20 fuels for agencies. Agencies and institutions that independently purchase fuel shall use E85 and B20 fuel sites to the maximum extent reasonably possible.

All agencies and institutions shall take necessary actions to minimize vehicle miles traveled related to state operations. All agencies and institutions shall implement transit and ridesharing incentive programs within the parameters of the Department of Human Resource Management's guidelines, and shall maximize the use of telecommuting consistent with the policies of the Office of Telework Promotion and Broadband Assistance.

State vehicles used for law enforcement and emergency response shall be exempt from the provisions of this section. Public safety agencies are expected to make all reasonable efforts to reduce transportation energy use when possible in ways that do not adversely impact their missions and ultimately the safety of our citizens.

State Government Equipment and Supplies

Commonwealth agencies and institutions shall purchase or lease Energy Star rated appliances and equipment for all classifications for which an Energy Star designation is available. All new copiers, faxes, printers, and other such office equipment purchased or leased by the Commonwealth that uses paper shall be recycled paper-compatible. The Commonwealth shall purchase only recycled paper except where equipment limitations preclude the use of recycled paper.

Senior Advisor for Energy Policy and Energy Policy Advisory Council

There is hereby established the position of Senior Advisor to the Governor for Energy Policy and the Governor's Energy Policy Advisory Council to provide expertise and advice to the Commonwealth on the Virginia Energy Plan and other energy matters. The Senior Advisor will serve as the Governor's principal advisor on energy-related issues, and is directed to coordinate energy policy across state agencies and institutions, including advising state institutions of higher education on coordinating energy research efforts.

The Senior Advisor shall develop and update the Virginia Energy Plan in conjunction with the Division of Energy of the Department of Mines, Minerals, and Energy, as provided for in Chapter 2 of Title 67 of the Code of Virginia, drawing upon expertise of other agencies and institutions and Virginia businesses as appropriate.

The Governor's Energy Policy Advisory Council shall be chaired by the Senior Advisor for Energy Policy. The Council shall consist of 15 members appointed by the Governor, to serve at his pleasure. Appointees shall include representatives of Virginia's energy providers and producers, residential, commercial and industrial energy consumers, Virginia's conservation community, and the Secretaries of Natural Resources, Commerce and Trade, and Technology. The Advisory Council shall make a report of its activities by December 1 of each year.

The Advisory Council's responsibilities shall include the following:

1. Review the recommendations set forth in the Virginia Energy Plan as well as other relevant reports and studies.
2. Evaluate strategies for implementing recommendations of the Virginia Energy Plan, including prioritization, approach, and timeline.
3. Monitor implementation of the Virginia Energy Plan.
4. Identify additional energy policy options for the Commonwealth to address energy issues.
5. Make other recommendations as may be appropriate.

Responsibilities of the Department of Mines, Minerals and Energy

The Department of Mines, Minerals and Energy shall be responsible for providing technical assistance to state agencies and institutions in achieving energy savings. Specifically, the Department of Mines, Minerals and Energy shall:

1. Assist state agencies in their efforts to conserve energy to the maximum extent feasible;
2. Assist agencies and institutions with implementation of this Executive Order;
3. In cooperation with the Department of Environmental Quality, assist agencies with calculating the extent to which their energy savings result in a reduction in greenhouse gas emissions; and
4. Maintain a system to monitor and report on progress made by state agencies toward reducing from its 2006 baseline energy costs and consumption for state-owned facilities, and provide a report at least annually on its website.

This Executive Order shall become effective upon its signing and shall remain in full force and effect until June 30, 2011, unless amended or rescinded by further executive order.

Given under my hand and under the Seal of the Commonwealth of Virginia this Fifth day of April, 2007.

_____
Timothy M. Kaine, Governor

Attest:

_____
Secretary of the Commonwealth

Energy and Sustainability Committee, February 25, 2008

Review of Virginia Tech Recycling (Larry Bechtel, VTR Coordinator)

BOV approves monies for "reinstatement" of paper recycling, (July '08): $173,000

- $ 83,000 (salaries, 3 CS positions)
  - 1 vehicle operator/crew chief (Recycling Route #2, paper)
  - 1 Groundsworker (paper route)
  - 1 Groundsworker ("utility " position, all VTR crews/as needed recycling)
- $32,000 Dedicated Recycling Truck (16' Ford diesel box truck w/aluminum lift gate)
- $58,000 for supplies/equipment
  - 1300 stackable paper bins
  - 400 can/bottle bins
  - 80 Custodial Carts (built by Carpenter Shop)
  - 100 bins for CC
- 3 part-time student positions (spring semester '07)
  - Education &outreach
  - Database & reports
  - Website blog/Facebook & CRC Liaison

By mid-October, the truck was ready, the employees had been hired, bins had arrived, Custodial Carts had been built, and we had the cooperation of Housekeeping Services. One missing element: *clear and unambiguous university endorsement*. Dean Sorensen, of Pamplin College of Business, was upfront about this. If the program was cut once, will be cut again? He was very supportive of recycling he said, wanted the paper recycling back, but only if the university was committed, long-term. I couldn't address that, but Energy and Sustainability Coordinator Denny Cochrane, could. So we have worked effectively as a team, when working with the colleges, he speaking to the matter of commitment, and I to the "nuts and bolts" of the collection system.

As of 2/25, VTR is operational in 5 colleges

- CALS
- Pamplin College of Business
- CAUS
- CE
- CNR

We are getting close on the last three: CS should be complete by February 28; a meeting with VMRCVM Dean Schurig and his department heads took place this morning: CLAHS installation should be underway in 2-3 weeks. The goal is to have all eight colleges 'online' by the next BOV meeting, March 31.

Meanwhile, the Environmental Collection, with VTR support, continues to operate its paper collection route. As VTR re-establishes paper recycling in the major buildings, EC is 'transitioning' into an "Auxiliary Route," handling smaller or outlying facilities (i.e., Career Services, PACK bldg) and Residence Halls.

Items:

- *Custodians.* VTR is an ally of Housekeepers, not an enemy. This isn't mere talk. For example, just last week, my staff, at the request of the Housekeeping supervisor in Derring, took care of 20 boxes of paper recycling up on the 5th floor. *Her staff never had to touch this material.* Such interventions over time save Custodians hours of back-breaking work.
- *Principle of Shared Responsibility.* Everybody is asked to do their part. The last user of a piece of paper has the first responsibility to get it recycled. From there, the university collection system takes over. The more people participate, the more effective the program can be.
- *Student Interest.* I've been the recycling Coordinator here at Virginia Tech for about 18 years, with 2-3 years as a volunteer before that. I've worked with a lot of student groups and individuals in that time. But I have never seen the interest level so high as it has been over the past two years—for recycling and a broad array of other sustainability issues.

Results (snapshots):

- For Calendar Year 2007, we recycled about 100 tons more paper than we did in 2006, due to the reinstated paper recycling. That's about 1 ton of paper per day, October-December.
- Also for Calendar Year 2007, we disposed of 200 more tons of solid waste than in 2006, going up from 5300 tons to 5500 tons.
- Due to collection of old copper cabling by CNS, and steel pipe from the stream lines upgrade, our total recycling of scrap metals went way up in 2007—by almost 100 tons.

Our overall university recycling percentage should improve from 23% (2006) to approx. 32% (2007)

Conclusion:

About 1990, Paul Lancaster of Media Services produced a video on the then fledging Virginia Tech Recycling. At the conclusion of the video, I impulsively announced that I wanted the program to do twice the state recycling mandate figure of 25%. I wanted VTR to reach 50%.

For more than a few times since then, I have been embarrassed by the memory of those audacious words. But I have never quite lost the hope that someday that Virginia Tech might indeed reach that number. That *someday* may be dawning. I do think that we can reach a 50% recycling rate in four years, if we as a university and as individuals sustain our commitment. If we honestly achieve that rate, we will have tipped the balance. And I hope that tipping the balance will bring a threefold success: we will have helped the environment; we will have brought distinction to Virginia Tech; and we will have realized a financial advantage, through recycling.

Energy and Sustainability Committee Minutes
March 24, 2008
2:00 – 3:00 p.m.
210 Burruss Hall

Present: Sherwood Wilson, Melinda West for Dwight Shelton, Michael Coleman, Scott Hurst, Kim Briele, Keith Boyd for Ben Myers, Denny Cochrane, Rob Lowe, Richard Hirsh for Jack Lesko, Sean McGinnis, Annie Pearce, Tom Tucker, Mike Cutlip, Debra Stoudt for Sue Ott Rowlands, Brian Perkins, Lauren Ashley Hamm, Natalya Hallanan, and Bryce Carter for Diliana Hirt

Guests: Larry Bechtel, Angie De Sota, Sara Murrill, Moriah O'Brien, Damian Pitt

Absent: Bruce Ferguson, Lisa Wilkes

1. Adoption of Agenda

Sherwood Wilson recommended the agenda be accepted as proposed. The Committee concurred.

2. Approval of February 25, 2008 Minutes

A motion was made and seconded to approve the February 25, 2008 minutes with attachments.

3. Old Business

a) Sherwood Wilson introduced the draft resolution for appointment of the Energy and Sustainability Coordinator as an ex officio member of the Energy and Sustainability Committee (Attachment A). The resolution will require approval by the Committee, the Commission on University Support, and the University Council. A motion to approve the draft resolution was made, seconded, and unanimously approved. The resolution will be forwarded to the Commission on University Support for action at their upcoming meeting on April 17.

b) Sherwood Wilson informed the Committee that he talked with President Steger about the President's Climate Commitment. Given the many other priorities he is facing, the President hasn't been able to review the Commitment. Sherwood reemphasized that the President will only sign the document when he is confident the university can commit to it. If he decides not to sign, the Committee will prepare a Virginia Tech Climate Commitment.

c) Annie Pearce, Chair of the Sub-Committee to review and update Policy 5505: Campus Energy and Water Policy, provided highlights of their initial meeting held earlier on this date. The additional Sub-Committee members include Mike Coleman, Scott Hurst, Mike Cutlip, Brian Perkins, Natalya Hallanan, and Barry

Key (Associate Director of Budget Operations). The Sub-Committee will focus on two areas. First, it will review and update Policy 5505 to ensure it is in compliance with Governor Kaine's Executive Order 48 (2007), "Energy and Efficiency in State Government." Second, the Sub-Committee will present a proposal to the Committee to broaden the scope beyond just energy and water to include all components of sustainability. The proposal will be provided at the next Committee meeting.

d) Denny Cochrane provided an update on the paper recycling program. To date, seven of the eight colleges have fully operational programs. The eighth college will be fully operational by the end of this month. Larry Bechtel, the Virginia Tech Recycling Coordinator, reports a 30% increase in paper recycling from one year ago, and an overall increase in the recycling rate from 22% in FY 2006-07 to 34% FY 2007-08. In the first five weeks of the 2008 Recyclemania Competition, there has been a 45% increase in the totals from the previous year. There was discussion on the need to educate the university community on the disposal of Florissant light bulbs and e-waste.

e) Natalya Hallanan distributed a tentative schedule for Earth Week 2008 (Attachment B). The Environmental Coalition has the lead for planning this event which includes a variety of activities for the period April 20 through April 25. Tuesday, April 22 will include an Earth Day Fair on the Drillfield.

4. New Business

a) The members received a copy of the Annual Report on University Sustainability Initiatives to be presented to the Board of Visitors (BOV) at their upcoming meeting on March 31 (Attachment C). The report addresses four required topics to include: energy usage, air emissions, stormwater management, and recycling. Completed, in-progress, and planned sustainability projects and initiatives are listed. New this year is a section that highlights significant student activities.

b) Virginia Tech Professor John Randolph gave an outstanding and informative presentation titled "Blacksburg Energy and Greenhouse Gas (GHG) Emissions Inventory." The purpose of this inventory is to provide baseline data for future planning efforts to reduce energy use and town-wide GHG emissions. The report has been prepared for presentation to the Virginia Tech Energy and Sustainability Committee, the Town of Blacksburg Mayor's Task Force on Sustainability and Climate Change, and the Sustainable Blacksburg Steering Committee. Accompanying Professor Randolph was PhD candidate, Damian Pitt, who represented over 50 students who participated in the inventory. Data was gathered for the years 2000 to 2006, and trends were derived to project energy and emissions to 2020. Discussion centered on potential next steps. Sherwood Wilson provided laudatory comments to Professor Randolph and his students for a truly remarkable report and a job well done.

c) Denny Cochrane announced that "Sustainability Week 2007," was recently selected for the Governor's Environmental Excellence Award in the program category, and the award will be presented at the Environment Virginia 2008 Symposium at VMI on April 2. The Town of Blacksburg, the local citizens group

Sustainable Blacksburg, and Virginia Tech formed a “green partnership” to promote sustainability awareness and education using over 30 activities, speakers, and tours.

d) Sherwood Wilson was extremely impressed with a presentation from Professor Jack Lesko which highlighted Virginia Tech’s academic energy initiatives, and he strongly recommended this to the Committee at a future meeting.

5. Future Meeting

The next meeting will be April 28 at 2:00 p.m. in Room 210, Burruss Hall. Any agenda items should be emailed to Denny Cochrane at dennisсc@vt.edu .

6. Adjourn

It was moved and seconded to adjourn.

Attachment A

DRAFT

Commission on University Support
Resolution 2007-08B
Resolution for Appointment of the Energy and Sustainability Coordinator as an Ex Officio Member of the Energy and Sustainability Committee

Approved by the Commission on University Support:	TBD
First Reading at University Council:	TBD
Approved by University Council:	TBD
Approved by the President:	TBD
Effective:	Immediately upon approval

WHEREAS, the Energy and Sustainability Committee is a standing committee that has the responsibility 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; and

WHEREAS, the Vice President for Administrative Services has created a new faculty position with the title Energy and Sustainability Coordinator within the Office of the Associate Vice President for Facilities; and

WHEREAS, the Vice President for Administrative Services serves as chair of the Energy and Sustainability Committee; and

WHEREAS, the Energy and Sustainability Committee has four representatives from Virginia Tech Facilities selected by the Vice President for Administrative Services; and

WHEREAS, the Vice President for Administrative Services has selected the Energy and Sustainability Coordinator to serve as one of his representatives; and

WHEREAS, it is the intent of the Vice President for Administrative Services for the Energy and Sustainability Coordinator to coordinate all operational activities of the Energy and Sustainability Committee to include providing primary administrative support;

THEREFORE BE IT RESOLVED that the Energy and Sustainability Coordinator be appointed as an ex officio member of the Energy and Sustainability Committee.

Attachment B

Earth Week 2008 Tentative Schedule

Sunday April 20th

- 1:00 pm: Stroubles Creek clean up with VT SEEDS (Seek Education, Explore, and DiScover) and Blacksburg Girl Scouts

Monday, April 21st

- 1:00 pm- Speaker: Marilyn Brown, "The Emergence of Energy Efficiency as the Fifth Fuel"
- Evening- Speaker: Glen Bessa, Sierra Club, "Clean Energy Futures"
- 7:00pm-10:00pm- Green Fashion Show with Emerging Green Builders

Tuesday, April 22nd

- All day: Earth Day Fair on the drillfield
- 4:00pm- Speaker: Misty Gregg, "Pollution in the Household"
- 5:00pm- Green Effect Event
- 7:30- Speaker: Frank Harmon, "Green Architecture"

Wednesday, April 23rd

- Afternoon- Student Organization Field day
  - Participate in "Green" events
- Afternoon- Duckpond cleanup with Alpha Phi Omega
- 7:00pm- Speaker: Josh Tulkin, "Youth Climate Movement"

Thursday, April 24th

- Mountain Top Removal Day with Mountain Justice
- 7:00pm- Speaker: Larry Gibson, "Mountain Top Removal"

Friday, April 25th

- All day- Tree Planting on drillfield- 12 trees, 50+ people
- Afternoon/Evening- Speaker: Denny Cochrane, "Virginia Tech Sustainability"

ANNUAL REPORT ON UNIVERSITY SUSTAINABILITY INITIATIVES

Virginia Tech is committed to sustainability. During the past year the university has continued to implement measures to improve energy efficiency and to make the university community more sustainable. The Energy and Sustainability Coordinator faculty position was created to serve as a liaison between the administration, students, faculty, staff, local community, and private industry. The university has established the Energy and Sustainability Committee with the mission of reviewing and providing advice to university administration on broad policy issues relating to energy consumption and conservation. 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 Sustainability Week 2007. This first, week-long event, which was held in late October, included over 30 activities, speakers, and tours. The university assesses its progress towards creating a more sustainable campus by using baseline data to measure our status in the following four areas: energy usage, air emissions, stormwater management, and recycling.

Energy Usage: On April 5, 2007, Governor Timothy M. Kaine signed Executive Order 48 (2007), "Energy Efficiency in State Government." Since Virginia Tech had previously achieved the 10% energy savings goal established for 2006 in Executive Order 54 (2003), Executive Order 48 requires the university to "reduce costs of non-renewable energy purchases by an additional 15% of fiscal year 2006 expenditures by fiscal year 2010." A plan is in place to meet that goal. For fiscal year 2006, the reported energy costs were $15,400,000 (baseline). The Executive Order 48 goal is $2,310,000. For fiscal year 2007-2008, there is a series of ongoing energy projects, which will yield a non-renewable energy cost avoidance of $242,962. For fiscal years 2009 and 2010, a series of additional energy projects have been identified to include the addition of a new steam condenser in the Power Plant, which will provide an estimated non-renewable energy cost avoidance of $2,068,790.

Air Emissions: The university recently completed construction on a $5.85 million Boiler Pollution Controls project, which added a bag-house and an acid gas scrubber to Boiler #7 (older coal fired boiler). These controls are expected to reduce 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 like manner in 2008.

Stormwater Management: The university operates under a Small Municipal Separate Storm Sewer System permit (MS-4), which was originally issued in 2003 by the Department of Conservation and Recreation. The university has recently submitted a new five-year registration statement that further quantifies the specific stormwater management and control measures that must be followed. The permit commits the university to six specific categories of control measures and Best Management Practices in the areas of public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site runoff control, post construction stormwater management, and good housekeeping.

Recycling: The university has reinstated the paper recycling program. Virginia Tech Recycling hired three employees, purchased a new recycling vehicle, purchased several hundred recycling bins, and various accessory equipment. Collection services have been established at nearly all academic and administrative buildings. The reinstatement enabled Virginia Tech Recycling to collect over 100 tons more of paper in 2007 than in 2006. This tonnage, along with increased recycling of other materials, increased the university's overall recycling percentage to 32%, a 9% increase over the previous year. Last fall Tech participated in the first state-wide university

electronic waste recycling competition and collected 122,600 pounds of e-waste. Website: www.recycle.vt.edu.

Completed Sustainability Projects and Initiatives:

- Virginia Tech's transportation program received a "Best Place for Commuters" silver level award from the US Environmental Protection Agency and the Department of Transportation, and an "A" rating from the Sustainable Endowments Institute. Over $400,000 in federal enhancement grants have been received to build bike trails, lanes, and other amenities.
- Retrofitted light fixtures in Wallace Hall, Whittemore Hall, Hahn Hall, the Vet Med facilities, and the Human Resources Annex are estimated to save over $120,000 annually.
- Campus-wide water audit of all water consuming systems on the main campus identified approximately $322,000 in annual savings. Water conservation measures implemented in McBryde Hall, Pamplin Hall, and the Sterrett Facilities Complex save an estimated 2.1 million gallons of water annually.

In-progress and Planned Sustainability Projects and Initiatives:

- Installation of new steam distribution piping across campus with new insulation will greatly improve efficiency and reduce heat losses.
- 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 retro-fitted to manage stormwater more effectively.
- Installation of energy saving occupancy sensors for 146 classrooms, to be completed in June 2008, will result in $10,370 annual savings in electricity costs.
- The new Life Science Building will have a vegetated roof (green roof).
- Fralin Hall and Hancock Hall lighting retrofit projects.

Significant Student Activities:

- Approximately 50 students in the Urban Affairs & Planning (UAP) Program in the College of Architecture & Urban Studies conducted an inventory of The Town of Blacksburg and Virginia Tech energy use and greenhouse gas (GHG) emissions.
- Students participated in RecycleMania 2008 (a 10-week college and university competition).
- Hosted "Focus the Nation," a one-day "teach-in" for global warming solutions for America.
- Formed the student led environmental education group GREEN Team with a goal to educate all Hokies on how to live a more informed and sustainable life.

Future Opportunities: Throughout this past year the university has made tremendous advances in fostering awareness and providing educational opportunities on sustainability. The university needs to:

- Build on this momentum and expand the website: http://www.facilities.vt.edu/sustainability
- Review and revise current policies, and establish new policies such as a comprehensive energy plan that includes a technology/financial component, and a behavioral modification component.
- Establish broader communications strategies to enhance collaboration in teaching, research, and outreach.
- Explore and identify additional sustainability solutions that, along with current sustainability initiatives, will allow Virginia Tech to be a good steward of the environment while providing a high quality of life for learning, living, and working.

Energy and Sustainability Committee Minutes
April 28, 2008
2:00 – 3:00 p.m.
210 Burruss Hall

Present: Sherwood Wilson, Melinda West for Dwight Shelton, Michael Coleman, Scott Hurst, Kim Briele, Bruce Ferguson, Ben Myers, Denny Cochrane, Rob Lowe, Richard Hirsh for Jack Lesko, Sean McGinnis, Annie Pearce, Tom Tucker, Brian Perkins, Natalya Hallanan, Diliana Hirt

Guests: Bryce Carter**,** Angie De Soto, Lucinda Jennings, Rick Johnson, Sara Murrill, Erik Olsen, Tamim Younos

Absent: Mike Cutlip, Lauren Ashley Hamm, Sue Ott Rowlands, Lisa Wilkes

1. **Called Meeting to Order**

   Sherwood Wilson called the meeting to order. He welcomed the guests and invited them to attend future meetings.

2. **Adoption of Agenda**

   The Committee approved the agenda as proposed.

3. **Approval of March 24, 2008 Minutes**

   A motion was made and seconded to approve the March 24, 2008 minutes with attachments.

4. **Old Business**

   1) Earth Week Feedback: Natalya Hallanan, President of the Environmental Coalition, was pleased to report that Earth Week 2008 was very successful. The planning and implementation went very well, and the attendance was amazing. This six-day event included the participation of many student organizations, over 40 businesses, and several featured speakers. She introduced guest Angie De Soto who provided an update on her activities with the student group "Green Team." Angie organized this educational program to teach students what they can do to live a more sustainable lifestyle. To date, over 400 students have received this training.
   2) Report from Sub-Committee re: Policy 5505 Review: Annie Pearce, chair of the sub-committee to review and update Policy 5505, *Campus Energy and Water Policy*, discussed their progress. Upon a review of Policy 1000, *Policy on Policies*, it was discovered that many of the items in the current Policy 5505 were incorrectly positioned. Some of the current items in paragraph 2 "Policy"

belonged in paragraph 3 "Procedures" and vice versa. Upon completion of this realignment, internal administrative changes were made to incorporate recent changes in job titles, activity titles, executive order numbers, etc. Once the Sub-Committee members are satisfied with their latest revision, it will be forwarded to the full Committee for review and comments. As a separate but related matter, the Sub-Committee is exploring broadening the scope beyond just energy and water, and will share their views at a future meeting.

5. New Business

1) Sustainability Update from the Director of Housing and Dining Services: Rick Johnson distributed a handout (Attachment A) and talked about the Housing and Dining Services sustainability programs. The Committee was extremely impressed with the numerous initiatives taken, ongoing, or being researched. Rick expressed his interests in becoming a member of the Energy and Sustainability Committee. The Committee acknowledged their support for Rick to become a member. In the meantime, Sherwood Wilson encouraged Rick to come or send a representative regularly to the Energy and Sustainability Committee meetings.
2) Virginia Tech Climate Commitment: In a letter to the members of the Environmental Coalition dated April 23, 2008, President Steger announced he has decided not to sign the generic Presidents Climate Commitment and he provided his rationale for making that decision (Attachment B). He further stated that he "will ask the Energy and Sustainability Committee to develop a Virginia Tech Climate Commitment that is specific to our university and that outlines clear, measureable goals that we can realistically achieve." In a Memorandum to the Members of the Energy and Sustainability Committee dated April 25, 2008, President Steger charged the committee and provided details of this task (Attachment C). Sherwood Wilson recommended forming a sub-committee and asked Professor John Randolph to be the chair. The committee unanimously supported that recommendation and pledged full support to Professor Randolph. He agreed to become the sub-committee chair. Due to the limited time, and recognizing the need to begin work this summer, it was agreed to have a special meeting on Monday, May 5 for the purpose of selecting sub-committee members, establishing priorities and milestones, and identifying resource requirements.
3) Committee Goals and Objectives for FY 2008-09: There was not enough time to discuss this item. Denny Cochrane asked the members to send him their goals and objectives by email.

6. Future Meeting

The next meeting will be a special meeting May 5 at 1:30 p.m. in Room 210, Burruss Hall.

7. Adjourn

It was moved and seconded to adjourn.

HOUSING AND DINING SERVICES
SUSTAINABILITY PROGRAMS

- Housing and Dining Services manages 50 of the 100 buildings on campus (50%).
- Housing and Dining Services occupies 2.5 million gr. sq. ft. of space, 26% of the University total of 9.7 million gr. sq. ft.

Housing: Current

- Renovations of AJ are being designed so that the building can be certified at the Silver level according to the LEED green building rating system.
- Dual flush toilet system is being tested in AJ and will be part of the AJ renovation
- Increased our recycling of fluorescent lamps (we were doing partial recycling before, but have now stepped up the program to all lamps including compact and tube types – these are placed in a tube crusher drum, which is sent to recycle when full.
- Toilet paper at 10% recycled content. Roll towels at 100% recycled content. Black trashcan liners are 60% recycled content (clear liners are virgin plastic).
- All shower heads were replaced from 3gpm to 2gpm (pressure compensating/adjustable shower heads) as part of the Water Management Inc. recommendations in their report reducing water flow by 33%.
- Support Recyclemania.
- Recycling bin in every residence hall room (had them for years).
- No VOC (volatile organic compounds) paint.
- Switch common area light blubs to T8 light fixtures, as able, within renovation and funding availability
- Replacement of stand-alone battery operated smoke detectors from 9v to 10-year lithium types.
- Mattresses refurbished instead of being totally replaced on an approximate five-year cycle.
- Shower machines are used to clean showers – allowing for bulk/mix-at-site chemical use and more efficiency. The shower cleaner, Green Earth, is a green product.
- Cardboard recycling sites during fall check-in operations.
- Participation and advertisement of the Y-Toss program at the end of the year to reduce amount discarded by students.
- Support the paper recycling program in several halls and worked with groups to add recycling bins in the mailroom areas for junk mail.
- Rooms are limited to one microwave (<1000wats) and a small refrigerator (<4.5 cubic feet)
- Assignments staff changed over to mostly e-contracting and dispersal of materials, including assignment notices. Efforts are under way to reduce print-and-file operations in favor of electronic repositories of records arriving by e-mail.
- New buildings have thermal glass windows helping to reduce energy consumption. Most of the residence halls have received new windows in the past 15 years.

- White roof systems – roofing system recently replaced on AJ is of the white membrane type which is considered a cool-roof system reducing the cooling needs of the building compared to rubber/tar/gravel systems.
- 12v batteries and above are recycled when replaced.
- Bulk chemical containers for housekeeping are made of recycled material. Currently not being recycled due to foaming and rinsing needs, but are being researched for easier recycling.
- New lounge furniture will have sustainable fabric.
- Sustainable carpet in Slusher, Vawter, Miles, Newman, Lee, Pritchard, Barringer, and O'Shaughnessy.
- Discard metal and wood scraps in the hoppers at Physical Plant recycling.

Housing: Future

- In the process of researching and changing to some new chemicals that are green, but are not yet using them.
- Reviewing scope and scale of remaining 9v battery use and feasibility of recycling 9v batteries as well.
- RHF will push Recyclemania earlier.
- Educate students on sustainability during Orientation – Green Team presentation.
- Encourage on-campus residents to use recycle bins.
- Encourage on-campus residents to turn lights off and unplug appliances that are not being used for an extended period of time – use of sticker on each switch.
- Encourage on-campus residents not to take long showers – looking at a timer on showers.
- Invite the Green Team to sessions in the residence halls.
- Look at potentially doing collaborative program with Student Government Association (SGA) that will focus on cleaning the campus community, which ends the day with a band.
- Placing "sustainable" sheets at RHF booth at Orientation.
- Get information out without using paper all the time.

Dining: Current

- Replacing Styrofoam with more green alternatives, if a composting site is developed. Also, looking into food waste reduction through encouragement of sit-down or Styrofoam on to-go orders only.
- Cardboard recycling has been part of Dining operations for years (most of their materials come in cardboard boxing) and is a significant percentage of the University total recycling effort.
- Recycles used oil.
- Purchases 8-15% of food "locally."
- Recycles plastic and aluminum cans inside dining facilities.

Dining: Future

- Trayless at D2 and other locations – save food waste 30%.
- Exploring composting with the University and a firm in Riner, VA.
- Plan to use sugar/corn biodegradable/compostable food containers ($500,000 extra cost per year).
- Plan to compost all food scraps and bio to-go containers (sugar/corn based).
- Hire a sustainability coordinator.
- Convert used oil to biodiesel.
- Purchase future vehicles that use biodiesel.
- Working with prime vendor to identify local sources of food – VA, NC, MD, WV, and increase local purchases.
- Start an herb garden in front of D2.
- Eventually start a student garden on University land that will supply vegetables to Dining.

VirginiaTech

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April 23, 2008

Dear Members of the Environmental Coalition,

I regret that I could not be with you for the Green Event yesterday, but having had the opportunity to meet you in December, I was confident that the event was exceedingly well organized and would be a success. I am also grateful to Denny Cochrane for representing me.

The presentation that you made in December was highly impressive, and I have considered your points carefully. As I pledged to you at that time, if I make a promise, I intend to keep it. I do not make empty promises. That is why I asked our Vice President for Administrative Services, Dr. Sherwood Wilson, to examine the cost implications before I would make a decision.

Two particular tenets of the President's Climate deserve close examination. First is the commitment to carbon neutrality, which cannot be taken lightly. I have been advised that it is not feasible for Virginia Tech to accomplish this using current technology without purchasing carbon credits on the open market to offset our carbon production. Based on the university's carbon footprint of over 280,000 tons of CO_2 annually and the current market price per carbon credit, the additional cost to achieve climate neutrality could approach $2 million annually. This assumes a 25 percent reduction in carbon emissions through engineering and behavior modifications.

Second is the requirement to purchase or produce at least 15 percent of our electricity from renewable sources within one year. Although it is technically possible to purchase 15 percent of the university's electricity from renewable resources within one year, the premium price on green power would exceed $1 million annually.

I must consider these costs in the context of the university's strategic plan and all of the *critical* initiatives that are under way or planned to support that plan, coupled with the unplanned expenditures—and the overall impact on tuition. The unplanned expenditures include nearly $10 million that the university has expended to deal with the tragedy of April 16, 2007, and to begin to implement the recommendations contained in the Governor's Panel's Report as well as our three internal studies. These expenditures will grow significantly as we continue with the implementation. Moreover, state support for higher education in Virginia in general and for Virginia Tech in particular continues to decline. Total state funding for Virginia Tech is less today than seven years ago, even though enrollment is higher. Adjusted for inflation, this represents a loss of 23 percent of buying power. In 2000-01, the state provided 59 percent of the cost of education at Virginia Tech; this year, that support is only 41 percent. By the state's own calculation, Virginia Tech is underfunded (base budget adequacy) by more than $64 million annually.

Taking all of these factors into consideration, my decision is not to sign the generic President's Climate Commitment. Rather, I will ask the university's Committee on Energy and Sustainability that was created last year to assume the task of developing a Virginia Tech Climate Commitment that is specific to our university and that outlines clear, measurable goals that we can realistically achieve. That Committee will work closely with Dr. Wilson and his staff. I would expect to be briefed on their work along the way, and the plan would be vetted through the university governance structure—from the committee, on to the Commission on University Support, and then to University Council. The result should then be a commitment tailored to Virginia Tech that I can sign with high confidence that we will be able to fulfill it.

Needless to say, the university is not going to wait for the Virginia Tech Climate Commitment to be finalized before we take any action. We will continue with the initiatives under way and launch new ones.

For example, to the extent possible, we are ensuring that University facilities are designed, constructed, renovated, operated, and maintained in accordance with the latest energy/water efficiency standards and in a manner consistent with the US Green Building Council's LEED™ Building Rating Systems. We also recently hired a new associate vice president for facilities. Among his main responsibilities will be to coordinate our energy efficiency efforts.

Some of the more recent initiatives include:

- In spring of 2007 Virginia Tech converted 13 acres of campus from regularly maintained turf grass to low maintenance native grass meadows and wildflowers.

- Several other new projects incorporate sustainable features that are becoming standard at Virginia Tech. Energy efficiency has been increased with improved lighting and third party commissioning of HVAC systems.

- Virginia Tech has secured $17.25 million in state funding in support of a $28.75 million capital project established to carry out upgrades to the steam utility distribution system and Central Steam Plant. This project will provide more than $1 million annually in fuel savings, including the new ability to co-generate electricity during the summer months. The project will also reduce emissions by 10 tons annually.

- In addition, we are looking at some new educational endeavors to help prepare K-12 students and community college students to be more aware of energy conservation and to be a part of a new "green-workforce" that we will need in the future.

- Virginia Tech is also pleased to be one of the founding partners, along with Hannon Armstrong and Pepco Energy Services, in the Energy Efficiency Partnership of Greater Washington established last October, and to play an integral role in the greening of this important U.S. metropolitan area. Virginia Tech and our partners are launching a large-

scale building retro-fitting project in the Washington metropolitan area. Pepco Energy Services will carry out energy audits, supply materials, and perform building retrofits as well as guarantee the energy savings of the retrofit projects. Hannon Armstrong, an energy efficiency financier, has made a very substantial commitment to finance the retrofitting at no capital cost to building owners. Virginia Tech has entered into this partnership because it fits perfectly with our core missions of research, learning and outreach. In today's interconnected global environment, the problems of one city, nation or region are fast becoming the problems of all. Virginia Tech, as a leading research institution, has a responsibility to show leadership in addressing large-scale problems. And cross-sector partnerships with government, business and civil society are an important avenue in addressing these challenges.

- Today, I spoke at the "20-Now" Financing Green Buildings Action Forum in Washington, DC sponsored by Meridian International Center in partnership with the Energy Efficiency Partnership of Greater Washington (of which VT is a founding member), the World Business Council for Sustainable Development, and United Technologies. The event was designed to promote global and national best practices in financing energy efficiency projects to achieve zero net emission buildings and had an audience of more than one hundred regional and national building owners, developers, and financial institutions that expressed an interest in and commitment to energy efficiency in their work.

- On June 17, 2008, Virginia Tech will host Governor Kaine's Commission on Climate Change. The Virginia Energy Plan released last September set a goal for the state to reduce greenhouse gas emissions by 30 percent by 2025. We are looking forward to what we can learn from the Commission's report, due to be released in December.

The drive towards sustainability has strong support throughout the university's senior leadership; the deans and many of the vice presidents have been champions of this cause. And, I commend the Environmental Coalition for being a champion of environmental issues among the students; I am well aware that the desire for Virginia Tech to be a leader in terms of sustainability permeates the entire student body, as well as the faculty and staff. I look forward to the work of the Energy and Sustainability Committee and to signing a sustainability commitment tailored to Virginia Tech with realistic goals that will produce meaningful and enduring results.

Sincerely,

Charles W. Steger
President

cc: University Council
Commission on University Support
Committee on Energy and Sustainability

VirginiaTech

Charles W. Steger, President

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Memorandum

TO: Members of the University Committee on Energy and Sustainability

FROM: Charles W. Steger

DATE: April 25, 2008

SUBJECT: Drafting the Virginia Tech Climate Commitment

In the attached letter that I sent to the members of the Environmental Coalition on April 23, I laid out the rationale for my determination that Virginia Tech would be better served by developing a sustainability plan that is specific to Virginia Tech than by my signing the generic President's Climate Commitment. Given the long-term impact that the Virginia Tech Climate Commitment will have on the policies, operations, and budget of the university, securing the support of the university community through the governance system is critical to its successful implementation.

Accordingly, I am assigning to the Committee on Energy and Sustainability the important responsibility of developing a draft Virginia Tech Climate Commitment. This plan should be developed in close collaboration with and under the guidance of the Vice President for Administrative Services, Dr. Sherwood Wilson, and his staff. The plan should outline clear, measurable, and realistic goals. I would like to be briefed by the Committee chair at regular intervals while the plan is being developed. I am requesting that the Committee complete the draft plan by the end of the Fall Semester 2008, and submit a copy to the Commission on University Support and to me.

The next step would be for the Commission on University Support to review and approve the plan in resolution format, and then to send the resolution forward to University Council for action. As you know, University Council acts in an advisory capacity to the President. The goal is for University Council to act on the resolution prior to the end of the Spring Semester 2009.

Thank you in advance for the tremendous contribution you will be making to the university and future generations of students, faculty, and staff through this important work.

Enclosure

cc: Commission on University Support