

## FEATURE ARTICLE

# Leading the Way in Sustainability Through Hassle-Free Green Revolving Funds

by Shoshana Blank and Max Storto

*Green revolving funds ensure that energy efficiency projects receive perpetual funding, even if there are institutional budget cuts.*

AS ENERGY COSTS CONTINUE TO RISE, a seemingly small efficiency project can save tens of thousands of dollars a year. In the face of limited operating budgets, schools are beginning to cash in on these upgrades. With lower utility costs, colleges and universities can devote more capital toward improving infrastructure while hedging against rising tuition costs. Volatile energy prices are not the only reason that schools are taking action, however. Increasing concern over carbon footprints and growing interest in sustainability among campus communities have popularized energy efficiency projects in higher education.

Despite a growing affinity for energy efficiency projects, administrators have struggled to finance them. Sustainability projects require significant up-front capital, which is often difficult to procure in a campus environment. Green revolving funds (GRFs) are internal financing mechanisms that issue loans to support clean technology and other sustainability projects that generate monetary savings. The savings from these projects, determined by measuring or estimating the difference in utility bills pre and post project implementation, are then used to replenish the fund, ultimately creating a perpetual financing mechanism that allows energy efficiency to remain an institutional priority. There are three primary reasons why GRFs are a simple and savvy way to finance energy efficiency at colleges and universities:

1. While funding projects through energy service companies, bonds, and power purchase agreements require schools to pay back outside entities over multiple years, GRFs return 100 percent of the financial savings to the institution after project implementation. Those savings are initially allocated to the GRF; however, after the project cost is repaid, they can be allocated to another account at the institution.
2. Unlike an annual allotment for energy efficiency, a GRF requires only a one-time infusion of capital and then relies on its own finances. GRFs ensure that energy efficiency projects receive perpetual funding, even if there are institutional budget cuts.
3. GRFs require you to quantify your savings in their very nature. There are many forms of measurement and verification. Some are based on actual energy data while others are based on estimates. Tracking energy savings helps institutions make the case that (a) energy efficiency is a great financial investment and (b) monetary reallocations from the energy budgets are merited.

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The GRF model is currently active on 76 campuses, and schools have begun to adopt these funds exponentially. The Greening the Bottom Line 2012 (GBL) report<sup>1</sup>, a survey of GRF trends in the higher education sector, found that 36 new funds were established between 2011 and 2012 and that \$111 million in capital has been collectively committed among established GRFs. Further, GRFs have a median return on investment of 28 percent. It is important to note that GRFs are not prevalent in just one type of institution; both large public universities and small private colleges with various endowment levels have implemented funds. No matter what type of institution you have, chances are that you can find a peer institution with a GRF.

As can be seen by the recent and sudden growth in GRF adoption, the concept is still very new. By establishing a GRF now, your institution has the chance to be at the forefront of this growing trend in energy efficiency financing and higher education sustainability. Further, GRFs enable institutions to maintain sufficient funding for carbon reduction projects, which makes reaching larger goals, such as emissions reductions found in climate action plans, more easily achievable.

GRFs often do not find new capital within an institution to finance energy efficiency. Instead, they adjust the financing framework, enabling an institution to streamline its funding process, seize new fund-raising opportunities, and instill sustainability and energy efficiency into its culture. GRFs transform yearly operating “expenses” into investments—they highlight the opportunity to save rather than the requirement to spend. This opportunity to invest encourages institutional development staff to reach out to sustainably-minded donors for contributions to an established revolving fund. Gifts to a GRF can be recycled and reused for up to three rounds of project financing in a 10-year period if a fund achieves a 28 percent ROI. Further, a GRF allows capital to flow more easily within an institution as facilities personnel do not need to constantly apply to administrators for project funding.

1 <http://greenbillion.org/resources/#reports>

Marketing the GRF is integral to its success. Universities frequently assign a unique name to their GRF (e.g., Arizona State University’s Sustainability Initiatives Revolving Fund, or SIRF Board). A clever fund name allows for easy branding, making the fund more recognizable throughout the campus community. Students and staff will then know more about sustainability initiatives on campus, which will help them create stronger project proposals in the case that the community can apply for fund loans. Additionally, the energy and financial tracking process allows institutions to publicly announce concrete results in their media outreach efforts, providing evidence of the fund’s successes.

There are numerous resources to help institutions oversee their GRFs. The Sustainable Endowments Institute created The Billion Dollar Green Challenge in October 2011 to help schools manage their GRFs. The Challenge provides you with consulting time during the GRF implementation process, connects you to peer institutions with GRFs, and even gives you access to the Green Revolving Investment Tracking System (GRITS) web tool, which helps you manage your GRF carbon, energy, and financial savings. Once on The Challenge, your institution will have additional opportunities for positive press as a member of a diverse network of schools committed to energy efficiency financing through GRFs.

The next sections provide snapshots of two institutions that have signed onto The Billion Dollar Green Challenge.

### CATAWBA COLLEGE NEEDED A WAY TO FUND SUSTAINABILITY

Catawba College started its Center for the Environment in 1996 with a mission to educate students and the rest of the school about sustainability. Soon after, the college constructed the building for the Center out of green materials, employing a closed-loop geo-exchange system to heat and cool the building as well as solar PV to provide a portion of the building’s electricity. In 2007 the college signed

the American College and University Presidents' Climate Commitment (ACUPCC), committing to reach carbon neutrality by 2030.

Even after signing onto the ACUPCC, however, it was hard to move projects forward, according to John Wear, director of the Center for the Environment:

The biggest limitation we ran into was that it was somewhat discouraging to not have particular funding for these goals. How are these ideas going to get implemented and who is going to bear the torch? Whose budget does it come out of? You continually have to go out and raise money for a project every time.

In June 2012, Catawba College signed onto The Billion Dollar Green Challenge after deciding that a GRF would help it achieve its sustainability goals and finance energy conservation measures, many of which were recommended from energy audits. After an initial e-mail calling for project ideas was sent to the campus community by Wear and president Brien Lewis, the GRF committee received a variety of recommendations. The group decided to fund a project to compost all the college's food waste and donate it to a local farm. The project's visibility would continue to keep students and faculty aware of the GRF. Wear says that this approach "has helped get the whole college focused on sustainability. It's difficult at times to bring all these different elements into focus for everyone. We have set it up to include people across the college, a bottom-up approach."

Now, sustainability projects will not be placed on the back burner if funding gets cut to the college. "The GRF allows you to have sustainability as a top funding priority that is not competing with anything else. It protects these projects so that they can happen no matter what," Wear says.

Luckily for Catawba, President Lewis is heavily involved in sustainability initiatives and serves as the co-chair for the GRF committee with Wear. Donor support was used to seed

the GRF, and the fund's progress is prominently displayed on the Catawba website.

If you're reading this and thinking about implementing a GRF at your university, it is important to realize that it is difficult to do alone. To ensure a successful implementation process, your institution will need a leader to champion the GRF through approvals from relevant committees, administrators, and boards. Perhaps you can be that champion at your institution. In the *GBL 2012* report, the Sustainable Endowments Institute noted that 56 percent of GRFs were championed by an administrator. Often facilities personnel or members of the sustainability staff act as GRF champions, too. More often than not it takes members from multiple stakeholder groups at a school to spearhead a GRF. Since a GRF overlaps topics of finance, energy, sustainability, operations, and even education, your leader could come from any one of these groups.

## DENISON UNIVERSITY'S CHAMPION

Jeremy King, the sustainability coordinator at Denison University, first heard about The Billion Dollar Green Challenge when it was being created in early 2011. He explained the idea of joining The Challenge and creating a GRF to the director of facilities, Art Chonko, and the vice president of finance and management, Seth Patton. While they researched revolving funds, outside companies were recommending ways that the university could improve its energy efficiency. Fortunately, the school also had a budget surplus that year. King says, "We were looking at projects to use this money for and we settled on energy efficiency upgrades to re-do lighting all over campus. Then it clicked for Seth and Art that it was serendipity and we should also fund the GRF through these projects. We made the decision to participate in The Challenge and this put us on the path of reinvestment."

When they took the idea of a GRF to the school's president, they were able to show him the huge potential for energy and financial savings. The 3.5- to 4-year payback that Denison would realize from lighting retrofits made perfect sense to at-the-time president Dale Knobel, who trusted King to do what was best for sustainability. Knobel approved the establishment of the university's GRF, which was named the Green Hill Fund.

Two years after signing onto The Challenge and one year after implementing 50 lighting retrofits financed by the Green Hill Fund, King, Patton, Chonko, and Cathy Untied (the university controller) still share managerial duties for the fund. The Campus Sustainability Committee, made up of faculty, staff, and a student, recommends projects and directs feasibility analyses. Together the four fund managers make the final project decisions with recommendations from the Campus Sustainability Committee.

King used the resources of The Challenge to help with the GRF implementation process. When joining The Challenge, an institution agrees to reach four key benchmarks in the first year: form a multi-stakeholder working group, conduct an energy audit of at least 10 percent of the campus, formalize a guiding document to outline the GRF operating procedures, and approve fund investment for the first project. These deadlines helped Denison stay on course and gradually develop its fund. King also sees joining The Challenge as a great way for Denison to get additional publicity for its sustainability efforts. "It was easy for us to do because we took advantage of The Challenge. We saw it as a great piece of marketing for us at such a low cost. We were going to do a GRF anyways. It threw Denison's name out there with a bunch of other schools for company who were on The Challenge too," he says.

King believes that the GRITS web tool, a platform provided to Challenge participants, will help Denison manage its fund: "Our accounting system is not set up to easily track a GRF, but GRITS made that possible for us."

The argument for starting a GRF at any school is obvious to King: "You are already making energy efficiency upgrades, and these can be used as a springboard to create a GRF so that in 5 or 10 years you are not holding your hand out for more money. Why would you not take the opportunity to reinvest that in upgrades in the future through a GRF?"

Denison witnessed a 10 percent decrease in energy consumption in the GRF's first year. This comes at a crucial time for the university as electricity prices have risen from \$0.06 to \$0.08 per kWh.

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Whoever decides to be the GRF champion will find *Green Revolving Funds: A Guide to Implementation & Management*,<sup>2</sup> a report recently published by the Sustainable Endowments Institute, extremely useful. The guide will walk you through the process of establishing a GRF by describing how other institutions have started their own funds and will also provide many ideas and strategies. Once you get an idea of the many types of GRFs available, you can tailor your fund to suit the needs of your institution. For example, if your facilities staff is extremely knowledgeable about energy efficiency and would prefer to take a leadership role in the GRF, your fund committee may choose to rely mostly on them with fewer students or faculty involved in the process. Or, if you do not have a building sub-metering system, you may decide that you need to base your GRF savings calculations off estimates. Accounting procedures often vary according to different accounting systems, and a GRF can fit into these different scenarios.

The meat of the *Guide to Implementation & Management* is a section called "10 Steps to a Successful GRF." After following these 10 steps, you should be able to create a successful fund on your campus.

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<sup>2</sup> <http://greenbillion.org/resources/>

1. DO YOUR HOMEWORK: Find out more about how GRFs are structured. You can read the first part of the *Guide to Implementation & Management* and the GBL 2012 report for this step.
2. SELECT YOUR MODEL: Decide how your GRF will be tailored to your institutional needs and begin to structure it in that fashion.
3. ASSESS OPPORTUNITY AND RUN THE NUMBERS: Look into what energy efficiency upgrades need to be done at your institution. Calculate the potential savings and ROI from these projects.
4. BUILD BUY-IN: Get others at the institution involved so you can start the conversation among appropriate parties.
5. SECURE SEED CAPITAL: After building campus support, you can figure out where the money will come from to create the GRF. It doesn't have to be seeded all at once. If you aim for a \$1 million GRF but can only acquire \$250,000 from the operating budget right now, you can still add more capital in the coming years.
6. ESTABLISH FINANCIAL FLOWS: By coordinating with the finance staff and administrators at your institution you can figure out the logistics of the GRF account, such as whether it will stand alone or be a sub-account. You can also figure out how repayments will be returned to the GRF.
7. LAUNCH THE FUND: Get your GRF committee together and start approving projects to be financed. Get the word out about the GRF to the rest of the campus community, especially if you seek the community's ideas for sustainability projects.
8. IMPLEMENT PROJECTS: Figure out the work flows between the project manager, the GRF committee, and the individuals who are physically implementing the projects. Turn your project ideas into energy efficiency or other sustainability upgrades that the entire campus will associate with the GRF.
9. TRACK, ANALYZE, AND ASSESS PERFORMANCE: Integrate a measurement and verification process to track energy and financial savings over time.
10. OPTIMIZE AND IMPROVE: Look at your project and performance data and assess how the GRF process is functioning. Make sure your campus is on board and supportive of the fund so that you can finance more successful projects in the future.

Please contact The Billion Dollar Green Challenge if you have any questions pertaining to a GRF or The Challenge: [info@greenbillion.org](mailto:info@greenbillion.org).

## AUTHOR BIOGRAPHIES

SHOSHANA BLANK is a senior research fellow at the Sustainable Endowments Institute. She has been the lead creator of the Green Revolving Investment Tracking System (GRITS) and works to make energy and financial savings data more accessible to university staff, faculty, and students. She is a graduate of St. Olaf College and is involved in environmental activism in the Boston area.

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