

Let's Save Energy



School Energy Managers Project



April 2014

Minimizing the Impact of Extreme Winter Weather

The winter of 2014 has seemed endless! The impact included many Snow Days and stress on practically every "system" in the district. This winter brought a concern of fuel supplies as well as increased energy costs. Because of missed days many districts will be in-session for a prolonged school year into the "**COOLING SEASON!**"

COOLING SEASON, of course means running the air conditioning, which can be 12 and 14 percent of your annual energy use. There is no way to predict the weather, however if school is in session until June 6, air conditioning will likely be needed, and that means using more energy, which means additional unplanned utility costs.

What a quandary . . . higher heating bills with the potential of higher cooling bills . . . WHAT'S A DISTRICT TO DO?

It is important to realize that energy management is a year long venture. Steps taken early or late in the year can minimize the impact of utility costs.

Below are a few key strategies that can be easily implemented to minimize this impact:

- When loading OR unloading students, DO NOT CONTINUOUSLY KEEP THE DOORS OPEN. You simply bring in much more air to "condition."
- Turn off the lights EVERY time you leave a room unoccupied.
- Unplug anything in the classroom that is not being used. Vampire Power does exist.
- Instead of setting occupied cooling temperature at 72°, set it at 74°, which may mean that students and staff may need to wear lighter weight clothing.
- Make sure you are using night and weekend setbacks.
- Instead of setting unoccupied cooling temperature at 78° set it at 80°
- Keep the lunchroom lights off, except during times that students are eating
- During the day, if a computer monitor is not being used, turn it off. (Screen Savers do NOT save energy.)
- At the end of the day, turn off all computers, monitors, printer, copiers and other business equipment.

KSBA School Energy Managers Project earns national recognition

Kentucky School Boards Association's School Energy Managers Project (SEMP) has been selected as 2014 ENERGY STAR® Partner of the Year for Energy Efficiency Program Delivery. SEMP helped schools reduce energy costs and build greater energy awareness among local education leaders, students and their families.

KSBA Interim Executive Director David Baird said the association is proud of the EPA award, but even prouder of the

achievements of the school energy managers.

SEMP Director Ron Willhite emphasized that SEMP is a partnership with districts. "We accept this honor on behalf of the efforts of Kentucky school districts," Willhite said. "SEMP provides a vehicle for communications, funding and educating school boards, administrators and energy managers on the implementation of best energy practices."

Extreme Weather means higher energy bills . . . OR DOES IT?

As the temperatures have plummeted, "prevailing wisdom" has been that we should expect higher utility bills. What we have found is that this is **NOT** the case in every district!

Woodford County is currently running 3.6% under last year due to culture changes and, to a lesser extent, LED lighting that was installed in the high school gym the end of December. Beginning with the 2013-14 school year, school energy teams became active. Sommer Melton, WCHS student leader, describes their audit process being conducted four times per school year. "An executive committee of students will audit the rooms before breaks to ensure all computers are off, teacher's private electronics (chargers, lamps, microwaves, etc.) are unplugged **and** that thermostats are set at correct temperatures." Additionally, the school no longer props-open doors when loading or unloading students, which has contributed to the reduction. The WCHS team now has an Energy Club meeting on

their school's Club Day Calendar where they discuss other opportunities for change.

Scott County has found that with LED lighting projects completed last year, their usage is 1.5% lower through March compared to last year. During the extremely cold weather (below 10°), they did not setback the building to normal setback temperatures, but went in to "preservation mode" to guard against freezing pipes. This resulted in more energy being used than planned. Now that school will be in session until early June, a renewed emphasis is being placed on energy management with the goal of having similar usage as last year.

Owen County has seen a six percent reduction in consumption. Brian Linder, Energy Manager for the Grant County Partnership that includes Owen County, complimented the district saying, "The district's efforts to ensure the buildings were not in occupied mode when school was out, but stayed in unoccupied mode has led to the energy savings we have seen.

We were also well below last's years consumption rate prior to the advent of bad weather."



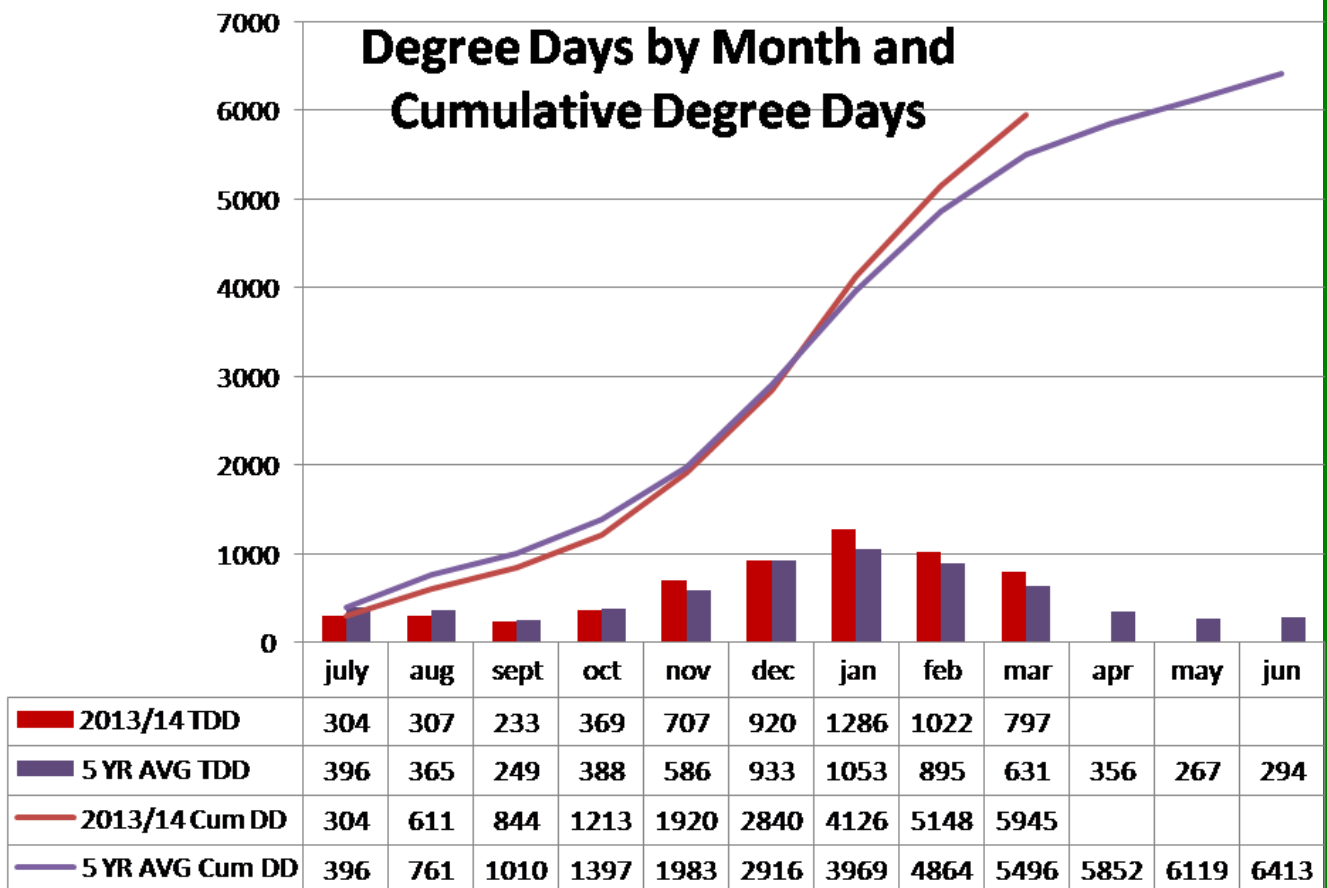
Woodford County High School students Sommer Melton and Lindsay Patterson are part of the newly formed Energy Club that is active in making energy audits.

A True Comparison . . . DEGREE DAYS

There is a lot to learn in managing your energy resources. Another piece of data is "Degree Days." There are "heating degree days" and "cooling degree days." The heating degree days for January and February have been much colder than the five-year average. Yet the cumulative year-to-date Degree Days have only been 6 percent higher than the five year average. Of particular interest is the fact that July through October 2013 was milder than the five year average.

According to Terry Anderson, energy manager for Fleming County Partnership, "districts who implemented appropriate setback plans at the beginning of this school year had "energy in the bank". These districts are the ones whose consumption is near the same as last year. Terry reminds us that "it is never too late to begin a setback procedure, because there are always savings to identify."

Degree Days by Month and Cumulative Degree Days



The graph above shows that while the individual months of January and February had a much greater number of degree days, the number of degree days for the year is only 5.8% higher than average.

WARREN COUNTY SCHOOLS HOSTS THE RACE!



Each year, Warren County Schools hosts a program called "Reduce and Conserve Energy" or RACE which ties to their community's Corvette Museum. As described in the Bowling Green Daily News, "Katie Levesque, a sixth-grader at Cumberland Trace Elementary School, said her energy team concentrated on keeping track of energy use at the school. The students did "energy audits," Katie said. "We make sure the teachers have the lights off. A trick we learned was making a little flag that could be affixed to the inside of a window at home to check for air flow leaks around the window."

"RACE has been a huge success, with 18 teams participating this year" says Energy Manager Jay Wilson. "Warren County Public Schools embraces energy conservation and believes it to be our responsibility to ensure that every reasonable effort is made to conserve energy and natural resources while exercising sound financial management".

The overall focus of RACE includes:

- ◆ *Communicate and encourage behavior promoting energy conservation.*
- ◆ *Educate students, staff, and community to Respect and Conserve Energy (RACE) and Environmental Sustainability.*
- ◆ *Encourage use of school facilities as a hands-on learning lab.*
- ◆ *Engage students in active responsible citizenship through RACE activities.*
- ◆ *Increase student achievement*
- ◆ *Maintain awareness of energy efficiency best practices.*
- ◆ *Provide RACE leadership opportunities to students.*
- ◆ *Promote WCPS as responsible stewards of the environment and community tax dollars.*
- ◆ *Utilize internal energy audits and checklists to evaluate energy efficiency.*
- ◆ *Establish Community Partnerships (i.e. Utility providers, Federal and State agencies, etc.)*



The Alvaton Elementary Energy Team works throughout the year to identify and eliminate "vampire" loads in their school.