



DR. WATTS' BRILLIANT SAVINGS

Cutting Heating Costs

Small changes = Big savings

- Don't leave the room without closing the closet door. There's no need to spend hard-earned money heating storage spaces.
- Is there a doorway between the first and second floors in your home, or on the way up into the attic? If not, it may make sense to install one. Stairwells act like chimney flues, conducting heat to the top of the house where you need it less. A door may be easy to install and will tend to keep the heat downstairs where you need it.
- And, speaking of chimneys, don't forget to close those chimney dampers if you have a fireplace or stove not in use. An open chimney will send more heat from the house than an open window!



The Kindness of Others

As oil and natural gas prices near all-time highs, moaning and complaining about heating the campus and our homes has risen, as well. The root of our troubles is our absolute dependence on other countries for energy – oil, in particular.

Each and every day, we import about 10 million barrels of oil and export about \$450 million to pay for it. Much of this money goes to countries that don't have our best interests at heart.

Some folks on campus are implementing small but effective measures to cut our heating bill. Josh Horton of Information Systems works in a south-facing office. He and his co-workers turn OFF the lights and use the passive solar energy streaming through their windows to both warm and light their office.

Let's dip into some of our renowned self-reliance and, expanding our minds, develop ways to turn our thermostats down, both here and at home. A lower thermostat setting means a lot – to us individually, to our campus and to our country.



Each 6' wide fume hood on campus uses \$5,000 annually in energy. So shut OFF and close that fume hood, by all means, please. Let's pay ourselves instead of the utility!



Energy Myths Debunked!

Energy Myth #4: Keeping your thermostat at the same temperature day and night uses less energy than turning it DOWN at night and heating your home UP again in the morning.

The Facts: It takes less energy to warm up a cold home in the morning than it does to maintain a constant temperature throughout the night.

GO FOR IT!



On the Home Front

The Proof is in the Pudding or Turn ON the Light and Show me the Money!

Throughout the winter months, days are shorter and nights are long, resulting in higher use of indoor lights. Yet so many – too many – of these lights are incandescent bulbs. Regular readers will remember that replacing these bulbs with compact fluorescent lamps (CFL) is always recommended. But, really, how does one justify purchasing a CFL for \$9 (prices vary), when an incandescent light bulb is available for just 75¢? Let's look at that "pudding" and learn.

Say, a 75 watt incandescent bulb is ON from 5:00pm to 10:00pm each night. That's equal to 1,825 hours ON each year. Now, 75 watts multiplied by 1,825 hours equals 136,875 watthours or 136.875 kilowatthours. (1 kilowatthour = 1,000 watts used for an hour) Using PECO Energy's Residential Rate R, each kilowatthour costs about 14¢. Hence, 14¢/kilowatthour multiplied by 136.875 kilowatthours equals \$19.16 in electricity costs each year, using that 75W incandescent light bulb. Replacing this incandescent light bulb with a 20 watt CFL that's also ON for 1,825 hours each year will use 20 watts multiplied by 1,825 hours, which equals 36,500 watthours or 36.5 kilowatthours. And 14¢/kilowatthour multiplied by 36.5 kilowatthours equals \$5.11 in electricity costs each year, using the 20W CFL. (and a 20W CFL will provide the same light as a 75W incandescent bulb) Thus, using the 20 watt CFL rather than the 75 watt incandescent bulb saves you \$14.05 each year in electricity costs. And you're not done saving. Read on!

Now, the 20 watt CFL has a rated life of 10,000 hours. Remember, in this example, your lamp is ON for 1,825 hours in a year. Yet, the 75 watt incandescent light bulb has a rated life of only 1,200 hours. Thus, you'll have to go out and buy five more 75W incandescent lamps to equal the 10,000 hour life of the one CFL. (10,000 hours divided by 1,825 hours or 5.5 bulbs) So, you'll pay an additional \$3.75 (75¢/bulb multiplied by 5 bulbs equals \$3.75) just for replacement incandescent bulbs.

Finally, for the \$8.25 investment (\$9.00 less 75¢) required to buy the 20W CFL, you save \$14.05 in electricity costs each year for 5.5 years (the life of one CFL). Total electricity savings = \$77.28 (\$14.05 per year multiplied by 5.5 years) plus the \$3.75 needed to buy replacement incandescent bulbs for a grand total of \$81.03 in savings. And all for an \$8.25 investment! It's like putting your money in the bank and getting over 50% interest – WOW! So, stop paying the utility and pay yourself, instead. And help the environment in the bargain. Go for it!

Bright Ideas

And the Winner Is...



Mary Diehl, Administrative Coordinator of Academic Affairs, JMC is seen herewith her \$100 award for her suggestion to turn off your computer monitor when you leave your desk. This not only saves energy but increases security. Make sure you have your power management settings on your computer set to put the monitor to sleep after 10-20 minutes of inactivity. To change settings, click on the start button, go to settings, control panel, display, screen saver then monitor power. If all monitors on our campus are turned off either manually or automatically, we will save more than \$70,000 per year in electricity.

Savings at Work – Center City Campus

July-Sept 2004	Budget	Actual	Prior Year Actual
Electricity	\$2,198,000	\$2,301,601	\$2,251,865
Steam	716,000	971,246	963,413
Water	352,00	210,684	138,430



Don't stop looking for ways to cut energy use around here. We need your input and are counting on you. We're also counting out the bucks – don't forget, we'll be awarding a \$100 bill to that person who submits the best idea for cutting energy use on campus. And, if we have 2 good ideas, well there's nothing in the rules (what rules?) to prevent us from awarding more than one \$100 bill. Winners announced in the spring edition.

The Future

Every day, more solar energy falls on this country than all of the energy used in the United States in an entire year.

Look around your area and observe operations, develop a good idea to lower energy use and then call me, Randy Haines at 503-6099 or email me at randolph.haines@jefferson.edu. Enter the competition and earn some holiday shopping dollars.



Look for the EPA's Energy Star label on products that use less energy, save you money on your utility bills and help protect the environment.



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