

A background image of several wind turbines silhouetted against a vibrant sunset sky with orange and red hues. The turbines are arranged in a line across the horizon.

Tracking and Sharing Project Impacts with GRITS

By Aaron Karp

The Sustainable Endowments Institute (SEI) is excited to mark the fifth anniversary of its partnership with APPA, through which APPA member institutions gain access to a free version of SEI's GRITS platform.

This project-management tool is used by over 800 colleges, universities, and other organizations to facilitate the work of facilities, energy, and sustainability professionals. GRITS allows users to replace spreadsheets with a secure, web-based platform that calculates project-level energy, financial, and carbon emissions savings as well as metrics like payback period, return on investment, and net present value. This business-case analysis helps professionals evaluate opportunities and drive investment in sustainability projects.

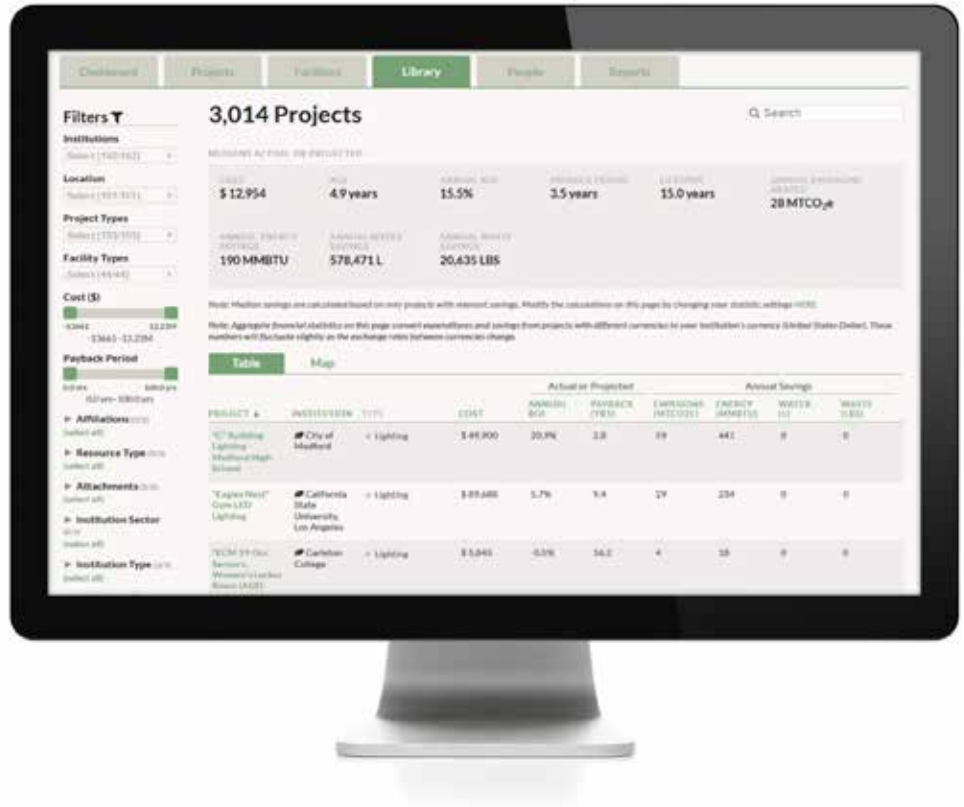
The platform also helps users share the impact of their work with stakeholders. The Reports feature enables users to generate graphs that illustrate project savings and cash flows over time or combine multiple charts into extensive progress statements. Users can embed a GRITS public dashboard in their sustainability

webpage to communicate up-to-date achievements. The GRITS Project Library allows users to view and benchmark against over 3,000 completed projects from other institutions, and it sparks learning through a new user-to-user contact feature (more below).

GRITS quantifies the impact of the work undertaken by APPA member institutions. Consider these statistics:

- 321 APPA member institutions currently accessing GRITS
- 1,595 completed projects entered by APPA member institutions
- Total-to-date financial savings: \$881 million
- Total-to-date energy savings: 18.7 million MMBTUs
- Total-to-date emissions savings: 1.8 million metric tons CO₂e (carbon dioxide equivalent)
- Total project investment: \$165 million
- Median annual financial savings: \$3,500
- Median payback period: 3.1 years
- Median annual return on investment: 20.1%

FIGURE 1: Screenshot of the GRITS Library



SEI offers full onboarding support to GRITS users through live walkthroughs and a comprehensive GRITS Guide. New users can learn the ropes in less than an hour and enter a project in minutes. Users can also upload project data from a spreadsheet template provided by SEI and import facility data through a connection with the U.S. Environmental Protection Agency’s free Energy Star Portfolio Manager tool.

Several individuals who use GRITS to advance their work have shared their stories in webinars over the past few months. John Pumilio, the Director of Sustainability at Colgate University, had his sights set on creating a green revolving fund (GRF) back in 2009. At the time, however, the idea lacked broader support. He moved forward with the University’s first greenhouse gas inventory that year and developed a climate action plan that included around 30 projects aimed at reducing emissions. Funds for certain projects were set aside, and GRITS was incorporated as a project database. For years GRITS was used to track and share the results of these projects with Colgate’s finance office and other campus stakeholders, which Pumilio used to build the case for a revolving fund. These efforts paid off in 2018, when university officials decided to establish a GRF. The previous climate action plan projects are now tracked separately in the database, and GRITS primarily follows the projects financed through the GRF (investments currently totaling around \$800,000). The fund has since captured the attention of the campus community and inspired students to propose numerous projects, while the GRITS Library adds thousands of additional project ideas.

Macalester College created its first energy manager position in 2015. But after taking on the role, Mike Pumroy found that

GRITS Features

| Features | Free | Unlimited |
|-------------------------------------|----------------|-----------------------------------|
| Number of projects entered | Unlimited | Unlimited |
| Number of saved projects | 5 | Unlimited |
| Number of users | Unlimited | Unlimited |
| Dashboard | ✓ | ✓ |
| Projects overview | ✓ | ✓ |
| Project details | ✓ | ✓ |
| Project PDF export | ✓ | ✓ |
| Sharing features | ✓ | ✓ |
| Project library | Partial access | ✓ |
| Project data import / export (XLS) | | ✓ |
| Reporting feature (graphs & charts) | | ✓ |
| Subscription | Free | Monthly or annual fee (\$) |



there was no central repository of project information. When he started, he would find snippets of previous work history—handwritten lists of projects, operation and maintenance manuals, and rebate summaries. But without the full picture, it was difficult to do his job properly. That changed when Macalester started using GRITS three years ago, and since then the platform has become an integral part of Pumroy’s work. The College now has a well-organized database of projects, a record of Pumroy’s calculations that he and others can always revisit, and a “virtual

FIGURE 2: The GRITS Public Dashboard, as set up by Bucknell University



SOURCE: <https://www.bucknell.edu/life-bucknell/sustainability/green-fund/projects-outcomes>

file cabinet” of photos and engineering reports. He uses the Public Dashboard to help tell the College’s energy efficiency story, and has enjoyed seeing this body of work evolve over time as more projects are entered.

Dom McGraw, the Efficiency and Projects Manager at the City of Philadelphia, oversees the energy portfolio for hundreds of municipal buildings. With clear energy and carbon reduction goals established by the city’s energy master plan, McGraw’s job is to focus on energy efficiency and show the progress towards these targets. The energy office previously relied on a shared Excel spreadsheet, having to monitor the edits made by different people and prevent accidental deletion of important functions. And the city’s EnergyCAP account, which it uses to track its utility data, couldn’t follow individual energy efficiency projects. Incorporating GRITS allowed McGraw to centralize and secure the city’s project data, apply custom carbon emissions factors to calculate their emissions reductions with precision, and tell their own story. Seeing the financial savings achieved by an LED lighting upgrade in one of Philadelphia’s fire stations helped to convince the budget office to dedicate \$500,000 to additional lighting projects throughout the city. With GRITS, McGraw can easily illustrate the progress made towards Philadelphia’s energy and

carbon reduction goals since he began in his role.

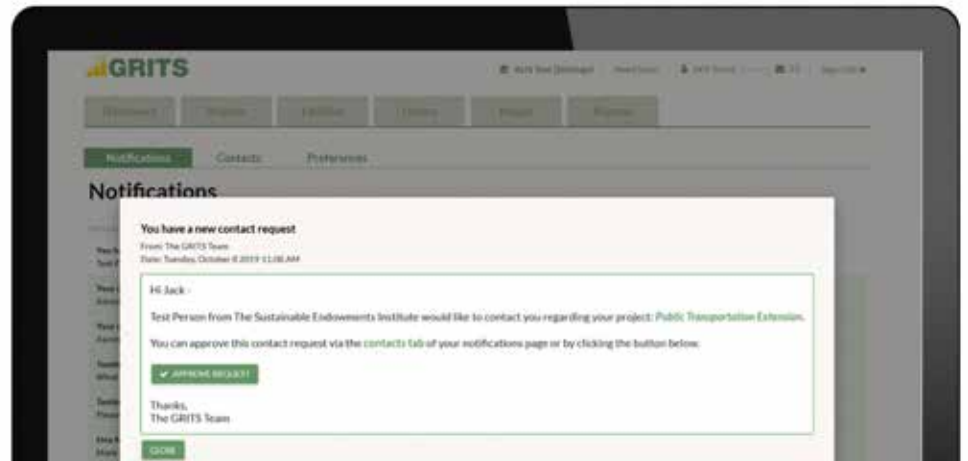
By establishing a \$9.5 million GRE, the State of Vermont’s General Assembly took a promising step towards more efficient operations across the state. But Daniel Edson, the State Energy Program Manager, remembers how quickly the energy office realized the need for a program and staff dedicated to overseeing the fund. They learned about GRITS from colleagues at Efficiency Vermont, a non-profit dedicated to reducing the state’s energy use, who assured them that GRITS would be indispensable for managing the state’s revolving fund. Edson has now used the platform for nearly six years to track project costs and GRF loan repayments. The energy office has

completed over 50 projects, investing about \$9 million and saving more than \$1 million each year. They use GRITS’ graphing feature to generate visuals of their spending and project impacts, presenting them to the governing bodies that provide project funding to meet their reporting requirements. Edson attributes part of their program’s success to the streamlined tracking of their project investments through GRITS.

GRITS 3.5

SEI is always working to improve GRITS and add new features, many of which are based on user feedback. The latest version is GRITS 3.5, developed in late 2019. Some of its newest features are:

FIGURE 3: Recovering a Connection Request through the GRITS Notification Center



- **Unlimited users for free accounts** – If you use the free version of GRITS through the APPA partnership, you can now create logins for as many members of your team as you like.
- **New user welcome email** – Now you can ensure that a new team member is aware of their GRITS access without sending them a separate message. Whenever you create a new GRITS login for a team member, you can have GRITS send them a welcome email informing them of their access and allowing them to create a custom password.
- **Clone projects** – If you’re planning to enter a project similar to one you’ve already added, or simply wish to save time in the data entry process for your next project, you can now create a copy of any project in your account in seconds.
- **Historical emissions factors** – GRITS now incorporates electricity emissions factors from past years when that data is available, so that your project’s carbon savings are derived from the factor for each individual year of its lifespan. This leads to a more accurate lifetime carbon-savings calculation.

The most significant feature added in GRITS 3.5 is the *Notification Center*. In the past, users could only learn on their own by viewing projects completed by others in the Library. The new Notification Center in GRITS allows you to connect directly with other users to dig into the details—the contractors, vendors, and specific challenges involved with the project.

When viewing another institution’s Project Detail page from the Library, you’ll see a “Request Contact” button that allows you to send a connection request to the project lead at that institution. If the request is accepted, GRITS will connect you with your counterpart via email, and from there you can discuss their experience with that project. With new connections to your peers, you can gain valuable insight and avoid reinventing the wheel.

LOOKING AHEAD

Some institutions make investments in energy efficiency or renewable energy outside of an overarching plan, but they could get more done with specific medium- and long-term goals in mind. Other institutions draft climate action plans that establish a target date for carbon neutrality, but they lack the means to systematically identify potential pathways that will allow them to reach their target. As a result, these plans may go unfulfilled.

These challenges will be addressed through the largest single expansion of GRITS’ capabilities since its launch on Earth Day 2014. A new suite of features called “GRITS Goals” will empower users to develop detailed climate and sustainability action plans by assembling their projects into resource-reduction scenarios. It will combine GRITS’ business-case analysis, customizable

project timelines, and dynamic charting to help map out pathways from business as usual to aggressive carbon, energy, water, waste, or cost reduction targets. It will also help optimize project sequencing and execution timelines to allow for more precise planning. GRITS Goals will measure users’ progress towards their sustainability targets and include a live public dashboard that they can embed in a webpage to publicly display key progress metrics.

GRITS Goals will allow users to build carbon emissions reduction scenarios in an easy-to-understand format that will simplify collaboration between their administration, finance, sustainability, and facilities offices. It will provide decision makers with a full financial analysis displaying their upfront capital expenditures year by year and long-term financial savings generated.

Users will be able to analyze financial metrics and visual evidence to prioritize the conservation projects with the greatest economic and environmental impact. By ensuring that users’ investments support the highest priority projects, institutions will increase the likelihood of achieving their targets.

GETTING STARTED

APPA member institutions have access to a free, basic version of GRITS. This version includes the platform’s core project-management features (project-level calculations, whole-portfolio metrics, unlimited user logins) as well as partial (browsing) access to the Library, and will also include GRITS Goals when development is complete. It does not include access to the Reports feature and caps the number of project entries at five. However, users can also initiate a free, 30-day trial of the Unlimited version to add dozens of projects that will remain available in the free version.

Institutions can also subscribe to GRITS Unlimited—which includes all of the platform’s features and unlimited project entries—at a price determined by their operating budget. APPA members also receive a 25 percent discount. Please contact us at support@gogrits.org for a price quote. 💰

Aaron Karp is GRITS director and senior research fellow at the Sustainable Endowments Institute, Boston, MA; he can be reached at aaron@endowmentinstitute.org.