



MAINE SCHOOL ENERGY PROJECTS GETTING STARTED GUIDE

ENGAGEMENT



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Introduction

Energy retrofit projects can lead to many benefits for schools, including reducing energy bills and fostering a healthier and more productive learning environment. At the same time, the highest priority for most community members is improving student learning and education outcomes. Rather than detracting from those priorities, an energy retrofit project can create opportunities to shape how and what students learn. By taking an expansive view of the potential benefits of energy retrofits and effectively engaging community members to achieve those benefits, schools can build broad support for these projects.

Collaborators for energy upgrades include direct decision makers like the school facilities manager, superintendent, and school board, as well as other beneficiaries like the students, educators, and local community.

When community members are engaged throughout the process, the project is more likely to reach completion. Effective engagement can reduce the potential for rumors and misinformation that can negatively impact the project. While engaging the diverse range of collaborators can be time-consuming and challenging, the effort is critical to the success of any energy retrofit.



Collaborators & Motivations

STUDENTS & EDUCATORS

Many students are motivated to improve their schools and fight climate change. Students can take action by helping lead the direction of energy efficiency projects and groups while learning science, technology, engineering, and math (STEM) fundamentals. Heating and cooling projects make classrooms more comfortable and healthier, and educators can keep windows closed and not use fans so the classroom can be quieter.

COMMUNITY MEMBERS

Schools should emphasize that students will get hands-on learning while participating in a new project. The school should show that the building will be a healthier learning environment while demonstrating it is fiscally responsible by lowering energy costs. If possible, it should be shown how the project will benefit the whole community, such as how adding air conditioning with heat pumps lets community groups use the building in the summer.

SCHOOL BOARD

In addition to improving student achievement and the learning environment, school boards want to make sure the district is investing its money wisely toward better educational outcomes. Schools should show how a project will result in long-term savings along with better educational performance and a healthier environment.

SUPERINTENDENT & SCHOOL ADMINISTRATORS

School administrators are concerned with improving student learning and creating a safe and comfortable environment for students within the school's operating budget. Schools should highlight how an energy retrofit project will reduce the operating budget, improve the learning environment, and can be used in lessons for students.

FACILITY MANAGER

Facility managers are concerned with the time and effort it takes to operate systems, and the potential for complaints from staff and students. Schools should show how new technology will be easy to operate and maintain, improve comfort, and reduce the operating budget.

Engaging the School Community

1. Identify a project champion and create a project team.

The champion will set goals and lead a team that includes school staff involved in implementation as well as consultants who lend their expertise to the project.

2. Understand the various groups.

Schools should identify all community groups and understand their values and goals for the school district and community.

3. Generate excitement!

Schools should identify ways the project can improve the school, engage educators and students, and appeal to each group while focusing on outcomes.

Healthier students and better learning environment: Better temperature control and cleaner indoor air lead to healthier classrooms so students can focus on learning.

Student learning and action: Students learn technical and leadership skills by participating in a team that supports implementation of energy projects.

Lower operating costs: Lower energy bills mean operating funds can be repurposed for other critical needs.

The school as a community amenity: Building improvements can create new opportunities for the community to use the building outside of school hours. For example, a new cooling system means community groups can use it for summer meetings or events.

Community resiliency: A new solar and battery project can provide backup power in emergencies where there may be widespread power outages.

Protecting the environment: Through these projects, students and educators can take action and reduce their school's contribution to environmental damage while learning how they can shape a more sustainable future.

Sharing examples of other schools leading the way with similar projects can inspire all those involved. The end of this guide offers sample case studies from Maine schools inspiring change.

4. Encourage collaboration.

Community members should be invited to meetings or workshops to gather their input and help integrate their goals into a larger vision for the project.



Integrating Retrofits Into Education

The school building is the largest financial investment a school makes, so it makes sense to leverage it for learning. Educators can use a new energy retrofit as a teaching tool.

- ▶ Educators can use historical energy usage and cost data to show how the project is saving energy and money over time. Students should be involved in collecting and analyzing the data, potentially even benchmarking their school's performance against others across the state. They can also use live energy monitoring equipment that is installed as part of the project to show how solar power generation or energy use changes over time.

Live Power Monitoring System

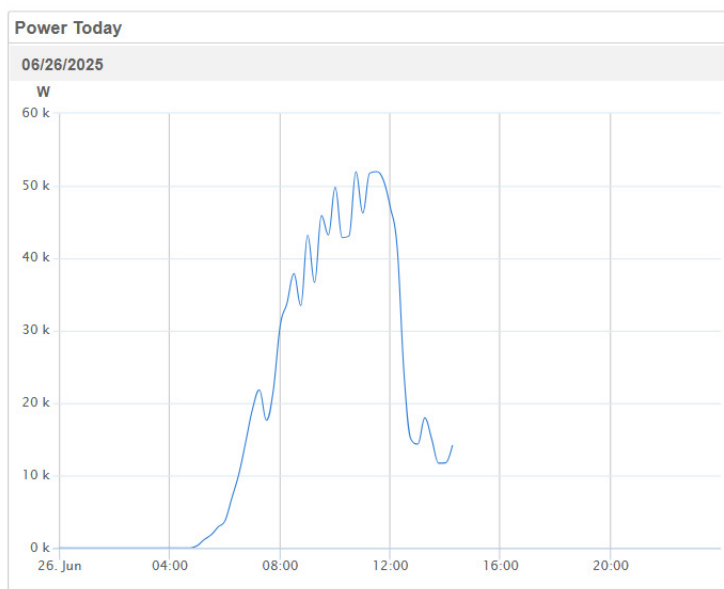


Fig. 1: [Lamoine Consolidated School live solar power monitoring system](#) can be used as an example of energy tracking in the classroom.

- ▶ The [U.S. Green Building Council \(USGBC\) Building Learners program](#) provides other examples of how to incorporate sustainability into the school curriculum.
- ▶ A “green team” gives students and staff volunteers the opportunity to learn and engage in projects to protect the environment.
- ▶ Work-based learning opportunities where students can intern with school staff or design or construction professionals should be considered.

PORTLAND STUDENTS SHINE WITH SOLAR CAMPAIGN

In 2017, Portland students came together across three high schools and created [SolaRISE Portland](#) to advocate for installation of solar PV systems at local schools. The students raised \$25,000 to convince the school board to investigate options for solar. SolaRISE spent months attending school board and city council meetings and coordinating with community members across the district. The Portland school board eventually joined the Competitive Energy Services (CES) Maine Distributed Generation Consortium initiative, which helps offset 75% of the annual electricity used by City of Portland school and municipal buildings with solar and other renewable energy sources.



Examples of Engagement

Bath's RSU1 Takes Action on Climate



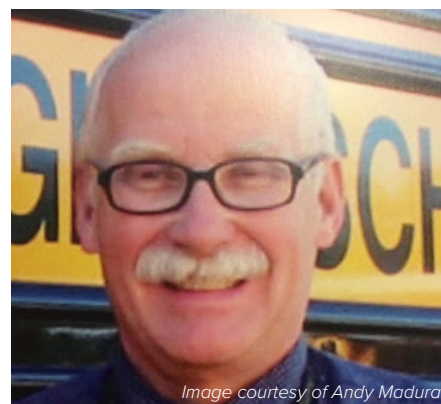
Micah Depper, a science teacher at Bath Middle School, is leading a grassroots effort of students and educators to adopt and implement [a new climate policy for the school district](#), RSU1. Students presented the new climate policy to the superintendent and school board, demonstrating why it is important to the district. After adopting the policy, RSU1 formed a diverse committee, including six students, five educators, the superintendent, director of operations, and a board member, to develop a plan for implementing the policy across each school in the district. While planning is underway, schools have formed student green teams that are undertaking actionable changes like standing up recycling programs and organizing food waste audits.

Micah offers several recommendations for students and educators looking to adopt similar policies:

- ▶ Don't start from scratch; look to others. RSU1 aligned their policy with the [Maine Won't Wait](#) state climate action plan and the [City of Bath Climate Action & Resiliency Plan](#).
- ▶ Make the case for action by highlighting how climate change is impacting the community. Bath is a coastal community where the school has been forced to close due to flooding.
- ▶ Keep it positive and results oriented. Focus on actions students can accomplish and not the doom and gloom in the news.
- ▶ Most importantly, include students in the process as active participants. Their energy and priorities can provide direction for the green teams, leading to faster tangible results.

Lake Region Schools Build Community Support

Andy Madura, facilities manager at Lake Region Schools, has 43 years of experience in Maine schools, during which time he has gathered valuable insights on engaging community members. He emphasizes the importance of transparency and demonstrating that the school will be responsible with the community's contributions. He also incorporates community members directly into projects. "Any building committee that we've ever had - several parents and community members are a part of that."



Additionally, Madura emphasizes that schools must "understand that these buildings are community buildings, too." The Lake Region district allows community groups to use the school for meetings and walking programs on winter nights, and the community theater uses the auditorium. "A lot of those people who walk through the doors... they don't have kids in school. But they are taxpayers."



Financial Resources

An important part of demonstrating long-term benefits to the community is to show that the project will pay back the community's investment. A number of resources to help reduce project costs are available.

- ▶ [Efficiency Maine](#) offers incentives to assist with energy retrofit projects.
- ▶ [Efficiency Maine](#) provides a tool for finding Qualified Partners to complete projects.
- ▶ The [State of Maine Community Resilience Partnership](#) offers grant opportunities to communities and schools in Maine.

References & Guides

- ▶ The [Maine Governor's Office of Policy Innovation and the Future Youth Climate Leadership Roadmap](#) offers communication and engagement tips for students from students.
- ▶ The [National Renewable Energy Laboratory \(NREL\) Guide to Zero Energy and Zero Energy Ready K-12 Schools](#) provides guidance on engagement for an energy retrofit project.
- ▶ The [New Buildings Institute \(NBI\) Decarbonization Roadmap Guide for School Decision Makers](#) and [Key Messages for Communicating Carbon Neutral Schools](#) offer advice on engagement and communication about school energy projects.
- ▶ [NBI Getting to Zero](#) provides a database of case studies for school energy projects across the country.
- ▶ The [U.S. Green Building Council \(USGBC\) Building Learners program](#) includes examples of how to incorporate sustainability into school curriculum.
- ▶ [SolaRISE](#) offers additional information regarding the initiative in Portland schools.

Contact

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