

**Energy and Sustainability Committee Meeting Minutes**  
**September 24, 2012**  
**2:00 – 3:00 p.m.**  
**Room 325, Burruss Hall**

**Present:** Fred Selby, Kayla Smith (for Sherwood Wilson), Deborah Greer (for Dwight Shelton), John Beach (for Mike Coleman), Jason Soileau, Denny Cochrane, Jean Smoot (for Frances Keene), Rob Lowe, Althea Aschmann, John Randolph, James Dale, Catherine Goggins, and Drew Gallagher.

**Absent:** Bruce Ferguson, Georg Reichard, Nancy McGehee, Becky Saylor, Tom Tucker, Paul Winistorfer, and Michael Painter.

**Guests:** Angie De Soto and Mark DiFilippo.

**Call Meeting to Order and Welcome Guests**

Chair Fred Selby called the meeting to order, welcomed everyone, and invited all attendees to introduce themselves.

**Approval of Agenda**

The Committee approved the agenda as proposed.

**Approval of Minutes**

The Committee approved the minutes from the previous meeting.

**Old Business**

**1. Virginia Tech Climate Action Commitment and Sustainability Plan (VTCAC&SP) Subcommittee Update**

John Beach reported that the VTCAC&SP Subcommittee meets every other week. The subcommittee is examining each item on the VT CAC Resolution and plan to report their findings to the committee at the end of the semester.

**a. VT Sustainability Definition.**

John Randolph reported a draft definition to present to the committee. The definition is listed below.

*Sustainability is the simultaneous pursuit of social equity, economic prosperity, and environmental quality through action, education, and engagement to address current needs without compromising the capacity and needs of future generations.*

*The University serves as a model community for a sustainable society. Sustainability is an integral part of the fabric of Virginia Tech as it pursues economic stability and affordability, multicultural appreciation and respect, environmental stewardship, expansion of knowledge, and education of future leaders. This is achieved through the University's administration, its physical environment and*

*operations, student life, campus culture and behavior, and academic programs.*

The definition is intended to have 3 tiers, a global definition, a definition specific to Virginia Tech, and an operational definition for each of specific actions. Angie De Soto suggested the term “multicultural appreciation and respect” be changed to reflect the VT Principles of Community. Another suggested that the definition appeared to creep from definition to vision and mission.

Denny Cochrane informed the committee that in an open letter to the university from President Steger, Dr. Steger listed university support for sustainability. A link to the article is listed below.

<http://www.vtnews.vt.edu/articles/2012/09/092412-president-strategicplan.html> .

## **2. OES Student Intern Program Update**

Angie De Soto provided the Committee an update on the Office of Energy and Sustainability (OES) Internship Program. As Program Manager, she has held project briefing and team brainstorming meetings with each of the teams. Teams continue to make progress on the following large-scale campus sustainability projects: (1) materials management assessment in Lane Stadium and Hokie Stone Rally Towel; (2) greenhouse gas emissions reduction plan through energy efficiency projects; (3) sustainable funding mechanisms best practices research and VT fund design; (4) campus Sustainability Portal expansion at [www.sustainability.vt.edu](http://www.sustainability.vt.edu); (5) green purchasing guide development and cross campus engagement around more sustainable procurement; (6) Sustainability Advisors program research and development for education and engagement in the residence halls. Angie shared the schedule for remaining fall semester workshops (see “E&SC 092412 Attachment 1 – Fall 2012 OES IP Schedule.docx”); during the month, students completed their first professional development workshop which covered program orientation and included mixed group project brainstorming; She mentioned to the Committee that she was having difficulty staffing Project Advisory Teams and requested again that if Committee members had any recommendations on potential AT members, they could send contact information directly to her at [adesoto@vt.edu](mailto:adesoto@vt.edu).

## **3. 2012-2013 Request for Proposal for Student Organization Sustainability Initiatives (Green RFP) Status Update**

Denny Cochrane reported that the university leadership is very impressed with the results of the Green RFP program and is fully supportive of its continuance. The Office of Budget and Financial Planning and the Office of Energy and Sustainability are in the process of finalizing the 2012-2013 Request for Proposal for Student Organization Sustainability Initiatives (Green RFP) Memorandum which provides criteria, guidelines, milestones and the format for the proposal submission. The Energy and Sustainability Committee has the responsibility to review and prioritize student proposals with the results presented to the Office of Budget and Financial Planning before Thanksgiving. In order to meet an aggressive timeline, last year a subcommittee was established that provided the initial review. It proved very effective. Denny recommended that a similar procedure be adopted this year, volunteered to chair the subcommittee, and proposed

names for faculty, staff, and student membership. The recommendation was unanimously approved.

#### 4. **Gobblerfest 2012 / Sustainability Week 2012**

Denny Cochrane reported on the success of Gobblerfest 2012 and Sustainability Week 2012.

**Gobblerfest** is an annual festival intended to involve students in campus activities and connect with the surrounding community to promote curiosity, understanding, respect and self-understanding. The event is presented by the Department of Student Affairs and held at the beginning of the fall semester introducing new students to the many and diverse Virginia Tech student organizations, departments, local businesses, and non-profit organizations. While the target audience is freshmen and transfer students, all students, faculty, staff, friends and guests are welcome to participate.

This was the fifth year for Gobblerfest activities. The growth of the involvement was so great that Gobblerfest had to be hosted on the Drillfield. There were approximately 110 volunteers helping during the day. Approximately 20,000 people attended.

Groups present for participation with the activities were:

- 53 businesses
- 43 nonprofit organizations
- 358 student organizations
- 33 Virginia Tech departments

Denny presented a variety of photographs showing visitors, volunteers, sponsors and the food/bands/activity/informational booths. A special thank you was given to the VT Corps of Cadets for their tireless work with the trash and recycling. Sets of 3 bins (cardboard, trash and recycling for plastic, glass and cans) were placed in strategic locations for the collection and disposal of the trash by the cadets.

**Sustainability Week** is an annual event sponsored by Virginia Tech, the Town of Blacksburg and the local Sustainable Blacksburg groups. Sustainability Week 2012, held from September 18<sup>th</sup> to 20<sup>th</sup>, featured speakers from sustainability-related fields, workshops, movies, and community-wide events. The purpose was to provide an awareness and commitment to sustainable living to the surrounding communities – a partnering for a greener community.

Events included electric vehicle presentations at the Blacksburg branch of the Montgomery Floyd Regional Library and The Lyric Theatre, and a sustainability celebration at the Blacksburg Farmer's Market. There were tours of the solar photovoltaic project at the Perry Street Parking Garage, the LEED-gold-certified Institute for Critical Technology and Applied Sciences Research Building II (ICTAS II), and the Smithfield garden.

A tree planting was scheduled for September 18<sup>th</sup>, but due to rain was rescheduled to Tuesday, September 25<sup>th</sup>, near the entrance to Owens Food Court. Faculty, staff, student, and community volunteers planted several varieties of American trees donated by the forestry and horticulture departments. The tree plantings contribute to Virginia Tech's

commitment to being a Tree Campus USA, sponsored by the Arbor Day Foundation. Denny served as the primary university representative.

## **New Business**

### **5. ESCO Phase 1 Update**

Fred Selby provided an update presentation on the status of the ESCO Phase 1 project (see "E&SC 092412 Attachment 2 - "ESCO Status Update.pptx"). The presentation included backup information and project history for new committee members and guests, a listing of completed Energy Conservation Measures (ECM's) to date, current implementation schedule for in-progress ECM's, and several pictures of completed ECM examples. All ECM's are on schedule to be completed by year-end with the exception of Powerhouse VFD Upgrades (delayed due to boiler availability; will be implemented post heating-season) and Dietrick Hall Main Kitchen Hood Upgrade (scheduled for mid-March completion).

### **6. Open Discussion**

Due to the lateness of the hour, there were no new open discussion items raised.

## **Future Meetings**

Dates: The remaining scheduled meeting dates for Academic Year 2012-2013 are as follows:

- October 29, 2012
- November 26, 2012
- January 28, 2013
- February 25, 2013
- March 18, 2013 (Moved up one week due to scheduled BOV meeting on March 25)
- April 29, 2013

Times and Location: All meetings will be held from 2:00 p.m. to 3:00 p.m. in 325 Burruss Hall unless noted above.

## **Adjourn**

The meeting was adjourned.

## Fall 2012 Semester Schedule

Week	Meeting Style	Focus Area	Work Products Due
1	<i>1<sup>st</sup> Week of Classes – No Workshop</i>		
2 9/3 – 9/7	<i>Team meetings with Program Director</i>	Project briefing + team brainstorming	
3 9/10 – 9/14	<b>Cohort Workshop # 1</b>	Program orientation + Mixed group project brainstorming	<b>9/14:</b> Personal career and semester goals for the year due <b>9/14:</b> Idea compilation document due
	<i>Team meetings</i>	Compile individual and mixed group brainstorms to prepare for stakeholder meetings	
4 9/17 – 9/21	<b>Cohort Workshop # 2</b>	Sustainable Systems + Organizational Assessment	
	<i>Team meetings with Advisory Teams + Key Stakeholders</i>	Discuss projects in detail, share ideas, and finalize frameworks	
5 9/24 – 9/28	<b>Cohort Workshop # 3</b>	Project planning, management and communication strategies	<b>9/28:</b> Final project framework + Semester Plan due
	<i>Team meetings</i>	Finalize project frameworks and develop semester plan	
6 10/1 – 10/5	<b>Cohort Workshop # 4</b>	Public speaking, presentation methods and best practices	
	<i>Team meetings</i>		
7 10/8 – 10/12	<b>Cohort Workshop # 5</b> <i>(Fall Break on 10/12)</i>	You on Paper: Resume workshop and your professional profiles	
	<i>Team meetings</i>		
8 10/15 – 10/19	<b>Cohort Workshop # 6</b>	What are “Sustainability Professionals” and their roles in an organization?	<b>10/19:</b> Detailed resumes and LinkedIn profile links due
	<i>Team meetings</i>		
9 10/22 – 10/26	<b>Cohort Workshop # 7</b>	How to get your first job and what to expect	
	<i>Team meetings with Program Director + Advisory Teams</i>	Discussion of project progress and barriers to success	
10 10/29 – 11/2	<b>Cohort Workshop # 8</b>	Mid semester presentations: Share progress, cohort discussions of major challenges	<b>11/2:</b> Written Progress Reports due
	<i>Team meetings</i>		
11 11/5 – 11/9	<b>Cohort Workshop # 9</b>	Sustainable Systems + Campus Applications	
	<i>Team meetings</i>		
12 11/12 – 11/16	<b>Cohort Workshop # 10</b>	2050 Global Challenges + System Interdependencies	
	<i>Team meetings</i>		
13	<i>Thanksgiving Break – No Workshop</i>		
14 11/26 – 11/30	<b>Final Cohort Meeting</b>	Practice Presentations: 10 minute overview presentations + cohort feedback	<b>11/30:</b> Draft presentation materials due
	<i>Team meetings with Advisory Teams</i>	Discussion of end of semester presentations and review of fall semester’s final work products	
15 12/3 – 12/7	<b>Final Presentations for University Leaders + Project Stakeholders</b>	30 minute presentation + 30 minute stakeholder engagement session for each project (1 hour total)	<b>12/7:</b> End of semester presentation materials due
16 + 17 12/10 – 12/20	<b>Finals Start – No Additional Workshops</b>		<b>12/14:</b> Fall semester project work products due <b>12/20:</b> Individual reflection paper due



# Performance Contracting (ESCO) Status Update

Energy & Sustainability Committee  
September 24, 2012



VirginiaTech  
*Invent the Future*



# Background

- **Energy Performance Contracting (EPC)**

- Program overseen by Virginia DMME
- ESCO (Energy Service Company)
  - A business that develops, installs, and arranges financing for facilities energy efficiency improvement projects over a seven to twenty year time period
- The ESCO:
  - Identifies and recommends a package of Energy Conservation Measures (ECM's) based on returned energy savings
  - Guarantees savings will meet or exceed annual payments to cover all project costs
  - Guarantees positive net cash flow every year over a multi-year period
  - Pays the difference if savings don't materialize

# Background

- **Phase 1 Contract with Pepco signed 12/22/11**
  - 5-Building ECM Package
  - **\$5,334,266 Cost, \$642,261 Annual Savings; 8.31-Year Simple Payback**
  - Anticipated Completion – 7/13
  - 1-2 Years of Measurement & Verification Planned



McBryde Hall



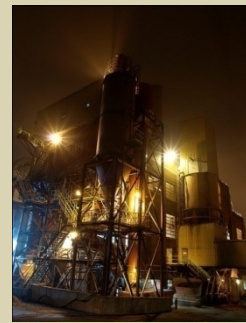
Cassell  
Coliseum



Dietrick Hall



Hahn (South)  
Hall



Central  
Power Plant



# Phase 1 ECM List / Status

	Academic/ Admin. McBryde	Athletics Cassell/Jamerson	Dining Dietrick	Lab / Research Hahn-South	Residential Pritchard	Utilities Powerhouse
Automatic Compressors Staging						✓
Boiler Blowdown Recovery						✓
Building Envelope Sealing-New	✓	✓		✓		
Cooling Tower Upgrades			✓			
Destratification Fans		✓				
Powerhouse VFD Upgrades						✓
Steam System Repairs (Steam Traps)	✓		✓	✓		✓
High Efficiency Transformers	★		★	★		✓
HVAC Controls	✓	✓	✓			
Insulation Blankets						★
Lighting	★	★	★	★		★
Main Kitchen Hood Ventilation Upgrades			✓			
Metering	★	★	★	★	✓	★
Variable Frequency Drives - AHUs	✓	✓				
Vending Miser	✓	✓				
Water Conservation			✓			
Window Film	★					

Key: ✓ In Progress ECM; ★ Completed ECM

# Phase 1 ECM List / Status

- **Completion Schedule**

- **McBryde Hall**

- Steam Trap Repair – 10/8/12
- Vending Misers – 10/11/12
- Building Envelope Sealing – 10/19/12
- HVAC Controls – 11/15/12
- Variable Frequency Drives – 11/15/12

- **Hahn Hall – South**

- Building Envelope Sealing – 10/25/12
- Steam Trap Repair – 10/9/12

- **Dietrick Hall**

- Steam Trap Repair – 10/15/12
- Water Conservation – 10/25/12
- Building Envelope Sealing – 10/31/12
- Cooling Tower Upgrades – 11/13/12
- HVAC Controls – 11/21/12
- Main Kitchen Hood Upgrade – **3/15/13**

# Phase 1 ECM List / Status

- **Completion Schedule (Cont.)**
  - Cassell Coliseum / Jamerson Center
    - Vending Misers – 10/11/12
    - AHU Variable Frequency Drives – 11/21/12
    - Destratification Fans – 11/26/12
    - HVAC Controls – 12/4/12
  - Central Powerhouse
    - Steam Trap Repair – 9/27/12
    - High Efficiency Transformers - 10/5/12
    - Automatic Air Compressors Staging – 10/5/12
    - Steam Trap Repair – 10/9/12
    - Boiler Blowdown Heat Recovery – 10/30/12
    - Powerhouse VFD Upgrades – **6/27/13**



# Completed ECM's

Cassell Exterior Door  
Weather-stripping



Hahn-South Transformers

# Completed ECM's (Cont.)

McBryde Window Film  
(Before and After)



Powerhouse Lighting



# Completed ECM's (Cont.)

Powerhouse Insulation Blankets



Powerhouse Inverter-Duty Motors (for future Variable Frequency Drives)



# Questions?