

ENERGY AND SUSTAINABILITY COMMITTEE MEETING

April 27, 2015

Room 325, Burruss Hall

MEMBERS:

Members Present: Kayla Smith (for Sherwood Wilson), Savita Sharma (for Dwight Shelton), Jason Soileau, Denny Cochrane, Ruben Avagyan, Steve Mouras, Rob Lowe, Sean McGinnis, John Chermak, Tim Baird, David Mellichamp, Devita Mccullough, Sarah Mazza, Joe Jajonie.

Members Absent: Chris Kiwus, Frances Keene, Bruce Obenhaus, Katie Reaves, Richard Benson, Josh Barniak.

Recorder: Emily Schosid

Guests: Emily Schosid, Stephanie Smith, Rial Carver.

1. Welcome & Introductions E&S Committee Members; Review Charge

Mr. Mouras called the meeting to order at 2:02PM

2. Approval of Proposed Agenda

Mr. Mouras, at the request of Mr. Chermak, one item was added to the agenda (item "d" in "New Business). Mr. Mouras asked for further changes to the agenda, and receiving none, the agenda was approved.

3. Approval of March 23, 2015 Minutes

Mr. Mouras asked for changes to the minutes, and receiving none, the minutes were approved.

4. Old Business

a. 2014-2015 Green RFP Final Results: Denny Cochrane

Of the six projects that were placed on the Category 1 list by the E&S Committee, five received funding. These projects include the LED lighting upgrades for street lamps and the residence hall water bottle refill stations (fully funded), OZZI machines (2 of 3 requested were approved), Solar table (one of two requested was funded), water bottle refill stations for E&G buildings (only one per building was funded). The Automated Bike Counters were not funded. The projects funded total \$111,040. Since its start in 2010, the Green RFP program has funded 32 projects totaling \$322,782. This means that this year's funding accounts for over a third of the total program funding.

b. Earth Week 2015: Emily Schosid

Mr. Mouras thanked the Environmental Coalition for their hard work coordinating the entirety of the week's events. He noted that OES has taken a larger part in Earth Week events than in previous years. Ms. Schosid gave an overview of the programs OES planned, and offered that if anyone wants to see the full list of events, they can do so at www.theecvt.com. On Monday, one of the intern teams did an alternative transportation expo that included a bike mechanic, Mega Bus, Zip Car, and safe biking techniques. There was a smoothie bike where people were able to pedal their own smoothies. On Tuesday afternoon, there were tables talking about the Green Graduation Pledge and the Spring

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Cleaning event that will work in conjunction with Ytoss. Tuesday night, there was a movie on the Drillfield. Wall-E was shown, and over 400 people attended despite the cold and wind. On Thursday, OES led the effort to plant 13 new trees in the President's Quad.

5. New Business

a. Composting Challenges: Denny Cochrane

Mr. Mouras told the committee that the one and only composting facility in the area (PME) called at the beginning of April to inform us that they were going out of business. Currently, we compost about 20 tons of materials per week. Mr. Cochrane gave an overview of what solutions have been found and what long-term options are being considered to fix the issue. Annually, VT composts about 600 tons of material, which accounts for about 25% of all recycled material on campus. Currently, the recycling rate at VT is around 40%; without compost, that number would drop to 30%. Office of Energy and Sustainability, Dining Services, and Facilities Services worked together to come up with short-term and long-term solutions. Dining Services were concerned about the fact that they had trained all of their employees on composting, and they were determined to continue the composting program. Mr. Mouras chimed in that Dining Services could have very easily stopped the composting program and started putting materials in the trash. This would have saved them roughly \$60,000 annually. However, Dining Services is very committed to the composting program, and is not willing to stop it. Dining Services looked for alternative composting facilities in Virginia, and found Commonwealth Composting and Recycling Services (CCRS) in Ivanhoe, VA. Ms. Carver described how materials will get from the dining facilities to the composting facility: Bob's Refuse Service (BRS, one of our contracted waste haulers) is picking up materials from the Dining facilities daily, and drops it off at the old Tom's Creek Landfill, in a 60-foot roll-off. BRS will take compostables from this location to CCRS every week for the short-term. The roll-off fits about 10 tons, so it is possible that there will be twice weekly drop-offs. CCRS uses an in-vessel system, which takes about 3 weeks to process instead of the 3 months it took at PME (who used row-composting).

Mr. McGinnis asked for more clarification on the \$60,000 figure stated. Ms. Carver said that landfill materials would cost the university \$30,000 annually, but this amount would get wrapped up in the central tipping fee. Dining Services pays for the collection of compost out-of-pocket, and that amount is about \$60,000. Mr. McGinnis asked if an on-campus composting facility was in the works, and if the operating costs would be comparable. Ms. Carver said that Dining Services would not wish to be in the business of running a composting facility, but very much supports having an on-campus facility. Mr. Mouras said that this starts to get at the complexity of the issue of an on-campus composting facility. Who runs it? Who pays for it? Mr. Chermak asked about the Catawba Sustainability Center, and if it was a possible location for a composting facility on campus. Mr. Mouras said that he had not thought about it, but that it is further than the Tom's Creek Landfill or Kentland Farm. Mr. Mouras said that he would contact Josh Neese to ask his opinion on the matter. Ms. Sharma asked how sustainable the current short term solution is. Mr. Mouras said that we are definitely going to keep using this facility until we are finished with the Staff Appreciation Event. Ms. Carver said that the price for using CCRS is much cheaper than PME, but that we would like to look at an on campus facility. Mr. Chermak said that there was a study on composting that took place about 10 years ago. Ms. Carver said that the people involved in this study would be part of the team that looks at the feasibility of an on-campus compost facility going forward.

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b. Winter 2014-2015 Energy Initiatives: Ruben Avagyan

Mr. Avagyan gave an overview of the projects that have been going on over the last 6 months or so. Energy audits have been going on since October 2014. So far 29 buildings have been audited, looking at over 800 steam traps, and over \$20,000 in potential savings have been found. These are potential savings, not current savings. Eight buildings have been surveyed for lighting issues. Over 4000 lighting fixtures have been looked at and over \$160,000 in potential energy savings have been found. This amount will come from replacing lighting fixtures with LEDs and installing occupancy sensors. 20 building envelop audits have taken place, and many issues have been found and documented. Three buildings underwent a feasibility study of energy controls and an investment-grade energy audit. They recommend going forth with an investment-grade audit, and over \$380,000 in potential energy savings were identified. This means that the payback for going forward with the audit would be less than 5 years. The three buildings were chosen from the “Energy Hogs” list. One of the buildings is ILSB, which is a building in the CRC. Mr. McGinnis asked about the ILSB being less than 5 years old, and why such a new building would need such a large upgrade. Mr. Mouras explained that the CRC is not owned by Virginia Tech, and so our architects do not design them. Mr. Avagyan also said that technology is getting better every year. Mr. Baird asked about what the time scale is for the energy savings. Mr. Avagyan clarified that these numbers are annual savings. Mr. Lowe asked where the funding is coming from to do this. Mr. Avagyan said that a funding source has not yet been found. Mr. Mouras explained that funding can come to projects that have a very good return on investment, and a 5-year payback is very good. Mr. Baird asked whether we would benefit from waiting to do the upgrades because the technology is changing so quickly. Mr. Avagyan said that it was possible, but in the meantime we’re paying a lot more money for not doing anything.

Mr. Avagyan then talked about projects that have already taken place. 60 insulation blankets for steam traps have been ordered, which will provide over \$5000 annual savings, and a 2-year payback. Lights have been replaced in 2 buildings, which will also provide a 2-year payback. 24 sub-meters were installed in 10 buildings, mostly to provide data from the chiller plants. Additionally, 32 buildings were chosen to get sub-metered and changed to variable service at the North Chiller Plant. All of the parts have been ordered, and they will be installed this summer. Estimated annual savings are \$250,000 after completion of the project. Mr. Lowe asked if the North Chiller plant was at capacity. Mr. Avagyan said that yes we are. Mr. Mouras explained that with a chiller plant, you want to ensure you have some reserve capacity in case something goes wrong with one of the existing systems. There is some talk about renting extra chillers to hook up to the North Chiller Plant on the short term, because an expansion of the plant (which is planned) is very expensive. Indeed, there is already a plan in place to address the added capacity that is needed for the North Chiller Plant.

c. Ytoss Update: Emily Schosid

Ms. Schosid gave a very brief update on the Ytoss program for this year. Collection will take place May 8-14, at the same locations as last year. She encouraged the committee to volunteer to run one of the collection points, as Ytoss is looking for volunteers and they are only 2 hour shifts.

d. Undergraduate Poster Session on Energy: John Chermak

Mr. Chermak spoke about a poster session that his students will be presenting. The students are looking at the concept of Cradle-to-Grave and various issues associated.

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6. Open Discussion

Ms. Mazza asked about a program that U Wisconsin has learned about. It is a program designed to collect Styrofoam that lab equipment is packaged in. The program at UW was EPA funded, and she believes the school is supposed to help other schools get started with the program. Mr. Lowe said that at one time EHS collected large blocks of Styrofoam, but that program has stopped. Mr. Mouras invited Ms. Mazza to send her information about the program to the rest of the committee to learn more about the potential to start the program at VT. Mr. Jajonie thanked the group for allowing him to be a part of the process. He lost his seat in SGA, and will not be joining us again next year. Mr. Mouras reminded him that all sessions are open to the public and he is welcome to join us next year. Mr. Mouras thanked everyone for their work this year, and is looking forward to those returning next year, and sad to see those not returning go.

Next Meeting: September 28, 2015, 2PM – Room 325 Burruss Hall.

Adjourned at 2:59PM

Respectfully Submitted,
Emily Schosid