The Green Wire

Volume 2, Issue 1

Plug Into Smart Resource Use

*** Post & Share Widely ***

Olympia School District

Articles

Holiday Vacation Results
Mid-Winter Break Shut Down
Energy History Lesson
District Highlights
Resources & Opportunities

The Results are In!

Just before winter holiday break, schools were requested to participate in energy conservation measures to close down work spaces and classrooms. Most of the district's 2100 operating computers were turned off, blinds drawn, and heating systems turned down. Thanks to your help, taking steps to minimize energy use over the two week vacation made a difference in the district's energy consumption and costs. See page 2 for numbers and details...

Mid-Winter Break – Shut Down with Style

The actions taken to conserve energy & resources during the holidays were a measurable success. With our next vacation break upon us, it's time again to take these simple steps to properly close down our classrooms & offices.

- Turn off ALL computers, monitors, speakers and printers.
- Switch off copiers, fax machines and any other office equipment.
- UNPLUG all unnecessary electric appliances (TVs, VCR's, radios/stereos, water coolers, mini refrigerators, compressors, etc.).
- Switch off display cases and decorative lighting.
- Close blinds and curtains.
- Turn off all overhead lights.
- Unplug vending machines.

IF YOU WORK IN A PORTABLE:

Please be sure to pay extra attention in turning down your thermostat to 55 °F ‘Hold’ or ‘Vacation’ mode. Heating systems in the portables are not typically programmed with the rest of the school. If thermostats are not manually put into ‘hold’ mode, it is highly likely the portable heating units will continue to run as if it were a normal school week, wasting valuable energy dollars. If you need assistance, please contact your custodian or Support Services Center (x7800), and we will be happy to help.

 DON'T FORGET COMMON AREAS, NOOKS & CRANNIES...

Common space is often the victim of neglect when it comes to turning off computers, or unplugging vending machines, water coolers and other electronics that we all use. With no one person responsible for it, many of us think, “Oh, someone will remember”. Be that someone! All kilowatts count on the road to energy conservation!

A note about ‘sleeping’ and ‘hibernation’...

Newer computers with power down (“sleep”) functions can save up to 70% in energy costs and prolong the life of the computer. However, older models and components are less likely to have power saving options, and use more energy to operate.

Did you know most stereos and TV's do not actually use less energy when you turn off the power? Appliances that have clocks or remote control functions that are ready to power up at a moment's notice are often using the same amount of energy in the ‘off’ position as when they are in use. Unplugging them while we are away really does make a difference!

Newsletter archives and more information about OSD Resource Conservation can be found on the web at: http://osd.wednet.edu/departments/facilities/resourceconservation

Contact:
Olympia School District
1113 Legion Way SE
Olympia, WA 98501
Brittin Witzenburg
Resource Conservation Manager
PH: 360-596-6112
FAX: 360-596-8561
EMAIL: bwitzenburg@osd.wednet.edu
OSD Reduced Energy Use by 7.4%

Over the past two winter holidays, Olympia School District has focused on minimizing energy use during the vacation breaks. Typically, most schools see little or no activity for two weeks during the month of December. With 1.4 million square feet of building space across the district, taking measures to shut down the schools as much as possible has triggered a noticeable reduction in energy consumption.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Use (kWh)</td>
<td>1,679,814</td>
<td>1,609,784</td>
<td>1,477,393</td>
</tr>
<tr>
<td>Natural Gas Use (Therm)</td>
<td>33,033</td>
<td>35,527</td>
<td>33,378</td>
</tr>
<tr>
<td>Propane Use (Gallons)</td>
<td>1,263</td>
<td>2,022</td>
<td>1011*</td>
</tr>
<tr>
<td>Total Energy Use (MBtu)</td>
<td>9034.8</td>
<td>9045.3</td>
<td>8378.6</td>
</tr>
</tbody>
</table>

The table shows combined monthly energy use for the district’s facilities during the months of December 2002, 2003, and 2004, when the majority of our winter break occurs. Total energy use in December 2004 was 7.4% lower than total consumption in December 2003. The energy used to light and heat buildings is calculated into the numbers above. Sites within Olympia School District are heated by electricity, natural gas, or propane, and in some locations, both gas and electric are used. Different factors can impact energy consumption. Weather, changes in building use, heating system & building efficiency, and construction projects can play a role in overall energy use.

Total energy cost is impacted not only by actual consumption, but also by energy utility rates. As most of us know, energy rates have been increasing over the past few years. Between the months of December in 2002 and 2003, OSD saw a 4.6% increase in energy rates for electricity, natural gas, and propane combined. And in December 2004, the combined energy rates were 9% greater than the year before.

If we translate the rate increases into dollars, our energy costs look something like this. Let’s say OSD uses the same amount of energy as we did in December 2003 (9045.3 MBtu). Multiply the total use by the December 2004 rates and our total energy bill for the month would be nearly $12,000 more than the prior year. Fortunately, thanks to district-wide energy reduction efforts, the 7.4% reduction in district energy use provided OSD avoided costs of $10,500 for December 2004.

We may not be able to control rate increases with our energy utilities, but we can manage how we use energy in our schools. Through behavioral changes and building efficiency measures, using less energy helps the school district keep up with the increasing cost to operate our schools and facilities. During occasions when schools are not in use – vacation breaks, weekends, holidays – energy costs can be kept at a minimum when we take a few minutes to turn off & unplug electronic devices and turn down heating systems.

Thank you for your efforts to shut down workspaces over the last winter break! We look forward to further avoided costs during the upcoming mid-winter break. Be sure to use the checklist on page 1 before heading out on a relaxing week!

The average modern water cooler with a cold and hot spigot costs about $4.00 per month to operate.

How did you Reduce, Reuse, & Recycle over the holidays? At Boston Harbor Elementary, students had the chance to “go shopping” for holiday gifts before winter break. The school hosted a Holiday Bazaar where gently used items were donated to ‘stock the shelves’ and students could purchase any item for 25¢. When the shopping list was complete, students headed for the gift wrapping room where volunteers helped wrap up gifts before sending students home for 2 weeks of holiday R ‘n R.
History Lesson: Energy in the United States

As technology has evolved, so has the many energy forms available for human use. Before the industrial revolution, our energy sources were limited and simple. Earliest human history used muscle power (human and animal) and wood as the primary source of energy. Later, tools to harness the power of wind and water were developed. When the modern world found ways to tap into the earth’s resources of coal, oil, and natural gas, very dramatic changes in energy use also began to take place.

The early 1900’s was a time of rapid change for the United States, politically, economically, and socially. The availability of fossil fuels transformed the way society worked: increased speed, quantity, productivity! Mechanical innovation amplified energy demand and more energy was produced. With more energy available, more ways were found to use it. Between 1880 and 1918, America’s energy use quadrupled (Energy Information Administration), and continued to escalate from there.

The United States’ appetite for energy has extended to sources beyond our borders and today is one of the primary players in the global fuel economy. We use coal, petroleum, natural gas, hydropower, nuclear energy, solar, wind, thermal, and biomass to provide power for electricity, heating our buildings, fueling our automobiles, and more. With a few minor historical dips in energy demand, the United States energy use has continued to rise into the current millennium.

What’s wrong with this story? Unfortunately our primary sources of energy are not the renewable kind. This means when we are out, we’re out. Many experts have estimated how much fossil fuel we have left if we continue to use energy at our current rates, and some speculations are fairly grim. As well, all forms of energy use can have negative environmental impacts. Extracting resources and altering stream flows, for example, can permanently damage landscapes and natural biological processes. Scientists have also observed a rise in atmospheric carbon dioxide (CO₂) levels and global temperature over the past century, and many have come to link these observations with human generated causes, such as increased energy use. It is also believed that increased levels of CO₂ and temperature may produce harmful impacts in the global climate.

While the absolute outlook of our energy supply is uncertain, we do know the future of our resources is still evolving. We are fortunate to live in a time with many different energy choices and technological possibilities. The power is in our hands!

For more information on energy statistics in the United States, see the Energy Information Administration’s Annual Energy Review page at www.eia.doe.gov/emeu/aer/contents.html.
District Highlights

RECENT CHANGES IN THE RECYCLING PROGRAM AT CAPITAL HIGH SCHOOL HAVE MADE PARTICIPATION EASIER THAN EVER.

Last November, students from the Environmental Club decided to take action to increase the level of recycling at Capital High School. For months they saw recyclables in trash containers and noticed recycle bins filling up with non-recyclables in the classrooms. Being ambitious problem-solvers, the Environmental Club students came up with a plan to streamline the recycling process. First, they contacted Lemay Enterprises, the district’s recycling hauler, and discussed the situation with the recycling coordinator, Emmett Brown. He assisted the program by providing roll carts and classroom bins and offered no cost hauling if they were willing to separate materials. The club decided they would need to develop a system that made recycling easy for the school community and sorting easy for them. Here’s what they implemented:

1. Centralized recycling & garbage stations in each pod. Presuming most people will separate properly if both options are convenient, containers for recyclables and trash are placed next to each other.

2. More locations. Visible and dependable placement of containers in frequent spots along the hallways makes recycling nearly effortless.

3. Labeling campaign. Making it obvious to distinguish between bins is essential. Students added lids and straightforward signs for recycling carts and painted trash cans to help people make the best choice.

4. Offer better classroom bins to teachers for easier separation of materials.

5. Communication. Teachers and students were notified of the changes and signs are now posted to make everyone aware of recycling options.

Setting up a centralized system makes collection easier for club members. Previously, they went into every classroom to collect cans and bottles, often finding more than recyclables in the bin. Now, they go to stations in each pod and find significantly less contamination in the recycle carts. Every other week the club sorts materials - aluminum, plastic, glass - typically collecting 4-5 full, extra large bags.

Two Environmental Club members, Saara Snow and Anna O’Brien say the new system is working well. What is the secret to their success? “Regularity and commitment,” Saara and Anna agreed. “You can’t decide to do it one week and not the next, you have to keep it going.”

Does your school or group have resource conservation successes to share? All are welcome to submit their stories and self promotion is encouraged. If you would like to do more in your school but need assistance, please call 596-6112.