

# School Cents...The Energy Behavior Management Guide

By Sue Pierce

*“The difference between what we do and what we are capable of doing would suffice to solve most of the world’s problems.” - Mahatma Gandhi*

Sometimes we don’t know what is possible until someone shows us. For years, the 4-minute mile was considered not merely unreachable but, according to physiologists of the time, dangerous to the health of any athlete who attempted to reach it. For many years it was widely believed to be impossible for a human to run a mile (1609 meters) in under four minutes. In fact, for many years, it was believed that the four minute mile was a physical barrier that no man could break without causing significant damage to the runner’s health. The achievement of a four minute mile seemed beyond human possibility... like climbing Mount Everest or walking on the moon... And yet, on May 6, 1954, during an athletic meeting between the British AAA and Oxford University Roger Bannister crossed the finish line with a time of 3 minutes, 59.4 seconds, and broke through the “four minute mile” psychological barrier. Within three years, 16 other runners also cracked the four minute mile. So what happened to the physical barrier that prevented humans from running the four minute mile? Was there a sudden leap in human evolution? No. It was the change in thinking that made the difference. Bannister had shown that breaking the four minute mile was possible. Others now saw that it was possible and then 16 runners went on to do the same.

And so it is in my work. Saving energy in schools through behavior is all about believing that it is possible and that it can be done. Many of the barriers that hold us back today exist only in our minds. So where do we begin?

As a school official or consultant, you probably know the annual energy bill to run America’s primary and secondary schools is a staggering \$6 billion – more than is spent on textbooks and computers combined. What you may not know is that the least efficient schools use three times more energy than the best energy performers and that the top energy performing schools cost \$.40 per square foot less to operate than the average performers. These statistics are from ENERGY STAR, a program of the United States Environmental Protection Agency. Schools can play a valuable role in teaching students about becoming energy efficient and in leading their communities to become more efficient, too. In the process, you positively impact the environment, teach social responsibility, and help the school district save money on energy bills.

The first step in creating an energy strategy is to create a vision, a mission statement, and strategic goals for your school community. It is important to know what you are all working to accomplish. And to accomplish this, it will take commitment and buy-in from the superintendent and school board. However, leadership must occur at all

levels within the district if the program is to succeed.

## Program Leadership

Leaders are critical to the success of an Energy Behavior Management Program. In essence, leadership in an organization involves (1) establishing a clear vision, (2) sharing and communicating that vision with others so they will follow willingly, (3) providing the information, knowledge, and methods to realize that vision, and (4) coordinating and balancing the conflicting interests of all members or stakeholders.

In a school, the principal and administrators with the support of a carefully selected planning team usually work together to identify the vision and mission and communicate it to stakeholders. However, all staff and students in the school community have a critical leadership role to play in the program. Every action a student takes to conserve energy or remind others to conserve energy is demonstrating leadership. Teachers who discuss energy conservation in the classroom and use it as a teaching lesson are showing leadership. Facility staff who monitor building equipment and grounds to make sure all is functioning properly and efficiently are demonstrating leadership. The Energy Behavior Management Program is best supported when everyone on the school campus realizes that they have a leadership role to play in saving energy.

A change in culture occurs when a majority of stakeholders identify with the vision and take some responsibility for bringing it about. *Administrators are change agents.* As the most visible leaders in the organization everyone is watching what they do. In a school, staff, students and parents respond to the direction set by the principal. If the principal takes action to turn off lights, use daylighting whenever possible and maintain district standards for temperature setpoints in his office, the school community understands he is committed to the vision. They will follow this example. *Building staff are change agents.* Students watch to see what they are willing to do to save energy. Do teachers implement energy education into the curriculum? Do teachers encourage energy fairs and Earth Day events? Do teachers turn off lights, use daylighting whenever possible, and maintain district standards for temperature setpoints in the classroom? School staff is aware of what is going on in the building and can play a key role in supporting the energy program. *Students are change agents.* Students can be the greatest cheerleaders for an energy program. When staff forget to take action, students are great at reminding them. Students love to participate in a wide variety of energy experiments and activities. They are a vital part of any building energy team.

### **Who Are Your Energy Cheerleaders?**

A challenge most schools face is how to get everyone fully engaged in the Energy Behavior Management Program. The best way is to identify an energy cheerleader(s) or advocate(s). These cheerleaders are students, staff, parents and community members who are passionate about the environment, energy conservation, and/or sustainability. These advocates become the core energy team members and work with the principal to expand the committee. Their leadership, passion, and persistence in communicating the vision to all stakeholders will attract others to the cause.

Cultures change over time and not overnight. It can take time to identify

Energy Behavior Management Program advocates especially if the school has not engaged in any energy or sustainability initiatives in the past. Getting everyone in a school community on board is a huge task and the initial results are hard to quantify. Significant results occur over time. For all of these reasons, persistence is critical to the Energy Behavior Management Program and its viability in the long term.

### **Policy Drives Decision-making and Action**

The American Association of School Administrators states that the typical school district spends \$400,000 each year on utility bills; some generate costs as high as \$20 million per year. The U.S. Department of Energy (DOE) estimates that many districts could save 25 percent of that money through energy behavior management programs, better building design, widely available energy technologies, renewable energy use, and improvements to operations and maintenance. Nationally, the estimated savings could pay for 40 million new textbooks, 30,000 new teachers or 1.5 million new computers every year. To support quality energy programs, the DOE recommends that schools adopt smart energy policies, standards and procedures that detail how to implement the policy. Schools that adopt and implement smart energy policies in their buildings, schools, buses, and classrooms save money but also receive many other benefits: (1) Classrooms are more conducive to learning, with better lighting, better temperature control, air quality, and less outside noise; (2) Students learn about energy conservation and how they can contribute to the environment; (3) Buses emit fewer dangerous pollutants, particularly into areas where children learn and play; (4) Schools spend less time and ultimately fewer resources maintaining and operating buildings and buses; (5) The community appreciates the district's wise use of taxpayers' money.

### **What is an energy conservation policy?**

An energy conservation policy is a statement(s) containing the principles, rules, and guidelines formulated by

administration and adopted by the school board to reach its long-term energy goals and to achieve its energy mission and vision. The policy is designed to influence and determine all major decisions and actions related to the Energy Behavior Management Program. Some school administrators object to creating policies thinking the policy may in some way restrict their decision-making ability and limit their flexibility. Since policy making is a function of the elected school board, a policy statement usually must go through a public review process including several readings before the board and prior to final adoption. It is cumbersome to create and difficult to change. Policies by their nature are broader statements that address the philosophical issues and as such are not changed frequently. The advantages of having an energy conservation policy statement far outweigh the disadvantages especially if the policy is written correctly. The policy statement provides direction, focus, and credibility to the Energy Behavior Management Program. During implementation of the energy program, the policy statement adopted by the board puts all district staff on notice that this is the direction we will pursue. It gives the energy team authority to carry out their mission sometimes in the face of objections. The policy aligns all district departments so the independent actions of each works together to achieve the energy vision. For example, after the district installs new energy efficient lighting in a school, purchasing will need to shift buying habits and carry the new replacement products. The energy policy supports this alignment as well as consistent decision-making to bring about a universal objective. The policy further influences planning and budgeting decisions.

### **Data Supports the Energy Behavior Management Program**

Data is the fuel that drives the Energy Behavior Management Program. Data analysis allows us to determine where we are today in terms of energy use in each of our buildings, thus creat-

ing a baseline for future comparison. Data supports decision-making regarding where and how to spend resources to improve energy performance. Data allows us to track our daily, weekly or monthly progress toward our goals. Data supports competition among the schools participating in the Energy Behavior Management Program. Here are my top five tips for sharing energy data:

1. **Simple easy to understand report format.** A simple and easy to read report format will be most useful in sharing information with a diverse group of people. Not every reader is an engineer or facility expert. Therefore, create a report using terminology everyone can understand.
2. **Consistent report creation.** Energy team members will expect to see the reports regularly -monthly, bi-monthly, quarterly. Failure to consistently create and issue these reports will undermine the Energy Behavior Management Program.
3. **Distribution to all stakeholders.** The energy information will best support the program when it is made available to everyone. Presentation of energy reports to all administrators, the school board, staff, parent groups and the community will raise awareness and build support.
4. **Transparency.** A report format that details the energy results of each school and district campus so that all can see not only how their campus is performing but how everyone else is performing encourages friendly competition, resulting in greater effort and more energy savings.
5. **Accuracy.** The information entered into the energy management software and used to create reports must be accurate and credible. It is best to take data directly from utility bills rather than from in-house generated worksheets.

### **Energy Teams Become the Key to Success**

The Energy Behavior Management Program model is the responsibility of the entire school district. Every administrator, every staff member, every campus, every facility person and every student have responsibilities. An effective structure for the program is to work through energy teams. There are two different types of energy teams at work throughout the program.

1. **Energy Advisory Team.** The energy advisory team is a group of community leaders, industry professionals, and district staff who are appointed by the superintendent. It is important to have district staff, school staff and student representation. The advisory team meets periodically to review district progress in reaching energy goals and to offer suggestions as to how the program can be improved.
2. **Campus Energy Teams.** Everybody plays! An energy team is created at every school, administrative center, and support services building. The energy teams become the engines that drive the program. It is their responsibility to design and deliver the Energy Behavior Management Program on their campus.

It is important to structure energy teams correctly from the beginning. At school locations, the principal or assistant principal and building support person (facility/maintenance staff) should serve on the team. In addition, teachers, staff, students, and parents representing different grade levels can complete membership. The principal will want to create a process for determining membership which can include an application or nomination process. Ideally, he will want to identify some "energy cheerleaders" early on who will bring their passion to the program and can assist him in finding other members. The size of the team will depend upon how the school chooses to structure and organize the team. If the school wants to have a representative(s) on the team from each grade or

allow more student involvement, the team will be larger. Administrative and support service buildings are not excluded from creating energy teams. In fact, as visible leaders many will watch to see what they are doing. Over time, their action or lack thereof will be a key indicator of how well the Energy Behavior Management Program performs district wide. Energy teams in these buildings should once again always include administrators and building support staff. These teams will generally be smaller in size than teams at the schools. The energy team is responsible for developing an energy plan for their site designed to achieve and implement the annual energy goals. In some cases, the district provides an annual energy goal to each site but sites will be allowed to set their own. Some of the activities the team will become involved in include managing energy consumption, educating themselves and the school community, and building energy awareness. Ultimately, Energy Behavior Management Programs succeed because people are constantly reminded to change habits. The energy team is charged with keeping the message in front of everybody. Energy Behavior Management Programs in schools properly implemented can generate amazing results both in terms of energy savings and educational benefit. And I know you can do it. ■

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