



November 10, 2014

Subject: Minutes - Strategic Sustainability Planning Committee Meeting, November 6, 2014

Attending: Cathy Allison, Tony Arnold, Randy Davis, Kate Drowne, Donna Kreisler, Jim Murphy, Stephen Roberts, Angie Rolufs, Ted Ruth, Mary Helen Stoltz

The first meeting of the new Strategic Sustainability Planning Committee was held on Thursday, November 6, 2014 at 11:00 a.m. in the Carver Room of the Havener Student Center. The meeting began with introductions of those in attendance, and was followed by an overview of sustainability at Missouri S&T by OSE3 director Angie Rolufs. Angie reminded committee members to attend the Geothermal Ribbon-Cutting Ceremony scheduled for 4:00 that afternoon on the east lawn of McNutt Hall.

Attendees were provided with a hand-out identifying the prioritized actions included in S&T's Strategic Plan under Lever 3:8 – *Exercise leadership in sustainability on campus and in the community by modeling sustainability practices in daily operations and practicing environmental stewardship*. A discussion was held about which of the prioritized actions the committee might be able to influence or help advance. The three that were discussed as possibilities were: development of a comprehensive waste management plan, creation of an alternative transportation culture, and investigation of new and existing courses for sustainability awareness.

Angie brought up the Colorado School of Mines practice of branding themselves as sustainability leaders by use of this statement: "Mines has distinguished itself by developing a curriculum and research program geared towards the responsible stewardship of the earth and its resources." Discussion was held about whether S&T could or should develop a similar branding statement. Do we have enough going on in the sustainability/climate change/energy/environmental arenas to promote ourselves without "green-washing"? Stephen Roberts pointed out that we are leaders in sustainability related to research and innovation. Three of our four Best-in-Class Research areas focus on sustainability, and we have been successful in a number of research awards in the area of energy and the environment. Our campus-wide geothermal energy system, our Ebus, and other innovative campus projects allow us to demonstrate leadership in operational sustainability. The committee agreed that, while we are unsure of our level of demonstrated commitment in the curriculum area, we may be able to develop a pathway if we can conduct an inventory and identify a starting point.

Discussion moved to the upcoming AASHE Sustainability Tracking, Assessment, and Rating System (STARS) self-assessment and review of the hand-out on Category 1 – Education and

Research. Angie explained that the highlighted areas are those where we have the opportunity for significant improvement, especially with the focused efforts of the Strategic Sustainability Committee. Jim Murphy asked about the area of a Student Sustainability Outreach Campaign, and whether we had adequately captured all of the volunteer service hours and other activities underway within the office of Student Affairs. Angie admitted that there was some difficulty in capturing that data for the previous assessment and agreed to meet with Jim to ensure that this information is captured for the next assessment. Discussion moved to how we can better capture sustainability-related courses offered by Missouri S&T, so we have a starting point for improvement. Angie pointed out that in the past we had no way to engage the faculty as a whole in this endeavor. Having two Deans that can request participation by faculty should help with gathering information about curriculum in the future.

Angie brought up the possibility of creating a “Green Team” of students that would support campus sustainability efforts while meeting the new student requirement for demonstrated participation in experiential learning.

The meeting wrapped up with a discussion of specific goals that the committee should consider for the coming year. Randy Davis recommended that the committee assist with keeping the Ebus for campus use after the FTA grant expires at the end of the spring semester. This will also tie in to the strategic plan action item of creating and promoting an alternative transportation culture. Kate Drowne identified the opportunity to engage the EcoMiners student group in meeting our goals. They are an active group who are interested in a variety of sustainability-related activities, including composting on campus. Kate also identified opportunities to track sustainability in undergraduate research by working with the Office of the Vice Provost for Undergraduate Studies.

The meeting concluded at 11:55 a.m.

Due Outs:

- Angie will set up a meeting with Randy Davis, Jim Murphy, and the Rolla Environmental Services Manager Brady Wilson to begin development of a comprehensive waste management plan for campus.
- Angie will set up a meeting with Jim Murphy to discuss sustainability-related activities underway within the Office of Student Affairs.
- The OSE3 office will contact the Office of the Vice Provost for Undergraduate Studies to discuss a method for tracking sustainability-related undergraduate research.
- The committee agreed to think about specific goals that we want to accomplish in the coming year, and to consider an approach to branding S&T as a sustainability leader.

The next meeting of the Strategic Sustainability Planning Committee is scheduled for 11:00 a.m. on Friday, December 5th in the Carver Room of the Havener Center.

Attachments: Prioritized Actions, Lever 3.8, S&T Strategic Plan; AASHE STARS matrix, Category 1, Education and Research

Missouri S&T Strategic Sustainability
Planning Committee Meeting
November 6, 2014 – 11:00 a.m.
Havener Center – Carver Room
Agenda

1. Welcome/Introductions
2. Geothermal Ribbon Cutting and Sustainability Day Update
3. Sustainability and the Missouri S&T Strategic Plan
 - a. How the committee can help
 - b. Raising the bar – Colorado School of Mines focus/theme – “Mines has distinguished itself by developing a **curriculum and research program geared towards responsible stewardship of the earth and its resources**”.
4. Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking Assessment and Reporting System (STARS) – upcoming information-gathering requirement
5. Goals for coming year
6. Open discussion

December 9, 2014

Subject: Minutes - Strategic Sustainability Planning Committee Meeting, December 5, 2014

Attending: Tony Arnold, Melanie Mormile, Jim Murphy, Mark Potrafka, Stephen Roberts, Angie Rolufs, Ted Ruth

The Strategic Sustainability Planning Committee met on Friday, December 5, 2014 at 11:00 a.m. in the Carver Room of the Havener Student Center. The agenda was focused on three items: Sustainability and the Missouri S&T Strategic Plan; Branding S&T as a Sustainability Leader; and Goals for the Coming Year.

Sustainability and the Missouri S&T Strategic Plan:

The committee agreed to focus on three prioritized actions under Lever 3:8 of the S&T Strategic Plan – *Exercise leadership in sustainability on campus and in the community by modeling sustainability practices in daily operations and practicing environmental stewardship*. The three prioritized actions are: development of a comprehensive waste management plan; creation of an alternative transportation culture; and investigation of new and existing courses for sustainability awareness.

Waste Management Plan: Angie updated the group on actions completed to date and informed them of a scheduled meeting with the City of Rolla Director of Environmental Services Director, Brady Wilson. Ted Ruth recommended revisiting the idea of purchasing one or more compactors in order to reduce the number of dumpsters located around the campus. This will reduce waste collection costs as well as the number of dumpster pads and screens that must be constructed and maintained. Mark Potrafka recommended addressing the inclusion of food waste in the compactors, as weight of compacted food waste has been an issue in the past. Angie agreed to include the use of compactors in her meeting with Brady Wilson.

Alternative Transportation Culture:

Ebus – The Ebus has been very well received on campus, but the grant that allows OSE3 to operate and maintain the bus will end at the end of the spring semester. The committee agreed to vet ideas for a future use plan for the Ebus. Angie will provide information on use and options for continued service for the committee to review.

Bike Plan – Extended discussion was held about the need for a comprehensive bike plan that was developed and championed by students. The committee agreed to allow student council representatives to present their ideas to the committee for feedback and support in gaining approval through the system.

Sustainability Curriculum and Research: Angie provided status on the development of comprehensive lists of current courses, funded research, and undergraduate research that contain a sustainability component. Student employees of OSE3 are compiling first-draft lists. Draft course lists will be sent to faculty for review and confirmation that sustainability is a component of the course. The Office of Undergraduate Affairs will modify the on-line application form for undergraduate research and will ask the students to check a box if their proposed project includes a sustainability or energy component.

Branding S&T as a Sustainability Leader:

The committee reviewed draft branding statements similar to Colorado School of Mines' statement: "Mines has distinguished itself by developing a curriculum and research program geared towards the responsible stewardship of the earth and its resources."

The statement was narrowed down to: **Missouri S&T distinguishes itself through innovative campus sustainability and leading research in global environmental stewardship**

Committee members agreed to review the statement and provide feedback before the next meeting.

Committee Goals for the Coming Year:

The committee agreed that the goals for the coming semester will be to provide support for the completion of the three prioritized actions under Lever 3.8 of the Strategic Plan: 1.) Develop a comprehensive waste management plan; 2.) Create an alternative transportation culture; and 3.) investigate new and existing courses for sustainability awareness. The committee will also guide the branding of Missouri S&T as a sustainability leader.

Meetings for spring semester 2015:

The committee agreed that we should meet monthly. Angie proposed the first Friday of the month at 11:00 a.m., but agreed to work with those who were not in attendance to find a day and time that will work for the majority of members.

The meeting concluded at 11:55 a.m.

Due Outs:

- Angie agreed to provide a draft waste management plan for the committee to review at the first meeting of the spring semester.
- Mark Potrafka agreed to work with the student council representatives who are pursuing a campus bike plan to schedule a presentation to the committee.
- Committee members will review the draft branding statement and provide feedback via email.
- Angie will schedule monthly meetings for the spring semester.

Missouri S&T Strategic Sustainability
Planning Committee Meeting
December 5, 2014 – 11:00 a.m.
Havener Center – Carver Room
Agenda

1. Welcome/Introductions
2. Sustainability and the Missouri S&T Strategic Plan
 - a. Waste Management Plan
 - i. Internal meetings held
 - ii. Meeting with Rolla Environmental Services Director on Monday, Dec 8th
 - iii. Draft plan ready for review by February 1st
 - b. Alternative Transportation Culture
 - i. Ebus Future
 - ii. Campus Bicycle Plan
 - c. Curriculum and Research – Sustainability
 - i. OSE3 drafting curriculum list using S&T course catalogue
 - ii. OSE3 drafting research awards list using OSP data
 - iii. Working with Office of Undergraduate Studies on undergraduate research list and opportunities to recognize energy and sustainability research at Undergraduate Research Conference
3. Branding S&T as a Sustainability Leader:
 - a. “Mines has distinguished itself by developing a curriculum and research program geared towards responsible stewardship of the earth and its resources”.
 - b. “Missouri S&T distinguishes itself by demonstrating innovative campus sustainability and leading research that will change the world.....(looking for ideas here!!)”
4. Goals for coming year
5. Open discussion

GOALS:

- Sustainability in Strategic Plan:
 - Waste management plan
 - Alternative Transportation
 - Curriculum and Research
- Branding of University
- Prioritize, develop metrics



February 10, 2015

Subject: Minutes - Strategic Sustainability Planning Committee Meeting, February 6, 2015

Attending: Cathy Allison, Tony Arnold, Cory Brennan, Michelle Bresnahan, Joel Burken, Jeff Cawlfeld, Kate Drowne, Donna Kreisler, Adam McMikle, Jim Murphy, Jim Packard, Mark Potrafka, Angie Rolufs, Ted Ruth

The Strategic Sustainability Planning Committee met on Friday, February 6th at 11:00 a.m. in the Shamrock Room of the Havener Student Center. The agenda is attached.

S&T Solar Village Microgrid Video: Angie shared the Solar Village Microgrid video, prepared by Terry Barner, videographer with S&T Communications (<http://youtu.be/t5CW8MNdFio>) which demonstrates a large portion of what OSE3 has been working on for the last 3 years.

Princeton Review's Guide to Green Colleges – S&T's Green Highlights: Angie provided the final version of the highlights that were sent to the Princeton Green Review for inclusion in their guide to Green Colleges. The S&T Communications Office reviewed the draft and provided input to the final version. A copy is provided with these minutes.

Alternative Transportation Culture:

Bike Plan – Adam McMikle, representing S&T Student Council, presented a comprehensive campus bike plan to the committee for feedback and support in gaining approval through the system.

Ebus Update – The Ebus has been very well received on campus, but the grant that allows OSE3 to operate and maintain the bus will end at the end of the spring semester. OSE3 will provide details on cost of service and recommendations to the committee for review at our March meeting.

Waste Management Plan: Angie informed the group that the plan has been drafted, but has not yet been reviewed by those who will be impacted. The draft plan does include the recommendation of purchasing one or more compactors and reducing the number of dumpsters located around the campus. Jim Packard asked what had changed since the previous study that recommended against compactors because of the inability to include food waste from Havener Center. Angie shared that, in meeting with the City's Environmental Services Director, Brady Wilson, it is now possible to include food waste in our compactors. Mark Potrafka confirmed that Brady Wilson had provided the same information to him in a recent meeting.

RecycleMania Update: Cory Brennan provided an update on our plans for participation in the RecycleMania competition for 2015. EcoMiners are working with OSE3 student employees to conduct waste audits and provide participation events for students during St. Pat's Week.

Branding S&T as a Sustainability Leader:

The committee reviewed draft branding statements similar to Colorado School of Mines' statement: "Mines has distinguished itself by developing a curriculum and research program geared towards the responsible stewardship of the earth and its resources."

At the December Strategic Sustainability Planning Committee meeting, the statement was narrowed down to: *Missouri S&T distinguishes itself through innovative campus sustainability and leading research in global environmental stewardship.*

Committee members agreed at the February 6th meeting that the marketing firm that was hired to work with the Communications Office on branding Missouri S&T would be the most appropriate group to put the final touches on this statement.

Open Discussion:

- Angie shared that the OSE3 would be hosting the first Sustainability Merit Badge event at the Boy Scout Merit Badge University scheduled for Saturday, February 7th on the S&T campus.
- Joel Burken let the group know that the Environmental Research Center was holding an Open House at 3:30 p.m. that afternoon (Friday, February 6th).
- Jim Packard informed the group that the 12th bottle-filling station on campus was installed in the Computer Science Building that week.

Missouri S&T Strategic Sustainability
Planning Committee Meeting
February 6, 2015 – 11:00 a.m.
Havener Center – Shamrock Room
Agenda

1. Welcome/Introductions
2. Solar Village Microgrid Video
3. Princeton Review's Guide to Green Colleges – S&T's Green Highlights
4. Campus bicycle plan presentation – Adam McMikle, Missouri S&T Student Council – Campus Concerns and Improvements (CCI) Physical
5. EBus Future
6. RecycleMania Update
7. Waste Management Plan Update
8. Branding S&T as a Sustainability Leader:
9. Open discussion

**Missouri S&T Strategic Sustainability
Planning Committee Meeting
March 6, 2015 – 11:00 a.m.
Havener Center – Shamrock Room
Agenda**

1. Welcome/Introductions
2. Boy Scouts of America Merit Badge University – Sustainability Merit Badge
3. Ameren Sustainability Planning Support (with Wash U. and SLU)
4. Earth Day 2015!
5. Waste Management Plan Update
6. EBus Future
7. RecycleMania Update
8. Open discussion



May 18, 2015

To: Missouri S&T Strategic Sustainability Planning Committee Members
Subject: Minutes - Strategic Sustainability Planning Committee Meeting, May 1, 2015

The Strategic Sustainability Planning Committee met on Friday, May 1st at 11:00 a.m. in the Shamrock Room of the Havener Student Center. The agenda is attached. Attending were: Bonnie Bachman, Jeff Cawfield, Alex Korff, Donna Kreisler, Adam McMikle, Bruce McMillin, Jim Packard, Mark Potrafka, Angie Rolufs, and Ted Ruth.

Strategic Plan Lever 3.8: Exercise leadership in sustainability on campus by integrating sustainability practices in daily operations.

Alternative Transportation Culture:

Bike Plan – Adam McMikle, Student Council President, informed the committee that his planning team was working with Physical Facilities to identify signage for potential bicycle/pedestrian impact areas. Signs will request that cyclists walk their bikes through these areas. He is also meeting with Rolla Public Works Director Steve Hargis to ensure that the city's plans are incorporated into campus bike planning.

Ebus Update – Angie updated the group on her efforts to secure funding for the continued operation of the Ebus after the FTA grant ends in June. OSE3 provided information about the Ebus and associated operational costs at the Student Council Executive Committee Meeting on April 7th. The committee agreed to add a potential student fee to the agenda for fall semester. If approved, the fee would be in place by fall semester of 2016. Students were extremely supportive of the Ebus at the meeting. OSE3 also met with Vice Chancellor for Finance and Administration, Walt Branson; along with representatives from Student Affairs and International Affairs on March 18th. The purpose of the meeting was to identify stop-gap funding to keep the Ebus operational after the FTA grant ends and until either a student fee is in place, or new grant funding can be secured.

Waste Management Plan: OSE3 hosted a meeting on March 17th with representatives from Physical Facilities, Residential Life, and the City of Rolla's Environmental Services Office. The group addressed the issue of installing centralized compactors and reducing the number of dumpsters and pick-up points around the campus. Potential impacts, both positive and negative, were identified. The group agreed to allow a compactor sales representative, who is currently working with Residential Life on placing compactors at Resident Halls, provide recommendations about centralized compactors on campus. We are awaiting feedback from the sales representative.

ACUPCC Climate Action Plan Progress Report: OSE3 submitted a required Climate Action Plan Progress Report to Second Nature on April 15, 2015. This report submission will keep us in good standing with the American College and University Presidents' Climate Commitment (ACUPCC). Angie is working on an update to S&T's Climate Action Plan. She will share this with the committee in August when we reconvene for the fall semester.

Sustainability Summit with Ameren, SLU, Wash U: Angie shared that she is partnering with the Sustainability Directors at Ameren, SLU, and Wash U on a regional Sustainability Summit that will be held at the SLU Center for Global Citizenship on April 13 and 14, 2016.

State Parks Meeting: OSE3 hosted a tour of the S&T Solar Village for Missouri State Parks Director, William J. Bryan; Ozarks District Supervisor, Laura L. Hendrickson; and Ozarks District Construction Unit Lead, Fred Weisenborn on Thursday April 30th. Following the tour, the State Parks team proposed a partnership with S&T to build a solar cabin that would be completed in time to celebrate the 100th anniversary of Missouri State Parks in 2017. OSE3 will coordinate with the Solar House Team and Student Design Center to determine if this is a feasible approach for the team to pursue for the 2017 competition.

Association of Climate Change Officers (ACCO) Certification Program: Angie has joined the ACCO and has been asked to join the curriculum development team for Climate Change Officer (CCO) certification training. This provides the potential for S&T to provide future on-line courses to meet certification goals.

Solar Market Pathways Grant: Missouri S&T is a sub-awardee for a DOE grant to the Midwest Renewable Energy Association for **The Solar Endowment: A PV Investment Roadmap for U.S. Universities and Foundations**. The project calls for the creation of campus solar investment proposals for consideration by university governance boards at four partnering universities (Missouri S&T, Purdue, University of Minnesota, and Illinois State University). The project proposal was coordinated by OSE3 and the grant will provide the opportunity for a multi-departmental senior design project. Meetings scheduled with potential partners. More details to follow.

AASHE STARS Self-Assessment: Angie provided heads-up about upcoming sustainability self-assessment. Undergraduate students employed by OSE3 will be gathering the required data for the assessment over the summer. She asked that committee members support the students as they gather this information.

Earth Day: The 14th annual Missouri S&T Earth Day was held on Thursday, April 16th. We had a beautiful day and great participation from several campus departments. Many local elementary schools and home-school student groups attended. Earth Day 2016 will be celebrated at S&T on April 22nd, 2016 – mark your calendars!

Bike-To-Work Day: OSE3 students are coordinating with the S&T bicycle club to host “Bike-To-Work-Day” on Friday, May 8th. (Rain-out – will reschedule for fall semester)

Open Discussion:

- Angie shared that the OSE3 is looking for ways to integrate sustainability into campus curriculum. It was recommended that we consider including something in Freshman Engineering and approach Dean Ferguson as he is in the process of modifying the program. Adam McMikle recommended doing more sustainability engagement activities during opening week.
- Jim Packard provided an update on the positive impacts and reductions in energy use associated with the geothermal energy project, and on plans to increase the number of bottle-filling stations on campus.

Next Meeting: The committee agreed that we will not meet during June or July. We will resume our regular schedule of meeting on the first Friday of each month at 11:00 a.m. beginning on Friday, August 7th. Angie will send out an updated Outlook Calendar Invitation to all committee members.

**Missouri S&T Strategic Sustainability
Planning Committee Meeting
May 1, 2015 – 11:00 a.m.
Havener Center – Shamrock Room
Agenda**

1. Welcome/Introductions
2. Strategic Plan Lever 3.8: Exercise leadership in sustainability on campus by integrating sustainability practices in daily operations
 - a. Waste Management Plan Update
 - b. EBus Future
3. ACUPCC Climate Action Plan Progress Report - submitted
4. Sustainability Summit with Ameren, SLU, Wash U.
5. State Parks Meeting – Sustainable Housing Partnership
6. Association of Climate Change Officers (ACCO) – CCO Certification Program - Curriculum Development
7. Solar Market Pathways Grant – Interdepartmental Senior Design Project Opportunity
8. AASHE STARS Self-Assessment
9. Earth Day
10. Bike-To-Work Day
11. Open discussion

**Missouri S&T Strategic Sustainability
Planning Committee Meeting
May 1, 2015 – 11:00 a.m.
Havener Center – Shamrock Room
Agenda**

1. Welcome/Introductions
2. Strategic Plan Lever 3.8: Exercise leadership in sustainability on campus by integrating sustainability practices in daily operations
 - a. Waste Management Plan Update
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