



Preparing our students for Tomorrow, Today

Schools on the Path to Sustainability:

Gresham-Barlow School District Energy Star Leader Award

What: EPA Energy Star Leader Award for energy efficient schools

Where: Gresham-Barlow School District, Multnomah County

How: The Gresham-Barlow School District was recognized nationally in 2005 for their significant reductions in energy use, but their commitment to sustainability has a strong history. The school district began its resource conservation efforts in 1995 with a waste reduction committee made up of staff representatives from the twenty schools in the district. The group of principals, teachers, custodians, secretaries, parents and occasionally students met bi-monthly initially and continues to meet quarterly. The waste reduction committee provides a meeting place for the volunteer representatives to weigh in on projects like this and share ideas and information that will help other schools. This committee initiated a district-wide focus on changing behaviors amongst students and staff, and that focus has helped to achieve the level of energy savings they enjoy today.

The energy program began in 1998 when the district started analyzing costs, installing direct digital controls and replacing outdated equipment with more energy efficient models. In addition to the district-wide changes, behavioral changes played a major part in reduced energy use. Individual schools have initiated projects such as student auditing and real time monitoring in order to address high use areas immediately. The district implemented incentive programs last year for schools to reap the benefits of their conservation efforts and participation in the waste reduction committee. Each high school has the possibility of earning \$3,000, each middle school can earn up to \$2,000 and each elementary school up to \$1,000 each year. These amounts were set using fifty percent of the base year savings. In order to receive the maximum pay-off, the school self-evaluates in three categories using a checklist created by the facilities department. Schools must demonstrate **performance** in areas of energy reduction (40%), **participation** within the school and in district-wide efforts, such as the waste reduction committee (40%), and **efforts** to improve that go above and beyond what is reasonably expected (20%). The percentage they achieve in this evaluation corresponds with their financial payback.

Benefits: The combination of education through school-based projects, efficient equipment and individual action has paid off: the district saved \$1.3 million in avoided costs (if no efforts were made, the district would have spent \$1.3 million dollars more on energy) in 2005 alone, and over \$3 million in the past 3-4 years. They use 40 percent less energy than the national average in K-12 schools, and their buildings are in the top 25th percentile of the EPA Energy Performance Rating System. Thirteen of the twenty schools in the district have received Energy Star Distinction for energy efficiency. The environmental impact of these efforts is huge, with 4,123.3 tons of pollution kept out of the atmosphere this year. These achievements earned them the prestigious 2005 EPA Energy Star Leader Award, the first organization in the country to gain such recognition.

You can do it too: For more information about any part of this project, the following individuals would be happy to share ideas and expertise.

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Gresham-Barlow Quick Reference Guide and Checklist For Optimum Energy Efficiency

Interior Lights

- Are classroom lights off when room is unoccupied?
- Are gym, multipurpose, and commons lights off when unoccupied?
- Are cafeteria lights off when unoccupied?
- Are pool and locker room lights off when unoccupied?
- After hours / non-school days, does custodian make sure that lights are on only in rooms they are cleaning?
- When building is not occupied are all interior lights off (except those that are necessary for emergency or egress (if not controllable otherwise))?
- Are lights off in display cases? If unused, have lamps been removed if not switchable?

Exterior Lights

- Are all exterior lights off when night custodians leave (except as directed by building administrator)?
- Are security lights on only when necessary (are timer and photocell functions checked regularly)?

Door & Windows-Heating and Cooling: When there is a call for heating or cooling (versus ventilation), exterior (and some interior) windows and doors need to be closed for the building to operate as designed. Become familiar with which interior doors compromise the building's optimum heating/cooling functions when opened. Also, make sure that all mechanical door closures are operating properly.

Doors & Windows-Cooling Season

- All doors and windows closed in any area that is being mechanically cooled.

Door & Windows-Heating Season

- All doors and windows closed in areas where heating is enabled.

Window Coverings-Day Time, Cooling Season

- Where applicable window coverings should be utilized to minimize heat gain from the sun.
- All window coverings need to be closed every evening without exception.
- Close all window coverings when rooms are unoccupied, where applicable.

Window Coverings-Heating Season

- All window coverings need to be closed every night without exception, where applicable.

Building Exhaust Fans

- All fans are to be turned off and, where applicable, ddc controls should be set to "unoccupied" mode at the end of the school day.

Air Circulation System

- Filters need to be changed regularly (frequency depends on specific building needs and location).
- Belts need to be checked regularly for appropriate tension.
- Appropriate fittings need to be greased regularly.

Computers

- All servers and computers/monitors needed to run equipment beyond regular school hours should have the "sleep" or "energy savings" mode enabled.
- All non-essential computers and monitors should be turned off at the end of the school day (or by the last user of the day).

Vending Machines

- All refrigerated beverage vending machines should be equipped with "vendor miser" type devices. In cases where this is not feasible, these machines should be unplugged at the end of each school day and plugged in first thing each morning.