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Whitman College 2016 Sustainability Report

Climate Action Plan

The end of 2016 marked a new beginning for sustainability at Whitman College. This April, the Board of Trustees unanimously approved the College's first Climate Action Plan - a roadmap to net zero greenhouse gas emissions. The Board of Trustees initiated the planning process in response to growing student concern about Whitman's contribution to anthropogenic climate change. Students, staff, faculty, overseers, and trustees volunteered their time developing this plan. The Plan addresses the unique challenges Whitman faces by taking advantage of our strengths while attempting not to compromise the educational mission of the College. The Plan is a living document, which encourages progressive updates.

The methods of emissions mitigation in the plan are categorized into operations, transportation, solid waste and purchasing, curriculum and research, and communication and outreach. A brief summary of primary objectives is as follows:

• Purchasing 100% renewable electricity starting this July;

• Purchasing 100% renewable natural gas by 2020;

• Leveraging the lifecycle fund to continuously improve campus efficiency;

• Incrementally installing utility submetering in campus buildings for a smarter campus;

• Maximizing solar energy production both on and off campus;

• Developing better means for tracking emissions related to paid travel;

• Offset remainder emissions to achieve climate neutrality by 2050;

• Building a deeper culture of environmental accountability in our community;

• Annually reporting on progress and periodically updating the Climate Action Plan.

Please read the Climate Action Plan for further detail.

Purchasing 100% Renewable Power for Campus

This year, the Board of Trustees approved expanding the College's renewable energy budget to provide campus with 100% renewable energy. Starting July 1st, Whitman will purchase $35,000 worth of Renewable Energy Credits (RECs) - a $15,000 increase over recent years. These Green-e™ certified credits are sourced from 100% wind energy projects. As a result, Whitman will be offsetting 100% of our electricity consumption. Next fall, a budget proposal for offsetting natural gas will be presented to the Board of Trustees.

Building Utility Submetering

This October, the utility submetering system in Olin Hall went live. This system captures real-time data on Olin's electricity, water, and heating consumption. The purpose of this project is to better understand the building's consumption patterns, be capable of quantifying efficiency improvements, and engage building occupants. Ideally, all major campus buildings will eventually be submetered to improve the Physical Plant's capacity to manage them. Better data means better management.

The public web dashboard is featured on Whitman's website. Once more buildings are online, a more complex hub will be formed. Here, one can view data over the time period of choice to compare and contrast dates, track the savings provided by upgrades, and learn about the building's systems.

Jewett Hall is next in line to receive submetering. Residence halls are prioritized to leverage student competitiveness for energy conservation challenges, as well as to educate residents on their impacts. A kiosk for a public space will be installed to educate occupants and visitors.

Efficiency Upgrades and the Lifecycle Fund

An engineering study was undertaken this fall to recommend efficiency measures for our campus. Measures such as LED lighting, thermostat settings, insulation, and heating and cooling hardware standards were recommended. The Lifecycle Committee took these recommendations and integrated them into updated standards for campus retrofits and remodels. Similar standards were adopted for new construction.

Last summer, Olin Hall underwent the first phase of a major retrofit, installing new heating and cooling equipment and new lighting. The lighting was upgraded to LEDs over T12 fluorescent tubes. This summer, the second phase will be underway, continuing the transition to LED lighting. These LEDs reduce lighting energy consumption an estimated 50%. Thanks to the building submetering present in Olin, this can be tracked as the project continues.

Revitalizing the Bike Share Program

Thanks to funding from ASWC and the Outdoor Environmental Leadership Fund, Whitman's bike share program has 8 new Fuji Captiva ST bikes. The Bike Share program is the cooperative result of student volunteers, the Outdoor Program's Bike Shop, and Penrose Library. The new bikes have been available to students for checkout in the library since February.

Historically, refurbished bikes sourced from abandonments on campus were used to encourage creative reuse and avoid wastefulness. Last year, wear and tear took their toll on the fleet. Only about three of nine were available at any given time. The program could not meet the level of demand.

Students proposed funding for the new, simpler, lower maintenance bikes in cooperation with the Outdoor Program and Library. Funding for a Bike Share Intern was also secured by ASWC for this spring. Going forward, the Bike Share Intern will report to the Campus Sustainability Coordinator to secure the future of the program. New checkout procedures are in place to ensure rider safety and bike maintenance thanks to the Bike Share Intern and library staff. This summer, a Dero Fixit station will be installed near Reid Campus Center to facilitate simple bike maintenance for our campus community. The station includes a lifted stand, tire pump, and simple tools.

Faculty and Student Micro-Turbine Installed

This spring a group of interested students (Peter French, Marissa Childs, Alex Shaw, and Noah Edelson) led by Danielle Hupper with help from Larry North (Science building Technician), Bob Carson (Dept. of Geology), Kurt Hoffman (Dept. of Physics), and Physical Plant personnel completed design, construction, and installation of a micro-turbine on campus. Located between the Hall of Science and Penrose Library, the current generator is low power so that the turbine turns with little wind. As a result, the generator is not able to produce sufficient power for battery charging purposes. An amp meter will soon be installed to indicate output for curious passersby. In the future, a slightly larger generator, capable of battery charging, will be retrofitted into the

system to see if the turbine blades can be used for this purpose. If successful, a small lighting feature will be added to illuminate the meter with a timed switch to conserve power. The installation of this turbine project is the beginning for more renewable energy education and onsite generation on campus.

Zero Waste

So far this year, Whitman's recycling team and groundskeepers have diverted over 100 tons of waste from Walla Walla's landfill - nearly 49 tons of yard waste, 32 tons of cardboard, 17 tons of paper, and 3 tons of bottles and cans. The diversion rate is sitting at 46.6% - fairly typical for Whitman, but with plenty of room to improve. Excluded are data on e-waste recycling, scrap metal, or the Physical Plant's annual garage sale.