

## CASE STUDY:

***South Washington County Schools Embrace Energy, Cost-Savings  
Using “Schools for Energy Efficiency™”***

By: Kari Rudd



It was fall of 2003 when Hallberg Engineering approached Mr. John Doth, Director of Facilities with Independent School District 833 of South Washington County Schools, regarding their new concept, the Schools for Energy Efficiency™ (SEE) Program. The SEE Program guides schools in low and no cost strategies to reduce the energy consumption and overall utility costs of the district.

Due to the large number of facilities at South Washington County Schools, Hallberg Engineering recommended that Mr. Doth hire a full-time individual to manage, train and monitor the SEE Program. In December of 2003, Mr. Jim Bain was hired as the Energy Management Coordinator.

In September of 2004, South Washington County Schools launched an aggressive and comprehensive energy campaign utilizing the systemized plan identified in the SEE Program and established it's goal to reduce energy consumption by 10%.

During the first 6 months, Jim worked with site team leaders from each school,

***South Washington County  
Schools Project Snapshot:***

Technologies Utilized:

- Schools for Energy Efficiency™ (SEE) Program
- Improved Energy Management Systems
- Automated classroom motion sensors
- Remote desktop application to monitor district building engineers' computers

Benefits:

- \$1 million in total savings (over 3 years)
- 16% reduction in energy use in an eight-month period (7/05 – 3/06)
- District was recipient of the 2005 Energy Star Leader Award
- Energy education integrated into curriculum
- Successful community outreach
- Streamlined building operations throughout district
- Reduced pollution and impact on local

which included principals, custodial staff, teachers and enthusiastic members from the PTA. Together, they implemented various energy reduction strategies along with an energy awareness campaign to promote a culture of conservation where staff and students take responsibility to save energy.

Teachers and administrators of South Washington County Schools fostered the culture of conservation by integrating energy efficiency and conservation concepts into the curriculum, aided in part by resources available through the Minnesota State Energy Office.

Fun, interactive activities supported by the U.S. Department of Energy brought the concepts developed in the classroom to life: students pedaled the “Energy Bike” to see how much power it takes to light up a regular incandescent bulb versus a compact fluorescent bulb; “the Energy Hog” website ([www.energyhog.org](http://www.energyhog.org)), featuring a comical bovine character, showed students how to make wise energy choices at school and home and avoid energy waste.

Other energy savings were achieved using Energy Management Systems (EMS) installed in all the buildings. Some buildings have limited controls that primarily monitor water and air temperatures and air pressures where other facilities are managing much more.

Jim Bain, not satisfied with the way the facilities EMS systems were being operated and maintained, made improvements on the existing systems, based on his training and experience with computers

Over the past couple years, standardizing and centralizing the EMS systems to deploy mechanical energy reduction strategies in a timely and efficient manner has vigorously been pursued. Building operators are now trained on the changes to the EMS systems and Jim has become the EMS and energy “guru” who supports the needs of the building operators and facilities. From his computer, Jim can view the facility computers through a “remote desktop” program that resolves issues and provides training for operators.

As the district continues to grow and pursue more efficient, web based, and user friendly EMS systems, district personnel will be able to monitor heating, ventilating and air conditioning (HVAC) systems, standardize and implement heating and cooling strategies, view classroom and space temperatures, and implement lighting and ventilation schedules and other facility use opportunities.

From July of 2005 through March of 2006, the district realized a 16% reduction in energy consumption. Since the inception and implementation of the SEE program in 2004, the District has enjoyed a cost avoidance of approximately \$1,000,000. These results were achieved through a combination of no and low cost operational energy reduction strategies, behavioral modifications, technical training, equipment upgrades, education and community outreach.

The commitment and support of administrators, combined with the team work and efforts of teachers, students, parents and building operators, under

the leadership of Jim Bain, has made a noticeable difference in how South Washington County Schools utilize, manage and control energy consumption. Along with energy and cost savings, the District has benefited from streamlined facility operations and fewer air quality complaints. There is a success story indeed—may other schools to follow suit!

*For more information on the South Washington County Schools energy reduction strategies, contact Jim Bain at [jbain@sowashco.k12.mn.us](mailto:jbain@sowashco.k12.mn.us)*

*For more information about the Schools for Energy Efficiency Program at Hallberg Engineering, Inc. of White Bear Lake, MN, contact Sheri Rosenthal, Program Manager at (651) 748-1100 [www.seeprograms.com](http://www.seeprograms.com)*