Class Tackles Energy Plan

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Campus upgrades save energy

Climate commitment

In 2007, President Thomas L. Helfie formed the Advisory Committee on the Environment and Sustainability (ACES), made up of faculty, administrators and students, to study specific environmental and sustainability issues. When Helfie signed the national Presidents Climate Commitment on Earth Day 2008, he illustrated his terfacebook and upon the recommendation of ACES. The program calls for colleges and universities to attain a position of carbon neutrality with respect to greenhouse gas emissions. The college has flexibility in the timing and means of achieving the goal. Among its activities, ACES has continued to work on determining the college’s carbon footprint and how to reduce it, develop guidelines to encourage new campus buildings to meet LEED (Leadership in Energy and Environmental Design) silver standards; assess recycling, conservation and sustainability programs; and determine potential costs and develop strategies to communicate the plan. Projects that are helping the college move toward a more sustainable future include:

• Increasing the use of local produce and dairy products to reduce plastic waste;
• Renovating Northrup Hall to LEED silver standards once funds are secured;
• Improving and increasing recycling efforts across campus;
• Reducing the amount of bottled water used to minimize plastic waste;
• Increasing the use of the local produce and dairy products when available;
• Using bulk beverages to reduce cans and bottles;
• Donating spent fryer oil for use as bio-fuel;
• Replacing appliances with Energy Star models;
• Studying ways to increase bus service for faculty and staff who commute;
• Encouraging car pooling;
• Increasing the number of bike racks on campus;
• Increasing mechanical equipment electrical efficiency by installing variable frequency drives.

In 1998, when Linfield College more than doubled its size and began an expansion into what is now known as the Keck Campus, the college faced both an opportunity and a challenge. The opportunity was the expansion, the chance to grow under controlled, methodical way, as need and funds allowed. The challenge was to integrate the energy and utility needs of the Keck Campus and develop a Utility Master Plan that would increase efficiency and reduce costs of heating, lighting and water/wastwater systems.

As the plan unfolded and upgrades developed, Linfield took steps toward reducing its carbon footprint before it became fashionable. A new computer-controlled heating plant with more than two miles of double-walled steam pipes replaced an 80-year-old system with leaky pipes that, every few years, would erupt with steam plumes giving the campus an ethereal look some days. Within two years, the college reduced its natural gas consumption by 36 percent and saved more than $386,000. In just over one decade, the college has saved some $2 million in utility costs.

At the same time, an underground automatic irrigation system and upgrades to the showers throughout campus were installed, reducing water use and saving $35,000 in just two years. Lights throughout campus were upgraded with more than 4,000 ballasts and 10,000 lamps converted to more efficient fluorescent lighting. An additional 1,500 incandescent bulbs were replaced with CFLs, which reduced energy consumption, saving more than $60,000 in the first year. A project is under way to upgrade lighting systems by reducing the number of lamps per fixture and installing a high reflective surface to enhance light quality with half the energy.

With the improvements and upgrades, Linfield reduced its energy consumption, despite increasing the square footage of its buildings by 15 percent.

“We were employing sustainability practices because it made good practical, economic sense,” said John Hall, director of facilities services at that time and now the director of capital planning and development. “It was a win for the environment and a win for the college and the students.”

Linfield may be in the formative stages of moving toward more sustainable practices, Hall said, but the college is moving in the right direction.

“We have done a lot. Ten years ago we started down this path, but we didn’t call it sustainability,” he said. “We were just being pragmatic in our approach and taking steps to save money and become more efficient.”

Class tackles energy plan

They trail into class from all campus corners, a group as varied as the issue they are studying.

“Dropping backdrops at their feet, 10 students settle around a table ready for work. They are business students, historians, artists, biologists, musicians. “Technically he’s contributing to greenhouse gas emissions because of all the carbon in the concrete he spends when he plays the trumpet,” someone jokes, gesturing toward a classmate. Others nod and smile. Though diverse, they share a common passion — the environment.

All are environmental studies majors or minors enrolled in the capstone course, Environmental Problem Solving. With the mindset to “think globally, act locally,” Marvin Henberg, professor of philosophy, and his students identify best practices and bring them to Linfield.

“We have students from both the policy track and science track, with majors in everything from business to Spanish to music,” said Henberg, who has led previous classes to clean up Cozine Creek and restore native habitat. When President Thomas L. Helfie signed the American College and University Presidents Climate Commitment on Earth Day April 22, 2008, Henberg recognized a timely class topic — identify Linfield’s carbon footprint and create a plan to reduce it.

The two-phase project began last year when students calculated the amount of greenhouse gas emitted by Linfield annually. They found Linfield’s carbon footprint to be far lower than that of other colleges of comparable size, but according to Henberg, that is not because the college is using less energy. It is using cleaner energy. Linfield’s energy comes from hydroelectric proven by McMinnville Water & Light, which does not contribute to global warming.

“It’s not because we’re more efficient than other colleges, it’s because we’re luckier,” he said. “The meaningful statistic will be to compare Linfield’s output from year to year, which will show whether or not we’re making progress.”

This year’s class created a plan to lower Linfield’s energy use over time. Dividing into small groups, students tackled three areas — infrastructure, green energy and behavioral change. Group members conducted interviews both on and off campus to get a sense of current habits and reviewed reports from other colleges. The material culminated in a comprehensive report.

“The strength of the class is everyone’s different backgrounds,” said Taichi Haraguchi ’09, who earned a degree in business management while minor in environmental non-profit after leaving Linfield. “Each student either has a minor or major in environmental science, which helps the class to come together and collaborate.”

Henberg recognizes the importance of diversity in dealing with environmental issues. He helped found the environmental studies program, designing it with two tracks — one specializing in policy and the other in science. “You need the two tracks to work together,” he said. “You need scientists to figure out what we’re doing to ourselves and you need policy people to figure out how not to do it to ourselves.”

Students are optimistic their work will impact Linfield’s future and look forward to seeing their ideas implemented.

“It is like everyone agrees sustainability is a pressing issue,” said Eric Butler ’09. “Our report will be useful — it may not necessarily set college policy for the future, but it will help inform it.”

— Laura Davis

Samantha Mack ’11 works in the community garden.

Student initiatives

This spring, the Oregon Campus Compact awarded a $1,000 mini-grant to Linfield for the Bike Shop project, spearheaded by Sarah Valentine ’11. Bicycles lie on racks at the end of each semester will be given to the project, which will then fix them to be raffled off or rented to students on a daily basis. A repair shop, fix and distribute to the community, will repair bikes that might otherwise be thrown away.

In conjunction with McMinnville Water & Light, Linfield students are going door to door offering to replace incandescent lights with more energy-efficient compact fluorescent. For every replacement documented, Linfield will receive a $2 energy rebate.

In May, the student body passed a referendum to create a renewable energy and sustainability fund. The fund will be established with a $10 per semester student fee, which will raise about $34,000 annually. A portion of the funds will go toward purchasing renewable energy credits to increase the use of renewable energy at Linfield from 6 to 15 percent. The remaining money will be awarded in the form of grants to sustainability projects designed by students, faculty and staff.