

a higher education presidential thought leadership series

2011/2012 Series: Strategies to Address the Rising Cost of Higher Education





The Financial Benefits of Campus Sustainability

Dr. Rosalind Reichard: President of Emory and Henry College

What is the fundamental purpose for your campus sustainability programs? Are you reducing your carbon footprint to help protect and restore the world's ecological systems as a moral and social responsibility? Are you working to have a healthier environment for people on your campus? Are you focusing on the interest of your students in environmental issues? Are you increasing the efficiency of your operations in order to reduce costs?

While one of these reasons may be the most central to your sustainability efforts, your college or university most likely embraces all of them, on some level. However, you may not be aware of the financial benefits to your campus that each of them provides. It is helpful to know that careful management of your resources to support any of these goals can enhance the bottom line of your budgets.

For the Common Good

The American College and University President's Climate Commitment initiative began in 2006, with the support of 12 presidents who agreed to be the founding signatories. Those presidents who have signed the commitment (today there are more than 600 signatories) have agreed to form a plan for their campus to: be carbon neutral at an appropriate future date, be held accountable to make progress toward this goal, and integrate sustainability into the educational experience for all students. They believe that they have a moral and social responsibility to lead the way in the efforts to reverse global warming.

In the Spring of 2007, I worked with my Board of Trustees at Emory & Henry College to gain its support for signing the President's Climate Commitment. This was no easy task, given the history of our region, Central Appalachia, and its long connection with the coal industry. We made this decision, however, because of our historic and deep commitment to social and civic responsibility. We wanted to help our surrounding communities become more sustainable. Financial benefits have accrued from these efforts, which have enhanced our reputation, resulting in stronger support from donors and a marketable distinctiveness for recruiting students and faculty.



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Two foundations have recognized our sustainability work and provided funding for our efforts. One of the foundations has granted funds to Emory & Henry and another institution in support of hiring a joint energy manager. Another foundation has provided funding to strengthen our Environmental Studies Program.

The number of college rankings that include sustainability efforts as a major factor is growing. The *Kaplan College Guide* has a green ranking. *Sierra Magazine* has a "Coolest Schools" list. *Princeton Review* has a *Guide to Green Colleges*. I understand that college rankings are controversial and can sometimes be counterproductive to the core values of higher education. However, I cite these rankings as an indicator that efforts to be sustainable are growing in importance with the public and can enhance an institution's reputation.

All college and university presidents are pressured from multiple directions. There are constituents that will either not care about or actively work against sustainability initiatives. However, scientific consensus has gradually become impossible to ignore. The balance is strongly in favor of expectations that we do a better job of reducing and measuring our overall environmental impact. In the end, these measures save money and improve the bottom line.

Health and Safety

In 2007, Emory & Henry College adopted a policy that all new buildings and major renovations to existing buildings would be constructed according to the Leadership in Energy and Environmental Design (LEED) certification system at the silver level or above. One of the goals of LEED certification is focused on providing a healthy place for all occupants to live and work. LEED certification generally adds somewhat to the overall cost of construction (some studies indicate the increase is between 4 and 11 percent). However, over the long term, reduction in operating costs and increases in productivity, satisfaction, and health of the occupants will provide financial benefits to your budget.

A sustainable campus that provides a healthy and safe environment, both indoors and outdoors, will improve the health of your employees and lower your health benefit costs. A healthy environment will enhance morale, and faculty, staff, and students will be easier to attract and retain. Lower absenteeism among your employees will increase productivity, and lower absenteeism among students will enhance their educational experiences. All of these advantages to a healthy and safe campus provide financial benefits to your institution.

Student Satisfaction

In 2008, the Cooperative Institutional Research Program (CIRP) of the Higher Education Research Institute surveyed 240,000 first-year students at colleges and universities in the United States. One of the questions asked of these students was about the importance of sustainability. Among these students, 29.5 percent reported feeling it is "essential" or "very important" to help clean up the environment, an increase from 26.7 percent in 2007 and 22.2 percent in 2006. Nearly one-half (45.3 percent) of respondents agreed that it is "very important" or "essential" to adopt green practices to protect the environment. And 74.3 percent stated that "addressing global warming should be a federal priority."



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Many of our college students today are of the millennial generation. They are socially engaged, insist on deep personal connections with other people and institutions, and have extraordinary access to information. Among these students are many who are committed to sustainability and who will assess a college's commitment to environmental issues. They will analyze how well your institution's values connect with their own, and then share that information with their peers.

College students will actively initiate sustainable practices on your campus. On many campuses, students have voted for the initiation of an annual fee to support the institution's efforts to reduce their carbon footprint. On the campus of Emory & Henry College, students tend to a garden that supplies food to the campus food service and local restaurants and families. Through our students' advocacy work, we have inserted in our contract with our campus food service a stipulation that a specific percentage of the food they serve must come from locally grown products.

Student tuition and fee revenue forms the largest source of funding for most private colleges and universities and is becoming increasingly important in the budgets of state institutions. Sustainability practices and programs can help you to recruit and retain students, and, thereby, generate additional revenue for your institution.

Operational Efficiencies

There is no doubt that many green initiatives will reduce operational costs and provide a financial benefit to your budget. As energy costs continue to rise, the long-term return on your investments will grow. However, it is not easy to compute the savings generated and to determine the number of years it will take to recoup your investment. Your physics or engineering faculty can be helpful here. If you decide to contract with a vendor, beware that nearly all consultants will overestimate cost savings for sustainability projects.

Most experts agree that the highest energy consumption savings and quickest payback on your investments comes from switching to energy-efficient lighting, using variable-frequency drives on your ventilation systems, and installing controls to shut down or slow down systems at night and on weekends. The next level of savings comes from the installation of controls to optimize temperatures and reduce lighting according to occupancy of spaces. Other important changes that can reduce your energy consumption and generate savings, though with a longer payback time than the others, are replacing windows, installing renewable energy sources, and upgrading boilers, chillers, and air-handling systems to current, more energy-efficient models.



One of the most difficult energy reduction areas for any campus to address is transportation. Faculty, staff, and student transportation can account for 15 to 20 percent of a campus' greenhouse gas emissions. Providing incentives for carpooling, bicycling, walking, and using electric vehicles can help. Replacing gas-powered campus-owned vehicles with electric or hybrid can provide significant cost-savings. For example, estimates of the costs for a battery-electric vehicle used by your facilities crew indicate that the cost of ownership is one-third and the fuel efficiency is eight times greater when compared to their gasoline-powered counterparts.

In addition to reducing costs through better management of energy consumption, other areas of savings from sustainability initiatives can result from water conservation, avoidance of additional capital costs, and better materials management (recycling, composting, and materials reduction/substitution).

On the home page of the President's Climate Commitment, Kathleen Schatzberg, president of Cape Cod Community College, is quoted to have said, "We are in the middle of one of those rare moments when the right thing to do is also the economically smart thing to do." College and university presidents have a responsibility to show courageous leadership in doing the right thing for restoring and protecting the environment. Knowing more about the financial benefits of these actions will help to accelerate efforts to address the critical issue of climate disruption—an issue—that cannot wait.



Dr. Rosalind Reichard joined Emory & Henry College in 2006 as its 20th President. Upon her arrival, she involved the entire community in developing a new strategic plan that is now guiding and directing the College into the future. A strong, new academic curriculum was developed to build on its outstanding reputation as one of the nation's best liberal arts institutions. She highlighted the College's unique service mission which led to its recognition as one of six institutions nationally to win the President's Award for Higher Education Community Service. Dr. Reichard led a campus-wide effort to develop a comprehensive facilities master plan, which included a \$12 million renovation and expansion project for two of the College's most historic buildings; Byars and Wiley Halls. Both of

these projects achieved LEED Silver certification. Other LEED projects include a completed new residence hall; a field-house which is under construction; and plans for a new center for the arts.

Dr. Reichard signed the American College & University Presidents' Climate Commitment in 2007 and has served on its Steering Committee since 2009. She has participated in various panels and presentations on the challenges and opportunities of building a sustainable campus. Dr. Reichard earned a B.A. degree in mathematics from Harpur College SUNY Binghamton, and M.S. and Ph.D. degrees in mathematics from Michigan State University. Prior to arriving at Emory & Henry, Dr. Reichard served as Senior Vice President for academic affairs at Meredith College in Raleigh. She began her education career as a Mathematics Professor at Elon University in Elon, North Carolina, where she later served as Dean of Science.