

There is Talk in the Halls About EM Maine Schools Become Energy Efficient

More than 40 public and private schools (K-12) in Maine have received cash incentives from the Efficiency Maine Business Program for installing energy efficient electric equipment. Efficiency Maine, helps schools to lower their operating costs while improving the quality of the indoor environment. Tight school budgets, rising energy prices, and the availability of cash incentives means **now** is the time to act.

Energy Efficient Benefits

- *Reduce Operating Costs by Investing in Efficiency*
Reducing energy costs is an effective way to help cash-strapped schools funnel more money into the classrooms, transportation and other budgets.
- *Reduce Operating Costs through Staff Training*
Efficiency Maine offers Building Operator Certification training, and Certified Energy Management training. In most cases, Efficiency Maine will fund full tuition for school facility operators to attend.

- *Reduce Pollution*

Efficiency projects impact power plant emissions. The efficiency projects undertaken by the 44 participating Maine schools are reducing CO₂ emissions by 1,356 tons annually, the equivalent of removing 266 cars off the road.



“With the savings and improved lighting, I am so excited to get going on our next efficiency project. We’ve been hearing about energy savings since the 70’s. With the technology where it is today, the savings are really there,” notes Bill Rudy, Maintenance Supervisor for M.S.A.D. #40.

(story continued on next page)



case study





A Slam Dunk!

M.S.A.D. #40

WALDOBORO — Bill Rudy, Maintenance Supervisor for M.S.A.D. #40, credits the Building Operator Certification (BOC) 100 and 200 classes with giving him the tools to make changes at Medomak Valley High School in Waldoboro. He said, “We replaced metal halide lights with high bay T5s, and it made a dramatic change in the way the gym looks and feels. Everyone is amazed at the improved lighting and we are saving \$1,400 per year. The studies show that better lighting improves morale, and we are experiencing that. Our sports teams are winning!”

Rudy added, “We discovered that our cafeteria was over lit, and now we are saving \$1,100 per school year with a properly lamped and lit area. The control system in the boiler room is saving us \$4,500 each heating season. With the incentive we received, the system had paid for itself by May.”

While the BOC classes helped Rudy start upgrading to energy efficient equipment, it is the results that keep him going.



“Efficient equipment has many benefits such as longer life expectancy on motors because they run less often. When we received a call from another school asking about our experience with T5s, I told them they would be crazy not to do it.”



Check this out!

School Union #134

CUTLER — Another BOC graduate has been busy putting his knowledge to work. Kenny Albee, Maintenance Supervisor for School Union #134 said, “What I learned in the training course was very helpful. We started out with the Bay Ridge School in Cutler, which has nine classrooms. After measuring the light in classrooms and other spaces, we discovered that some areas were over lit while others had inadequate lighting. Because the school has irregular windows and the natural light varies greatly, depending on the weather, the time of day and the season, we installed daylight sensors so that we could make the most of the natural light while maintaining appropriate levels of lighting.”

Albee also used motion, or occupancy, sensors and upgraded the school’s fluorescent lighting to High Performance T8s.



“Through careful analysis of the existing situation and selection of proper equipment, we’ve been able to save money by reducing the number of bulbs used while maintaining the right amount of light,” commented Albee.



Having completed Bay Ridge School, Albee then turned his attention to the Whiting Village School and this summer installed High Performance T8s throughout the building. Albee plans to complete the lighting upgrades in all three of School Union #134 schools as his budget allows.

How EM Can Help Your School

Help in the Decision Making Process

If you have questions about electric energy efficiency equipment or don't know what questions to ask, call us. Consider the Efficiency Maine staff to be no-cost, independent consultants who can help you improve the electric energy efficiency of your schools. We can answer questions, review plans or proposals and outline energy efficient options. Our team of professionals is available to work with your contractor or vendor to help outline your options and to make sure you understand them. Sometimes talking with a peer is the best way to learn. If you would like to talk with another Maine school that has completed a project you are considering, just let us know, and we will make the connection. Call us at 866-376-2463, and let us know how we can help you.

Training and Education

Efficiency Maine offers training on a variety of topics in building and equipment management, including Building Operator Certification. For a list of current offerings and materials, visit efficiencymaine.com and click on "What's New" or call 866-376-2463. Efficiency Maine also has self-survey tools and fact sheets available. Ones of particular interest to schools are:

- Upgrading Fluorescent Lamps and Ballasts
- Exit Signs
- Programmable Thermostats
- Energy Efficient Refrigeration

The complete list of materials is available at efficiencymaine.com under "Tools and Resources" or call 866-376-2463.

Cash Incentives

Efficiency Maine offers incentives to schools investing in high efficiency electric equipment, including:

- Lighting, compact fluorescent lights and high efficiency fluorescent tubes such as High Performance T8s and T5s
- Adjustable speed drives for HVAC equipment
- Programmable thermostats
- LED exit lights and signage
- Motion sensors controls
- Daylight sensing controls
- Vending machine controls
- Refrigeration
- NEMA Premium® motors
- Qualified electric heating, ventilation and air conditioning equipment
- Other electricity saving equipment

A list of incentives offered for qualifying equipment and products is available on our website, efficiencymaine.com or by calling 866-376-2463.

Help Finding a Vendor

We maintain a list of vendors, contractors and other professionals who are familiar with the Efficiency Maine Program. You can find this list on our Web site, efficiencymaine.com under "Participating Qualified Partners" or call us toll-free at 866-376-2463, and we will help you find a vendor who is familiar with Efficiency Maine.

Help Completing the Applications

We will also guide you through the process and let you know if pre-approval is required before you make your purchase. Once you have made your purchase, we will help you complete the application to ensure you receive your cash incentive in a timely manner.

Schools that have received incentive checks from Efficiency Maine

Auburn School Dept.	M.S.A.D. #45
Berwick Academy	M.S.A.D. #48
Brewer School Dept.	M.S.A.D. #53
Brunswick School Dept.	M.S.A.D. #72
Caribou School Dept.	M.S.A.D. #75
Cathedral School	Madawaska School Dept.
Cheverus High School	Maranacook Community School
Deck House School	Monmouth Middle School
Edgecomb Eddy School	Mount Merici School
Falmouth School Dept.	Pine Tree Academy
Five Town CSD-CDS 19	Portland Public School Dept.
Greater Houlton Christian Academy	Saco School Dept.
Holy Cross School	Sanford School Dept.
Holy Family Church	School Union #134
Lewiston School Dept.	St. Croix Regional Technical Center
M.S.A.D. #6	Waldo County Technical Center
M.S.A.D. #20	Washington Academy
M.S.A.D. #23 & #38	Waterville Public Schools
M.S.A.D. #24	Wiscasset School Dept.
M.S.A.D. #28	York School District
M.S.A.D. #35	
M.S.A.D. #40	
M.S.A.D. #41	

Ten Tips for Energy Efficiency

1. Provide school maintenance staff and financial managers with education and training. (For more information, see inside.)
2. Upgrade all T12 fluorescent fixtures to High Performance T8 lamps and ballasts (replacing the fixtures themselves when they are at the end of their service).
3. Install T5 lighting systems for areas with high ceilings such as gymnasiums and cafeterias to improve light quality and to save energy.
4. Use timers and occupancy sensors in offices, storage rooms, corridors and closets.
5. Use daylight-sensing controls in areas with abundant sunlight.
6. Establish a maintenance log and budget for your heating, cooling and ventilation equipment. Proper maintenance can dramatically improve efficiency.
7. Install variable frequency drives to control the speed of all supply and return fans. These greatly reduce fan motor consumption during off-peak hours.
8. Install CO₂ sensors to control ventilation. These reduce heating costs while supplying the correct amount of fresh air in the building. (Studies show that well-maintained air quality in schools supports the health, performance and attendance of students and teachers.)
9. Install VendingMisers® on vending machines. (These easy to install plug-ins can reduce a vending machine's energy use by 46% and have a payback of less than a year.)
10. Replace incandescent exit signs with LED exit signs. (LED signs save enough energy to pay for themselves in less than one year and will last for ten years or more.)



Coastal Ridge Elementary School, York

A Class Act! York School District

YORK — Jim Amoroso, Assistant to the Superintendent of the York School District, said that after a major addition to the middle school, it was using more energy than the district's three other schools combined. As he began talking to vendors and researching options, it became clear that addressing the energy issue across the district made more sense than looking at the buildings individually. Amoroso said, "We decided to invest in a package of lighting upgrades, vending machine controls and system controls that would maximize our energy efficiency in the long term. We now have CO₂ sensors that turn on ventilation in the gym only when it is needed. Our control system had an interlock between the heat coils and the air conditioning to prevent simultaneous heating and cooling."

Amoroso added, "When we were looking at this in 2004, the plan we decided on took advantage of the Efficiency Maine incentives and offered us a payback of 5 years. We believed that was a sound investment for us. We have had the new system in place for 2 years and as we have watched energy prices rise, the savings are magnified and we are very glad we acted when we did."