

## **Energy and Sustainability Committee Meeting Minutes**

**April 30, 2012**

**2:00 – 3:00 p.m.**

**Presidents Board Room, Burruss Hall**

**Present:** Fred Selby, Kayla Smith (for Sherwood Wilson), John Bush (for AVP - University Planning), Denny Cochrane, Jean Smoot (for Donna Ratcliffe), Bruce Ferguson, Rob Lowe, Mintai Kim, John Randolph, Becky Saylor, James Dale, and Alex Kosnett.

**Absent:** Savita Sharma (for Dwight Shelton), Mike Coleman, Leigh LaClair, Georg Reichard, Nancy McGhee, Tom Tucker, Paul Winistorfer, Michael Painter, and Kyle Gardiner.

**Guests:** Mark, DiFilippo, Alyssa Halle, Richard Hirsh, Maura Leveroos, and Sarah Hanks (YMCA).

### **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 March 19, 2012 Minutes**

Draft minutes from the March 19, 2012 meeting were presented to and approved by the Committee.

### **Old Business**

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

As shown in the Memorandum from Dwight Shelton, Vice President for Finance and Chief Finance Officer, subject “Proposals for Student Organizations Sustainability Initiatives (Green RFP) dated January 20, 2012, the university approved and unfunded seven Green RFP proposals for a total of \$37,070 (see attachment “E&SC 043012 Attachment 1 – Green RFP Funds Approval Memo.pdf”). Denny Cochrane provided a brief summary and the status of implementation for each approved proposal. The Office of Budget and Financial Planning has established four separate funds for implementation and funds have been transferred. The 5 Outdoor Mixed Paper Recycling Containers and the 350 Indoor “Hand Held” Mixed Paper Recycling Containers have been purchased and deployed. The order for the 4 Waste Stations for Dining Services has been submitted. The Sustainable Food Corps Advisor is obtaining approval of their perimeter fence design at Smithfield Plantation, and they are standing by to receive funds to purchase fence components, berry bushes and fruit trees. The Alternative Transportation Manager is working with the Landscape Architect and representatives from Housing and Residence Life to locate the placement for the Bike Racks, and once that process is complete, the Bike Racks will be ordered from a local firm in Roanoke, Virginia. The 4 Water Bottle Refill Stations have been ordered and Facilities Services will install two in Newman

Library and two in the Squires Student Center. The signage design for the Ytoss Program has been approved and the Facilities Services' Sign Shop has placed the order with a local firm in Christiansburg, Virginia. Especially noteworthy is that all seven proposals are either completed, or are well on their way to being completed, prior to the end of the 2012 Spring Semester.

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

On Subcommittee Chair Leigh LaClair's behalf, Fred Selby reported the subcommittee had met earlier in the day, highlighted by updates from individual workgroups assigned to research, provide recommendations, and draft language for updates and enhancements to one or more of the 14 VTCAC components. In addition, Denny Cochrane provided an overview of Virginia Tech's AASHE STARS application and reporting process that resulted in a Silver level rating for the university and Savita Sharma provided an overview of the University's central utilities funding process to better understand and identify possible changes to incentivize Departmental energy savings. The Subcommittee will continue to meet through the summer months.

**3) Stadium Woods Committee Update**

John Randolph, Chair of the Athletic Practice Facility Site Evaluation Committee (formerly known as the "Stadium Woods Committee") provided an update of the Committee's activities and progress. A preliminary report has been received from Biohabitats, Inc., a Baltimore, Maryland-based consulting firm commissioned by the committee to conduct an independent ecological characterization of Stadium Woods and determine the impacts of its development. Outside comments continue to pour in the form of emails and the issue is receiving extensive local media coverage. A random survey issued by the Committee received over 1,000 responses within the first six days. The Committee continues to meet on Fridays and has completed a final report framework, but continues to work on recommendations.

Alex Kosnett reported that on Tuesday, May 1 at 4:00 p.m., the Environmental Coalition would be publically naming one of the oak trees after comedian and television host Stephen Colbert. Virginia Tech television station VTTV and Roanoke television news crews would be filming the event and film coverage sent to Comedy Central, Colbert's host television channel, for potential airing.

**4) Spring 2012 Events Recap**

RecycleMania

Denny Cochrane reported that this is the seventh consecutive year that Virginia Tech has participated in RecycleMania, the national friendly competition to raise awareness and provide education for recycling. The competition was held during the period February 5 through March 31. Virginia Tech's goal was to increase its overall recycling rate for cardboard, paper, and bottles and cans by 10% above 2011 totals. A 32% overall recycling rate was achieved which far exceeded expectations. Particularly noteworthy was paper recycling, as 208,000 pounds was collected which represents an increase of 72% above 2011 results. In addition, composting (food waste organics) continued to be a

Virginia Tech strength, increasing 23% to more than 196,000 pounds. Cardboard and bottles and cans showed slight improvements above 2011 totals. The University of Virginia and Virginia Tech finished first and second respectively in total recyclable material collected in the Commonwealth of Virginia.

### Eco-Olympics

Alyssa Halle reported that Eco-Olympics, established in 2010 as an annual inter-residence hall competition to see which hall can reduce their electricity and water consumption the most, was again sponsored by the Student Government Association in coordination with the Office of Energy & Sustainability, Housing & Residence Life, and Virginia Tech Electric Service. As in previous years, residence halls were grouped into peer groups of similar size and function to provide a level playing field for all halls to compete. Points were awarded weekly based on achieved electricity and water reductions. Additionally, individuals earned prizes and extra points for their residence hall by attending sustainability-themed events held throughout the competition.

Pritchard Hall was the Grand Champion (overall winner) of the 2012 Virginia Tech Eco-Olympics. Pritchard Hall was awarded winner banners and has the honor of showcasing “Recycle Man,” a human-sized trophy made from recycled scrap metal, in their residence hall until next year’s competition (see “E&SC 043012 Attachment 2 – Eco-Olympics.pptx”). In addition to being the Grand Champion, Pritchard Hall also won the title of Large Residence Hall Winner. The other winners are as follows: East Ambler Johnston Hall (Air-Conditioned Residence Halls); Newman Hall (Medium Residence Halls); Hillcrest Hall (Small Residence Halls); and Kappa Kappa Gamma (SPH-J) (Oak Lane). New to the 2012 competition were two additional winner categories, Water Reduction and Electricity Reduction. Slusher Hall won the Water Reduction category for the greatest reduction in water consumption and Payne Hall won the Electricity Reduction category for the greatest reductions in electricity use.

### Earth Week

Denny Cochrane reported this was the most successful Earth Week program he has observed in the past five years and congratulated the Environmental Coalition and their Earth Week 2012 Program Coordinator Abby Hayes for planning and implementing a first class event. The website design was impressive and very informative. Events began on April 17 and continued through Earth Day, April 22. Especially noteworthy was that Virginia Tech President Steger and many other senior university leaders participated in an Earth Week 2012 Celebration Ceremony on April 19 that acknowledged the work of the Environmental Coalition and highlighted the third anniversary of the approval of the Virginia Tech Climate Action Commitment and Sustainability Plan (see “E&SC 043012 Attachment 3 – Earth Week.pptx”). Furthermore, the ceremony featured the unveiling of the US Green Building Council’s LEED Gold Plaque for the Institute for Critical Technology and Applied Science – II facility, and included comments from faculty and student members on the value this building had to their research and studies.

## **New Business**

**5) Perry Street Parking Garage Solar PV Project**

Due to the lateness of the hour, this agenda item was tabled; a presentation planned to be shown is included in the attachments (see “E&SC 043012 Attachment 4 – Solar PV Presentation.pptx”).

**6) Ytoss 2012**

Sarah Hanks, Associate Director for the YMCA at Virginia Tech shared a presentation on upcoming Ytoss 2012 (see “E&SC 043012 Attachment 5 – Ytoss 2012 Presentation.pptx”). She provided the names of student leaders, locations and times of operations for the PODS to be used to collect and store Ytoss donations, sponsorship details, accomplishments to date, and marketing plans. This year they will place 3 PODS at two off-campus student apartment complexes, i.e., Smith’s Landing and Terrace View. Most importantly, Sarah stressed the need for additional volunteers and demonstrated how interested parties may sign up. This was Sarah’s first year to oversee Ytoss and she has done a truly remarkable job.

**7) Open Discussion**

Maura Leveroos asked if the Energy and Sustainability Committee would be taking a formal stand on the Stadium Woods issue. Fred Selby responded that in his opinion the Committee should wait for the Athletic Practice Facility Site Evaluation Committee to issue their final report prior to weighing in formally on one side or the other. However, Maura, along with Richard Hirsh, John Bush, and Alex Kosnett voiced strong sentiment that the Energy and Sustainability Committee should be acting now as other University groups have chosen to do. Fred Selby stated that he would take the matter back to Facilities Services Senior Leadership for further advisement.

**Future Meetings**

This was the final meeting of the Energy and Sustainability Committee for Academic Year 2011-2012. Information on Academic Year 2012-2013 meeting dates, times, and locations will be issued at the beginning of the fall semester.


**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](mailto: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



    **eco olympics**  
**less is more**

**March 12 - April 13 , 2012**

 **VirginiaTech** <http://www.facebook.com/EcoOlympics>





**CELEBRATE EARTH WEEK 2012**

**ICTAS  
LEED™ GOLD  
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**Thursday, April 19, 2012, 11:00 a.m.  
ICTAS II, 1110 Washington Street SW  
Blacksburg, VA 24061**





    **eco olympics**  
**less is more**

**March 12 - April 13 , 2012**

 **VirginiaTech** <http://www.facebook.com/EcoOlympics>

# Perry Street Parking Garage Solar Photovoltaic Installation



**Energy & Sustainability Committee**  
**April 30, 2012**



**VirginiaTech**  
*Invent the Future*

# Technical Overview

- Solar Panels
  - Total number of panels: 440
  - Manufacturer: Sharp Electronics Corp.
  - Type: Monocrystalline silicon (60 per panel)
  - Max Rating: 60 VDC, 235 watt per panel
  - Single Panel Dimensions: 39.1" x 64.6" x 1.8"
  - Panels warranted for 25 years





# Technical Overview

- Electrical Output
  - Combined nominal power capacity of  $100 \text{ kW}_{\text{peak dc}}$  and est. annual energy output of 136,000 kWh
  - Inverter converts 315 to 600 VDC input to 480 VAC, 3 phase output
  - Connected to utility grid
  - Will supply ~13% of parking deck annual energy requirement



# Technical Overview

- Support Structure
  - Five rows of panels mounted to a steel beam lattice base
  - Panels oriented at a tilt of  $\sim 37^\circ$  from horizontal
  - Mounting structure faces Southwest
  - Measures 121' - 8" x 131' - 0", or  $\sim 16,000$  ft.<sup>2</sup>
  - Maximum vehicle height limit of 8.5' maintained



# Project Overview

- Project Financials
  - Total project cost: ~\$1.261 million
    - Mobilization \$23k
    - Engineering (design) \$121k
    - Structural steel \$238k
    - Steel erection \$67k
    - Solar Panels \$426k
    - Panel erection \$228k
    - AC/DC Electrical \$144k
    - Commissioning \$9k
  - Project was funded entirely through a federal grant received by the Commonwealth from the American Recovery and Reinvestment Act (2009)
- Project Management
  - Architectural Designer: Wiley|Wilson
  - General Contractor: Siemens Industry, Inc.
  - VT Project Manager: David Chinn



# Project Overview

- Project Timeline

- 6/08: VT BOV approves funding for parking structure
- 1/10: Governor Tim Kaine approves Decision Brief to fund VT Solar PV as an Energy PPEA project
  - PPEA: Public-Private Education Facilities and Infrastructure Act

**Decision Brief  
PPEA Energy Program  
Appropriation and Project Approval**

**Request:** DGS requests authorization of projects and appropriation of ARRA stimulus funds being administered by the Department of Mines Minerals and Energy so that Comprehensive Agreements and corresponding design-build agreements for these projects may be executed.

**Background:** The Comprehensive Agreements for the Energy PPEA have been negotiated and are nearing execution. The first projects designated to begin are a series of green energy projects that have been designated to be funded from ARRA funds being administered by the Department of Mines Minerals and Energy. These projects are generally described as:

Solar Photovoltaics projects at various DGS building for \$4,532,000  
Various solar projects at VCU for \$3,098,000  
Biomass project at VCCW for DGC for \$943,000  
Wind project at a DGC facility for up to \$2,377,000  
Solar Photovoltaics at the new Virginia Tech Parking facility for \$1,300,000  
Various Green Energy projects at DGIF hatcheries for \$750,000

It is requested that the Governor under authority granted by the appropriations act to expedite projects to be performed when the General Assembly is not in session, approve these as capital projects and appropriate the funds so that the contract can be executed.

*Richard F. Silwoski*  
Richard F. Silwoski, PE, DGS Director      Jan 5, 2010  
Date

**CONCURRENCE**

**Secretary of Administration:**  
Recommend   
Recommend w/ Modification   
Deny   
*Violet O. Baskerville*      1/05/10  
Violet O. Baskerville      Date

**Secretary of Finance:**  
Recommend   
Recommend w/ Modification   
Deny   
*Rob Brown*      1/10/10  
Rob Brown      Date

Chief of Staff:  
Recommend   
Recommend w/ Modification   
Deny   
*Wayne M. Turnage*      1/8/10  
Wayne M. Turnage      Date

**APPROVAL**

Approve       Approve w/ Modification       Deny   
Governor: *Timothy M. Kaine*      1/8/10  
Timothy M. Kaine      Date



# Project Overview

- Project Timeline (Cont.)
  - 8/10: Parking Garage opens with first 800 spaces
  - 9/10: Parking Garage completed with 1,300 spaces
  - 12/10: Virginia Department of Historic Resources approves Solar PV Environmental Impact Report
  - 3/11: VT Board of Visitors approves Solar PV plans
  - 8/11: Siemens given approval to proceed
  - 12/11: Construction begins
  - 4/12: Construction complete; commissioning phase begins

# Parking Garage

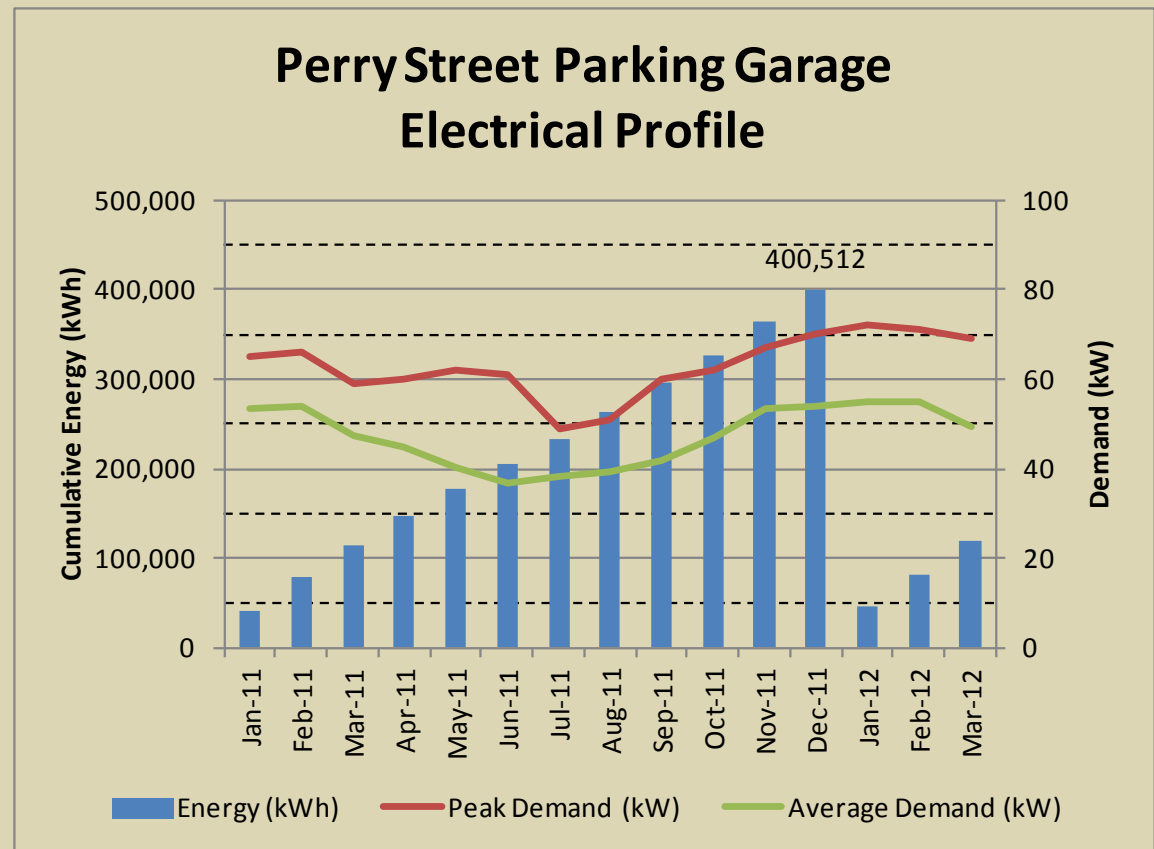
- Overview

- 1,300 spaces
- \$26 million project
- Lot first opened Aug. 23, 2010 with 800 spaces
- Remaining sections opened Oct., 2010
- Sustainability factors an integral part of design
  - Parking levels outfitted with LED light fixtures
  - Maximum utilization of natural light and ventilation
  - Advanced storm water management techniques



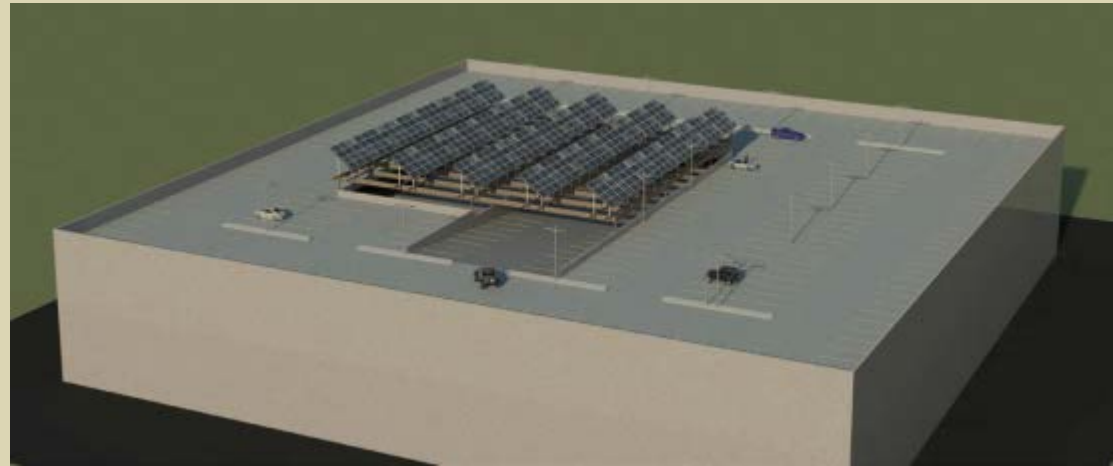
# Parking Garage

- Electrical Consumption Profile (Jan-11 To-Date)



# Parking Garage

- Overlay of Solar PV system



- The top deck could accommodate about 900 kW dc of solar photovoltaics
  - A system this size would generate ~1,070,100 kWh annually



# Comparative Cost Analyses

- Parking Garage: 100% Solar PV Fit-Out vs. Staying @ Existing ~13% Solar PV
  - 100% Solar PV Fit-Out
    - One-time, up-front capital cost for 100% solar: **\$8.439 million** (\$1.261 million for ~13%, extrapolated to 100%)
    - Ongoing purchased electricity cost: **\$0**
      - Incremental 934,100 kWh annual generation increase
  - Staying @ Existing ~13% Solar PV
    - One-time, up-front capital cost: **\$0**
    - Ongoing purchased electricity cost: **\$1.215 million** NPV based on:
      - 25-year life cycle
      - Current VTES E&G chargeout rate of \$0.0946 / kWh; annual 5% escalation cost for purchased electricity
      - 10% cost of capital
- While 100% solar PV is noble, it is not a sound business decision now

# Comparative Cost Analyses

- VT Energy Sources vs. Solar PV
  - Campus Power Plant (Coal, Gas, Oil) – FY2012 to date
    - Cost: \$3.418 million (fuel)
    - Generation (heat and electricity): 713,731 mmbtu
    - Simplified cost per mmbtu: \$3.418 million / 713,731 mmbtu, or **\$4.79 / mmbtu**
  - VTES (AEP) Purchased Electricity
    - Current VTES E&G charge-out rate: \$0.0946 / kWh, or **\$27.73 / mmbtu**
  - Parking Garage Solar PV
    - Cost: \$1.261 million
    - Annual Generation: 136,000 kWh, or 464 mmbtu
    - 25-year life cycle generation: 3,400 MWh, or 11,601 mmbtu
    - Simplified cost per mmbtu: \$1.261 million / 11,601 mmbtu, or **\$108.70 / mmbtu**

# Comparative Cost Analyses

- U.S. Energy Information Administration (EIA)'s “Annual Energy Outlook 2011”

Table 1. Estimated Levelized Cost of New Generation Resources, 2016.

Plant Type	Capacity Factor (%)	U.S. Average Levelized Costs (2009 \$/megawatt-hour) for Plants Entering Service in 2016				Total System Levelized Cost
		Levelized Capital Cost	Fixed O&M	Variable O&M (including fuel)	Transmission Investment	
Conventional Coal	85	85.5	3.9	24.5	1.2	95.1
Advanced Coal	85	74.7	7.9	25.9	1.2	109.7
Advanced Coal with CCS	85	92.9	9.2	33.3	1.2	136.5
Natural Gas-fired						
Conventional Combined Cycle	87	17.5	1.9	44.6	1.2	65.1
Advanced Combined Cycle	87	17.9	1.9	41.2	1.2	62.2
Advanced CC with CCS	87	34.7	3.9	48.6	1.2	88.4
Conventional Combustion Turbines	30	45.6	3.7	69.9	3.5	123.0
Advanced Combustion Turbines	30	31.7	5.5	61.3	3.5	102.1
Advanced Nuclear	90	90.2	11.1	11.7	1.0	114.0
Wind	34	83.3	9.5	0.0	3.4	96.1
Wind – Offshore	34	200.7	28.1	0.0	5.9	243.7
Solar PV <sup>1</sup>	25	194.9	12.1	0.0	4.0	211.0
Solar Thermal	18	259.8	46.0	0.0	5.8	312.2
Geothermal	91	77.4	11.9	9.5	1.0	90.8
Biomass	83	55.4	13.7	42.3	1.3	112.6
Hydro	53	78.5	4.0	6.2	1.8	90.5

<sup>1</sup> Costs are expressed in terms of net AC power available to the grid for the installed capacity.

Source: Energy Information Administration, Annual Energy Outlook 2011, April 2011, DOE/EIA-0383(2011)

- Solar is currently the most expensive renewable generation resource; *however...*
  - “Near-term market growth in some sectors, such as solar energy, is projected to result in **significantly reduced costs**...increasing the projected growth for those resources...” (Annual Energy Outlook 2012 Early Release Overview)



# On-Site Training Opportunity

- Presented by Siemens / Subcontractors
  - When: Thursday, May 03, 2012 9:00 AM-10:00 AM
  - Where: P5 Perry Street Parking Structure
  - Purpose: to explain how the photovoltaic system works and answer any maintenance questions that we have
  - RSVP: [dchinn@vt.edu](mailto:dchinn@vt.edu)



# Questions?



FOR YOUTH DEVELOPMENT  
FOR HEALTHY LIVING  
FOR SOCIAL RESPONSIBILITY

# YTOSS: 2012

YMCA AT VIRGINIA TECH

Energy and Sustainability Committee

Monday, April 30, 2012



# YTOSS TEAM

**Allison Rizzetta, Program Leader**

**Sheel Patel, Program Leader**

**Carrie Hatcher, Off Campus Liaison**

**Arris Bahrami, Volunteer Recruitment**

**Kelsey Frey, Marketing Chair**

**Emily Pielocik, Sponsorship Chair**

**Sarah Hanks, YMCA Associate Director**

# YTOSS COLLECTION: May 4<sup>th</sup>-10<sup>th</sup>

## PODS LOCATIONS & HOURS OF OPERATION

### Hours of Operations

- Friday, May 4; 5-7pm
- Saturday, May 5; 5-7pm
- Sunday, May 6; 2-7pm
- Monday, May 7; 10:30-6:30pm
- Tuesday, May 8; 10:30-6:30pm
- Wednesday, May 9; 10:30-6:30pm
- Thursday, May 10; 8-12pm

### Locations

- Pritchard Hall
- West AJ/West End
- Drillfield/War Memorial Gym
- Payne Hall
- Miles/Johnson Quad
- Owens Quad
- Oak Lane
- Barringer/Vawter (M-TH only)
- Upper Quad/Shanks (TBD)

# SPONSORSHIPS

## GOAL:

- 100% of on-campus PODS costs funded through sponsorships or grants

## ACCOMPLISHMENTS TO DATE:

- Green RFP funded 60 corrugated plastic signs (collection and sale); \$1300
- Student Government Association provided \$2000 in sponsorship
- Student Budget Board provided \$1945 in funding
- Environmental Coalition provided \$250 in sponsorship
- Pending: Interfraternity Council, Panhellenic, Greeks Going Green, Graduate Student Assembly

# VOLUNTEERS

## GOAL:

- 100% of volunteer positions filled; three volunteers at each location is optimal.

## CURRENT STATUS:

- Meetings with student organizations resulted in advanced commitment of volunteer hours; we're anticipating additional volunteers to sign up as a result of these commitments during the coming week.
- Encouraging classified staff to use community service leave and volunteer on campus for Ytoss.
- 90 shifts filled; 300+ to go
- Video will be released this week to inform volunteers of their roles and responsibilities while staffing a PODS unit; emphasis placed on PODS packing to maximize available space.



# OFF CAMPUS LIASON

## GOAL:

- Three to five PODS units, funded in part by apartment complexes, located on the grounds of each complex for the collection of items throughout the summer.

## COMMITMENTS:

- Smith's Landing = 2 PODS units
- Terrace View = 1 PODS unit

## NEXT STEPS:

- Contacting complexes that want to be involved but could not commit to a PODS unit this year to arrange for boxes and marketing materials to be on site

# MARKETING

## PROMOTIONAL MATERIALS AND VENUES INCLUDE:

- Booth at Environmental Field Day (April 15)
- Booth and display on the Drillfield (April 24-26)
- Booth in Squires Student Center (April 26)
- PowerPoint slides at various Student Centers and recreational facilities
- Table cards at dining halls across campus
- Banners displayed at various locations across campus
- A-frames displayed at various locations across campus
- Flyers in Residence Halls
- Classroom announcements
- Electronic communication via listservs, social media, etc.

# ADDITIONAL UPDATES

## 2012

- Rug recycling – plans pending
- Electronics collection/storage
- **SALE:** August 22 & 23 at McComas Hall
  - Volunteers needed for unloading, set up and sale Aug 21-23

## 2013

- Grant writing and sponsorship for Ytoss 2013 will begin immediately
  - Focus on corporate sponsors with a commitment to sustainability

# THANK YOU

**Sarah Hanks**

Associate Director

[sarah@vtymca.org](mailto:sarah@vtymca.org)

(540) 961-9622

[www.vtymca.org/ytoss.html](http://www.vtymca.org/ytoss.html)