

Energy and Sustainability Committee Meeting Minutes

January 30, 2012

2:00 – 3:00 p.m.

Presidents Board Room, Burruss Hall

Present: Fred Selby, Kayla Smith (for Sherwood Wilson), Savita Sharma (for Dwight Shelton), Leigh LaClair (for Mike Coleman), John Bush (for AVP - University Planning), Denny Cochrane, Rial Tomes (for Donna Ratcliffe), Bruce Ferguson, Rob Lowe, Georg Reichard, Mintai Kim, John Randolph, Nancy McGehee, Tom Tucker, Michael Painter, James Dale, Kyle Gardiner and Alex Kosnett.

Absent: Becky Saylor, Paul Winistorfer.

Guests: John Beach, John Chermak, Angie De Soto, Debby Freed, Alyssa Halle, Richard Hirsh, Maura Leveroos, and Jean Smoot.

Call Meeting to Order and Welcome Guests

Chair Fred Selby called the meeting to order and welcomed everyone.

Approval of Agenda

The Committee approved the agenda as proposed.

Approval of the November 28, 2011 Minutes

Draft minutes from the November 28, 2011 meeting were presented to and approved by the Committee.

Old Business

1) 2011-2012 Request for Proposal for Student Organization Sustainability Initiatives (Green RFP)

Denny Cochrane provided the results of the “2011-2012 Request for Student Organization Sustainability Initiatives (Green RFP) Program.” In a Memorandum to the Energy and Sustainability Committee dated January 20, 2012, Vice President for Finance and Chief Financial Officer Mr. Dwight Shelton announced that seven of the student organization proposals are approved for funding this year (see “E&SC 013012 Attachment 1 – Green RFP Funds Approval Memo.pdf”). Five of proposals are fully funded to include: (1) five Outdoor Mixed Paper Recycling Containers for use in the residence hall areas, (2) 350 Indoor Hand-Held Mixed Paper Recycling Bins to support two residence halls, (3) four Waste Stations to support four dining venues, (4) Additions to the Sustainable Farm, and (5) four Water Bottle Refilling Stations (two for the Squires Student Center and two for the Newman Library). Two of the proposals are partially funded to include: (6) 10 Bike Racks and (7) New Signage to support the Ytoss Program? Four funding sources have been identified to support these proposals to include: E&G, Residential, Dining, and UUSA. A total of \$37,070 is provided to fund these seven proposals. The detailed results were provided in a spreadsheet from the Office of Budget

and Financial Planning (see “E&SC 013012 Attachment 2 - Green RFP Summary Matrix Final 012412.xlsx”).

A total of 19 proposals were submitted this year from eight student organizations as compared with eight proposals from six student organizations last year. The \$37,070 approved this year represents a 38.5% increase from the \$26,783 approved last year. The Energy and Sustainability Committee recommended 12 proposals for funding this year as compared to five proposals from last year. The review process was similar to last year. A Green RFP Subcommittee was created to conduct the initial and follow-on reviews and included Nancy McGhee, Rob Low, James Dale, Michael Painter and Denny Cochrane. This year an additional review by Vice President for Administrative Services Dr. Sherwood Wilson and Associate Vice President and Chief Facilities Officer Mr. Mike Coleman was added. Both are current members of the Energy and Sustainability Committee, both are former Committee Chairs, and both will oversee implementation of many of the approved proposals. The net result was that the 19 proposals received a number of reviews and the prioritization process was thorough.

Travis Hundley, Assistant Director of Budget Operations, coordinated the review process by senior university leadership. Once again having the 19 proposal placed into the three categories was well received and facilitated their review. Due to Travis’ outstanding leadership the review process was accelerated and results were announced nearly two months ahead of schedule. This is significant for it will allow implementation to occur almost immediately with proposals able to be completed or well underway prior to the end of the 2012 Spring Semester. The Committee was pleased with the outcome.

2) Sustainability Internship Program Design Updates and Faculty/Staff Involvement Opportunities

Angie De Soto presented an overview and status update (see “E&SC 013012 Attachment 3 – Sustainability Laboratory & Internship Program Update.pptx”) of the OES Internship Program to the Committee. In her presentation, she reviewed the program’s mission and importance and shared major successes and challenges to date. She then presented her vision and plans for a Campus Sustainability Laboratory & Internship Program pilot program that would take place over the academic year 2012-2013 and would be the beginning steps for the development of a campus-wide “Sustainability Lens”. The pilot program would combine project-based learning with professional development for emerging young professionals.

As the program will require collaboration through all layers of university and between operations and academics, she proposed a pilot framework consisting of (1) a Steering Committee for approval of projects, advisory teams, and program design and curriculum, (2) a Curriculum Development Committee consisting of sustainability subject matter experts to determine class content and pedagogical approaches, and (3) Advisory Teams for specific projects. She then requested volunteers from within the Committee members and guests to participate on these committees and/or teams and passed around a sign-up sheet.

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

Fred Selby shared with the committee that Deputy Chief Facilities Officer Leigh LaClair had agreed to serve as chair for the Subcommittee that will review and assess progress on the Virginia Tech Climate Action Commitment (VTCAC). A draft membership roster has been developed, and Committee members and guests were again asked for their interest in participation. Specific individuals will be personally invited to serve on the Subcommittee outside of this meeting and an initial Subcommittee meeting will be set up for late February or early March.

New Business

4) **Stadium Woods Discussion**

John Randolph updated the Committee on the status of the Stadium Woods issue involving the proposed placement of a new indoor athletic practice facility partially in Stadium Woods, the wooded area containing old-growth forest adjacent to the athletics complex. Virginia Tech President Charles Steger recently named John Randolph to chair a 15-member committee that has been charged with developing recommendations to resolve the need for a critical athletics facility in close proximity to existing facilities while also being good stewards of the university's natural resources. The committee is to report its findings and recommendations to Vice President for Administrative Services Dr. Sherwood Wilson no later than June 1, 2012. Committee member Georg Reichard recommended a survey tool be used to capture and promote all views on the issue. John Randolph agreed to provide the Energy and Sustainability Committee monthly progress updates at future Committee meetings.

5) **ESCO Program Update**

Fred Selby presented an update (see "E&SC 013012 Attachment 4 – ESCO Status Update.pptx") on Virginia Tech's Energy Performance Contracting program. The presentation included background definitions and history to-date. He informed the Committee that Pepco Energy Services, the Energy Service Company (ESCO) that had completed initial energy audits in six campus buildings in 2010, had now been recently contracted to complete the work in five of the six. Cassell Coliseum and Jamerson Athletic Center, the central power plant, Hahn Hall-South, and Dietrick and McBryde Halls are all now slated to receive over \$5.3 million worth of energy and water conservation and efficiency upgrades over the next year that are expected to save the university \$8 million over a 11 year period.

6) **Open Discussion**

Denny Cochrane gave a brief update on planned sustainability-related events this spring, including Eco-Olympics and Recyclemania.

Future Meetings

Dates: The remaining scheduled meeting dates for Academic Year 2011-2012 are as follows:

- February 27, 2012
- March 19, 2012 (Rescheduled due to BOV meeting on March 26, 2012)
- April 30, 2012

Times and Location: All meetings will be held from 2:00 p.m. to 3:00 p.m. in the Presidents Board Room, 210 Burruss Hall unless noted above.

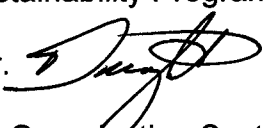
Adjourn

The meeting was adjourned.

January 20, 2012

MEMORANDUM

TO: Energy and Sustainability Committee
Denny Cochran, Sustainability Program Manager, Office of Sustainability

FROM: M. Dwight Shelton, Jr. 

SUBJECT: Proposals for Student Organization Sustainability Initiatives (Green RFP)

I am pleased to learn that progress is being made in advancing the Campus Sustainability Plan via the Green RFP program to solicit and respond to proposals from recognized student organizations. Student engagement is an important factor in achieving goals in the sustainability plan, and will continue to be crucial as the University implements specific actions in the plan.

The university has reviewed the funding request from the Student Organization Sustainability Initiatives (Green RFP) and approves the seven proposals recommended by the Energy and Sustainability Committee as illustrated below.

Description	Organization	Funding Source	Aux Funding	E&G Funding	Total Funding
5 Outdoor Mixed Paper Recycling	SGA Dir of Sustainability	Residential	\$3,670	\$0	\$3,670
350 Indoor Mixed Paper Recycling Bins	Res Committee on Sustainability	Residential	\$1,500	\$0	\$1,500
4 Waste Stations	Environmental Coalition	Dining	\$8,000	\$0	\$8,000
Additions to Sustainable Farm	Sustainable Food Corps	E&G	\$0	\$4,600	\$4,600
10 Bike Racks	SGA, Dir of Transportation	Residential, E&G	\$5,000	\$5,000	\$10,000
4 Water Bottle Refill Stations	Environmental Coalition	UUSA, E&G	\$4,000	\$4,000	\$8,000
Ytoss Program Signage Support	YMCA at Virginia Tech	Residential, E&G	\$650	\$650	\$1,300
Total			\$22,820	\$14,250	\$37,070

The Office of Sustainability will serve as the liaison between student organizations and the University. With this in mind, the Office of Budget and Financial Planning will establish four funds to underwrite these projects. Some initiatives were funded by Auxiliaries, others received support from E&G funds, and the cost of a few initiatives were shared between E&G funds and Auxiliaries as noted above.

Invent the Future

I want to thank you, the Office of Sustainability, Energy and Sustainability Committee, and the student organizations for their leadership and support of this pilot program.

If assistance in the funding process is needed please contact Travis Hundley (thundley@vt.edu or 231-4475).

cc: Kate Barbour
Mike Coleman
Jeff Earley
Tim Hodge
Travis Hundley
Fred Selby
Ken Smith
Ed Spencer
Sherwood Wilson
Wendell Vest

Student Organizations Sustainability Initiatives (Green RFP)
2011-12 Request Summary

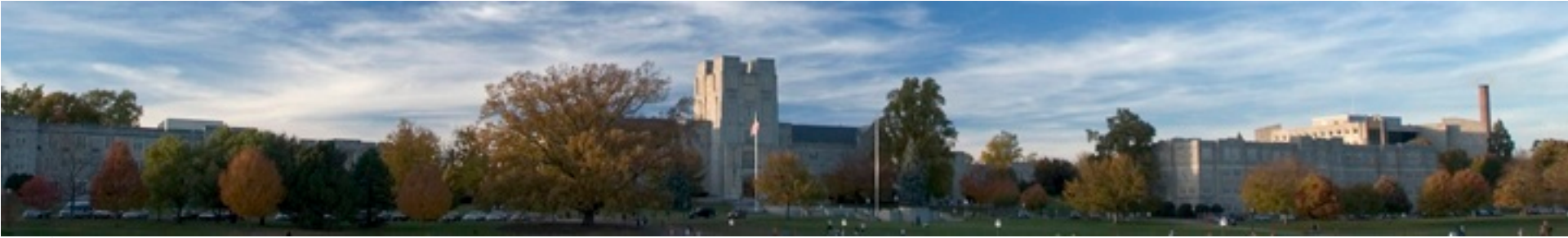
Approved											Final Status	Comments	
Proposal	Description	Organization	Subcommittee Supportive	VPAS Supportive	Review Group Supportive	Funding Source	Amount Requested	Aux Funding	E&G Funding	Total Funding			
Category 1	1	5 Outdoor Mixed Paper Recycling	SGA Dir of Sustainability	Yes	Yes	Yes	Residential	\$ 3,670	\$ 3,670	\$ -	\$ 3,670	Approved in Entirety	10 Bike Racks Only
	2	350 Indoor Mixed Paper Recycling Bins	Res Committee on Sustainability	Yes	Yes	Yes	Residential	1,500	1,500	-	1,500	Approved in Entirety	
	3	4 Waste Stations	Environmental Coalition	Yes	Yes	Yes	Dining	8,000	8,000	-	8,000	Approved in Entirety	
	4	500 Reusable Water Bottles	SGA Dir of Sustainability	Yes	Yes	Yes	E&G	4,100			-		
	5	Additions to Sustainable Farm	Sustainable Food Corps	Yes	Yes	Yes	E&G	4,600	-	4,600	4,600	Approved in Entirety	
	6	10 Bike Racks & 1 Shelter	SGA, Dir of Transportation	Yes	Yes	Yes	Residential, E&G	22,400	5,000	5,000	10,000	Approved Partial	
	7	4 Water Bottle Refill Stations	Environmental Coalition	Yes	Yes	Yes	UUSA, E&G	8,000	4,000	4,000	8,000	Approved in Entirety	
	8	Rally Towels/Sustain Lane	Sustain Lane Initiative Team	Yes	Yes	-	-	11,475	-	-	-		
	9	Rally Towel Purchase	Environmental Coalition	Yes	Yes	-	-	2,625	-	-	-		
	10	On Campus Food Market Support	Environmental Coalition	Yes	Yes	-	-	1,070	-	-	-		
	11	Low-Tech Bike Share Program	SGA, Dir of Sustainability	No	Maybe	-	-	10,000	-	-	-		
	12	Bike Safety Lights	SGA Dir of Transportation	No	Yes	-	-	1,000	-	-	-		
Subtotal							78,440	22,170	13,600	35,770			
Category 2	13	Ytoss Program Support	YMCA at Virginia Tech	Yes	Concerns	Yes	Residential, E&G	5,189	650	650	1,300	Approved Partial	Signage Support Only
	14	Automatic Hand Dryers	Environmental Coalition	Yes	Concerns	-	-	12,800	-	-	-		
	15	Upgrade Facility at the CSC	Students for the CSC	Yes	No	-	-	4,160	-	-	-		
	16	Sustainability Center in Squires	SGA Dir of Sustainability	No	No	-	-	8,069	-	-	-		
	17	SUNRNR Solar Generator	SGA Dir of Sustainability	No	No	-	-	4,350	-	-	-		
Subtotal							34,568	650	650	1,300			
Cat. 3	18	High-Tech Bike Share Program	SGA Dir of Sustainability	No	No	-	-	45,300	-	-	-		
	19	Green Roofing	Environmental Coalition	No	No	-	-	unknown	-	-	-		
Subtotal							45,300	-	-	-			
Total							158,308	22,820	14,250	37,070			



Campus Sustainability Laboratory & Internship Program

Looking Towards the Future

Presented by: Angie De Soto on January 30, 2012



Presentation Agenda

- Program Mission & Importance
- Summer + Fall 2011 Program Summary
- Campus Laboratory Program Overview
 - Pilot program in academic year 2012-2013
 - Six strategic pathways to campus sustainability
 - Classroom and project based learning
 - Opportunities for F/S involvement
- Questions



Program Mission

- Cultivate sustainability professionals
 - Sustainability lens from interdisciplinary perspective
 - Training and development for young professionals
- Collaboration across campus
 - Students, faculty, staff, and university leadership
 - Optimize operations through academic approach
 - Maximize interdisciplinary innovation potential
 - Increase capacity for new projects



Importance of Program

- **Discovery**
 - New research with on campus applications
- **Learning**
 - Innovation in undergraduate education
 - Attract new students with sustainability program
- **Outreach**
 - Build collaborative partnerships internally
 - Establish leadership nationally



Summer + Fall Projects

- Sustain Lane Initiative
 - “Hokie Stone” rally towel
 - Football game day materials management
- Best Practices Toolkit & Partnership
 - Game day operations toolkit
 - US EPA Partnership proposal
- Campus Sustainability Portal
 - www.sustainability.vt.edu



Major Successes

- Establishment of “shared space”
- National attention for toolkit
- Engagement and support across silos
- Faculty, staff, and university leadership involvement
- Budding partnership with US EPA and other critical national organizations



Major Challenges

- Advisory support for teams and projects
- Seed funding for projects
- Time balance for students & dropouts
- Compensation for students
 - Financial
 - Academic
- Program management with expansion



CAMPUS SUSTAINABILITY LABORATORY & INTERNSHIP PROGRAM



PILOT PROGRAM:
ACADEMIC YEAR 2012-2013



Campus Laboratory Overview

- Six strategic pathways to sustainability
- Campus sustainability projects
- Classroom curriculum
- Projected Resource Needs
- University-Wide Involvement



Six Strategic Pathways

- Academic Programs and Research
- Campus Culture and Social Sustainability
- Sustainable Materials Management
- Current Built Infrastructure & Campus Expansion
- Sustaining Sustainability on Campus
- Outreach and Community Partnerships



Eight Potential Projects

- Sustain Lane Initiative
- Campus Sustainability Portal
- EPA & Higher Education Partnership
- “Sustainability Advisors” Program
- Greenhouse Gas Inventory Update
- Energy Efficiency on Campus
- Catawba Sustainability Center
- Procurement & Materials Management



Project Based Learning

- Campus as a living laboratory
- Experience planning, developing and managing major projects
- Collaboration through all layers of university and between operations and academics



“Sustainability Lens” Development

- Providing an interdisciplinary perspective
- Constructing sustainability and understanding the differences of approaches
- Global sustainability challenges and solutions
- Environmental psychology and understanding basics of human behavior
- Sustainability and decision making in the workplace – how each field plays an important role



Emerging Young Professionals

- Critical soft and hard skill sets
- Project planning, management, implementation and assessment
- Professional and technical writing skills that are critical for the workplace
- Critical thinking skills for complex problems
- Understanding and mastering interdisciplinary team work and dynamics
- Understanding the differences between leadership and management



Projected Resource Needs

- People power:
 - Diverse group of bright, motivated students
 - Faculty and staff for advisory teams
 - Steering and curriculum committees
- Financial resources:
 - Graduate assistant
 - Seed funding for projects
- Course credit for participation



University-Wide Involvement

- **Steering Committee**
 - Approve projects and advisory teams for AY 12-13
 - Approve program design and curriculum
 - Meet 3-4 times this semester
- **Curriculum Development Committee**
 - Sustainability subject matter experts
 - Determine class content and pedagogical approaches
 - Meet 6-7 times this semester
- **Advisory Teams for Projects**



Questions?



Performance Contracting (ESCO) Status Update

Energy & Sustainability Committee
January 30, 2012



VirginiaTech
Invent the Future



Introduction

- **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

- **RFP Issued January, 2009:**
 - Preselected Vendors:
 - Pepco Energy Services; NORESO, Ameresco, Inc., CLT Efficient Technologies Group, and Siemens Building Technologies
 - VT Phase 1 Buildings:
 - McBryde, Hahn-South, Pritchard, Dietrick, Cassell/Jamerson, Central Power House
- **Back of the Envelope Proposals Received From Four Vendors:**
 - Negotiations held with best two and Pepco awarded ESCO contract
 - Memo of Understanding signed in August, 2009

Background (Cont.)

- **Technical Energy Audit received for VT Phase 1 February, 2010**
 - 29 ECM's totaling \$883,164 of annual savings and cost of \$11,721,080
 - 13.27-year simple payback
- **Facilities Services Analysis**
 - Recommended 25 ECM's totaling \$828,201 annual savings and cost of \$8,724,059 for a 10.5-year simple payback
- **ECM scope/list refined following additional stakeholder meetings and walkthroughs**

Current Status

- **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 – 12/12
 - 1-2 Years of Measurement & Verification Planned



McBryde Hall



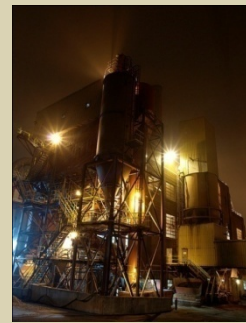
Cassell
Coliseum



Dietrick Hall



Hahn (South)
Hall



Central
Power Plant

Final Phase 1 ECM List

	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	✓					



Questions?