Performance Services

Energy Leadership Article Series

Spring Forward

Six Easily Implemented Energy Saving Techniques for K-12 Schools

At last, we're transitioning from Winter to Spring. As the season changes, there are many opportunities to save energy and money.

Longer days and warmer weather are an attractive prospect. Using unnecessary energy is not so appealing. That's why Performance Services is pleased to share six Spring Forward energy saving tips for the weeks ahead.

Each one is practical and it will save you money.

America's schools spend more than $7.5 billion annually on energy—more than they spend on textbooks and computers combined. Energy costs are the largest operating expense for school districts after salaries and benefits.

EnergyStar.gov

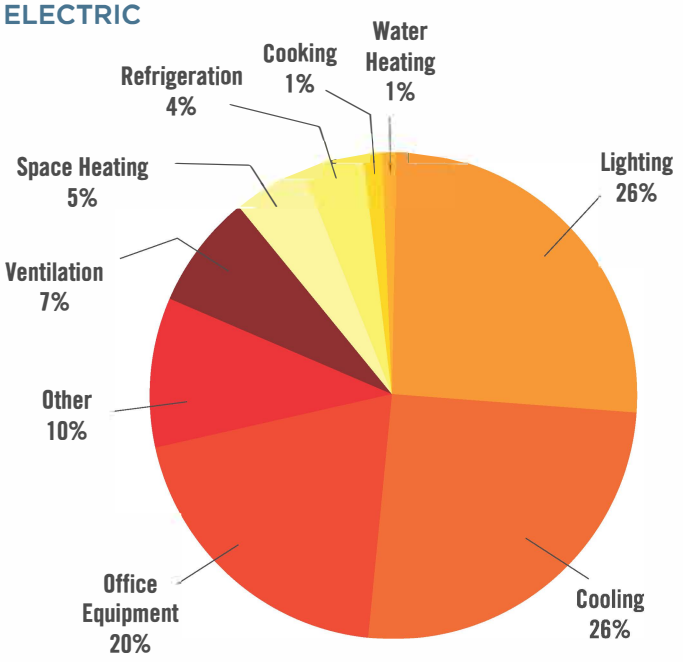
Energy is one of the few expenses that can be decreased without negatively affecting classroom instruction.

EnergyStar.gov

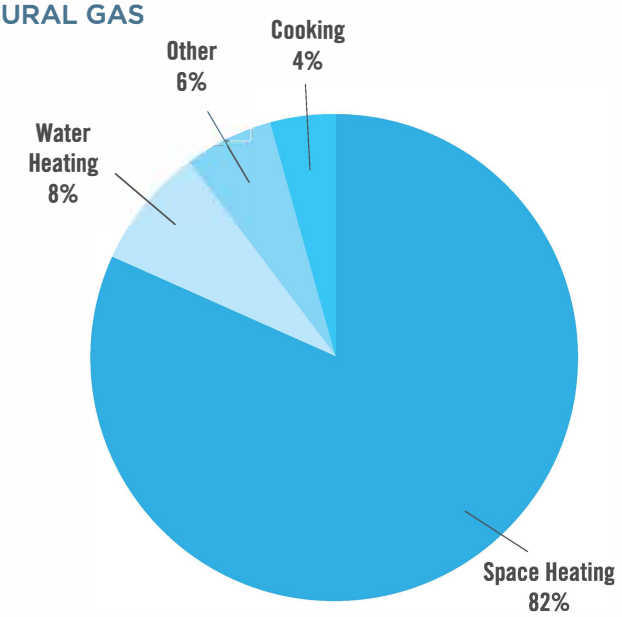
Electric And Natural Gas End-use Profiles For Educational Facilities

Most of the electricity consumed by educational facilities is used for lighting, cooling, and plug loads such as computers and copiers; most of the natural gas is used for space heating. Each school's energy profile is different, so these charts are not representative of all schools.

ELECTRIC



NATURAL GAS



Reference: Energy Star® Building Upgrade Manual

Spring Forward Energy Saving Tips

Space heaters need to be turned off, unplugged, and removed. If they're not around, they can't be used – or abused.

HVAC system run times need to be shortened as much as possible. Spring brings mild temperatures, specifically cool mornings and warm afternoons. These milder temperatures require less time to bring your buildings to optimal set-points in the morning, but can really test the accuracy of your control systems. They can also stress your central systems, as the need changes daily from heating to cooling. Any ventilation that occurs when kids are not in the building could lead to a lot of wasted energy. So avoid ventilating empty buildings.

"Freeze prevention" settings applied during the extreme cold of winter need to be removed now. Look out for the following issues: earlier than normal HVAC system start times; pumps overridden or locked in the 'on' position (the same for boilers); equipment with the electrical switch placed in the 'hand' or 'on' position; abnormal weekend or unoccupied run times; and HVAC units with the ventilation dampers locked or overridden in the 'closed' position.

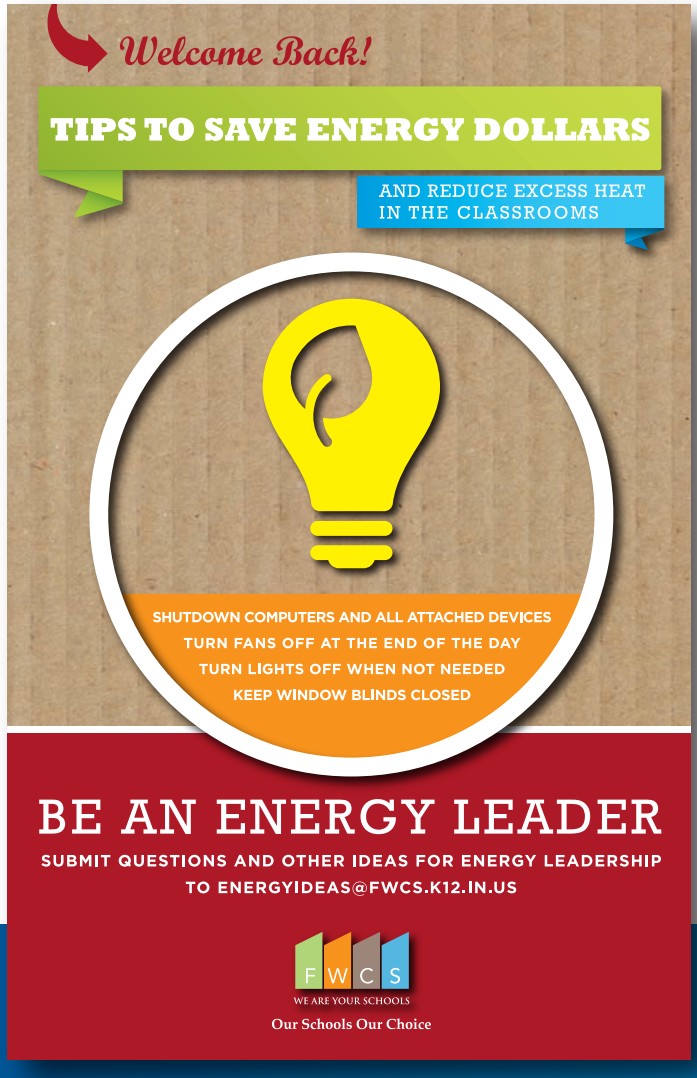
A/C start-up and Chiller Operation should be a focus as temperatures start to climb. Think about the impact on demand charges when deciding exactly when to start your chillers for the first time each Spring. If you haven't run your chillers all winter, your first month of operation will show a significant increase in electrical cost, due to the impact on KW demand charges. If your next meter reading is due shortly, you will save significant money for the current billing period if you can start the chiller after the meter is read.

Window operation should be reviewed with building occupants. Clearly, you want to avoid opening windows while mechanically cooling the building. Occupants need to be aware of the times when they are permitted to open windows and when to close them. Their cooperation makes it much easier to efficiently and effectively cool the building.

Fan usage includes discussing proper use of box, floor and ceiling fans with building occupants. Many building owners ban the use of individual portable fans due to safety concerns and electrical costs. Others allow fan usage, in schools with inadequate (or no) cooling systems. But, regardless of your own district's policy, the efficient and safe option is to have any freestanding fans turned off and unplugged whenever the area is unoccupied.

Action Time

Our energy saving measures are highly practical and your Energy Manager can take action during their routine audits of the buildings. No additional or external expertise is required. The savings should be welcomed by everybody. For students, participating in energy-efficiency programs at their schools and witnessing the results of their efforts also helps them to learn practical skills and become actively engaged in improving their learning environment. An example of this is at Fort Wayne Community Schools, Fort Wayne, Indiana. They have actively engaged their students in their Performance Services' Energy Leadership program.



So, don't forget the value of communication. Keep your school community stakeholders informed on why you are taking particular action, or why you want them do something. They will all warm to staying comfortable while reducing energy costs.

On behalf of our Performance Services team, I wish you a good Spring and a smooth transition into Summer. Please contact me if there is anything we can do to support you in running your facilities more efficiently.

Best wishes,

Mike Lindsey, BSME
Energy Leader

Mike Lindsey joined Performance Services in 2010 bringing with him more than 12 years of experience working as an owner's representative on more than 15 major school construction, HVAC renovation, and energy conservation projects. In addition, he has served in a leadership capacity for the Indiana ASBO Operations Committee. In 2010, Mike received the IASBO School Support Professional of the Year Award. Mike has helped schools in Indiana save more than $3 million annually through behavioral-based energy conservation programs. Subscribe to Mike's blog for the latest K-12 school facility seasonal articles at www.performanceservices.com