

Rate Watcher

New Hampshire

This Issue: Saving Money and Energy through Efficiency

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Going green, conserving energy, reducing our carbon footprint: how can we do it?

Today people are talking more than ever about the need to change how we use energy for a variety of reasons, including today's high prices. Consumers frequently ask us, "what can people with busy lives and limited resources do to reduce our energy usage?" This newsletter offers some suggestions about the actions we can take to save money and to prepare ourselves for the coming winter.

To plug or unplug - that is the question.

One simple way to cut your electric bill is to unplug unused appliances and electronics. The easiest way to do this is to put your home electronics (e.g., TVs, DVDs, cable boxes, CD players, computers, speakers, etc.) on UL-approved power strips, instead of each being plugged in separately, drawing power even when they are not in use. You can then turn off the power-strip when these items are not in use. You can also unplug other unused items, such as your dehumidifier (or humidifier in the winter), toaster, microwave, etc. that are not in use and do not need to draw electricity all day.

UL stands for Underwriters Laboratory, it is the trusted source across the globe for product compliance.

Taking these steps by using power strips and unplugging and shutting off unused appliances can save you money by reducing your "phantom load." Phantom load refers to the energy used in your home or business to keep your electrical appliances in "standby" mode. The most typical example of phantom load is the energy used by the many clocks we all have in our kitchen appliances. How many of us need to know the time on three or four clocks? Another example is running your cable box so that your TV will come on instantly. That uses electricity when you aren't even watching the TV, yet it usually takes only a few moments for your cable box to power back up.

Another great use of power strips is for all of the chargers we all use today for our cell phones, Ipods, digital cameras, and other mobile devices. Plug them all in on the same power strip and shut it off once the devices are charged and you unplug them from their power cord. It's simple!

In 2000, researchers from Lawrence Berkeley National Laboratory estimated that Americans spend around \$4 billion annually on standby power alone. In 2001, a report showed that standby power consumption accounted for an average of 15% of electricity consumption. For more information, see <http://www.byebyestandby.com/USA.html>.

Get that clean and fresh scent without chemicals...

Do you line dry any of your laundry? Project Laundry List (www.laundrylist.org) estimates that using a dryer makes up about 5-10% of our household electricity use. The group believes that in addition to saving money and reducing the environmental impact of energy usage, there are many other benefits to air drying, including humidifying our homes in dry seasons, and helping our clothes to last longer. The group also urges us to wash in cold water in order to save the energy used to heat up water. Check out their website for more.

Caulk it up.

Have you placed caulking and weather strips around doors and windows to reduce air leaks? Have you checked your attic hatch and basement door to make sure heat will not escape this winter? How about the spaces around those ceiling lighting fixtures? These areas can represent major heating losses in your homes, and insulating and tightening up these openings can save energy and money. Most hardware stores have the supplies to make these changes, and we predict that they will be hot commodities this fall!

Some like it (too) hot!

Is your hot water heater set higher than 125 degrees? Water temperatures above 125 degrees are not needed for most tasks (and actually can burn you), yet many water heaters are set at this or even higher temperature. This means that we are using energy (and spending money) unnecessarily to heat water that we don't need. A simple way to check your water temperature is to carefully place the back of your hand under a steady stream of hot water – if it is too hot to keep your hand there, the temperature of your water heater is too hot. You can also check the setting on your hot water heater, which typically shows the optimal setting.

Shine some light on your energy use.

Have you switched all of the bulbs in your lighting fixtures to compact fluorescent lamps (CFLs)? Many people think of the “twisty” light bulbs when they think of CFLs, but today they come in all shapes and sizes for use in all types of fixtures. There are CFLs suited for use in outdoor spotlights (including for motion sensor lighting), bathroom fixtures with exposed bulbs, and even recessed ceiling lighting. To learn more, visit www.nhsaves.com and click on the link to the “Lighting Catalog.” Another great way to save electricity is to use motion-sensor outdoor lighting. This allows you to have lights on outside when you need them, or when there is activity when you are away from home, but it saves the energy and money wasted when outdoor lights are run all night or during the day while you are away. With Christmas around the corner, think about using LED (light emitting diode) Christmas lights. LEDs are also a great way to save money and energy.

A star is born.

Have you invested in Energy Star® appliances when replacing older appliances? We recently heard from a consumer who saved \$30 *per month* on his electric bill after replacing his twenty year old refrigerator! He told us that he expected some savings, but that he had no idea that his old fridge was costing him that much. How much does yours cost? Some new Energy Star® refrigerators are so efficient that they use less energy than a 75 watt light bulb! Generally, Energy Star® products exceed the efficiency levels of other new products on the shelf by 20% and in some cases by as much as 75%.

For more information on efficient appliances and rebates available in New Hampshire, check out www.nhsaves.com.

The Federal Energy Policy Act of 2005 included several tax credits that are available to assist you in making these changes more affordable. Currently, tax credits for some improvements have expired, but may be renewed by Congress if the Renewable Energy and Energy Conservation Tax Credit Act of 2008 is passed (let your Senator or Representative know if you support them). For updated information about the tax credits available, visit these links.

- <http://www.dsireusa.org> – is the Database of State Incentives for Renewables & Efficiency, and it has the financial incentives and rules, regulations and policies applicable to New Hampshire all in one location.
- <http://www.energytaxincentives.org/consumers/> - is designed to give consumers and businesses information they need to make use of the federal income tax incentives for energy efficient products and technologies passed by Congress as part of the Energy Policy Act of 2005.

Technology can save you money.

We all know that more high-tech devices can mean higher electric bills, but it can also save us money. Have you installed a programmable thermostat to ensure that you use your heating system most efficiently? These thermostats allow you to program certain temperatures at different times of day to save energy when you are not home, or at night when you are sleeping. Programmable thermostats are now widely available at hardware and home improvement stores. You can find more information about them at http://www.energystar.gov/index.cfm?c=heat_cool.pr_hvac by clicking on the link for “Programmable Thermostats.”

Keep ‘em tuned up.

Do you change the filter on your furnace and have your furnace or boiler cleaned and tuned on a regular basis? Dirty, clogged furnace filters reduce the efficiency of your furnace by preventing proper airflow. Low-cost filters are available from your local hardware store. How often you will need to change filters will vary, but you should check the filter monthly during the heating season. When you purchase filters, always buy two so you have an extra one on hand. It also helps to write the proper filter size on the outside of the furnace cabinet.

Having a professional heating technician clean and tune your furnace (or boiler) on a regular basis is also a worthwhile investment. A tune-up may involve resetting the fuel/air mixture for proper combustion, and the cleaning of the blower and burners to assure maximum airflow and complete combustion. One way to find a good, reliable heating technician is to ask your neighbors and co-workers for referrals. You can also find this type of service through the yellow pages. If you have any questions about the reputation of a company, contact the Consumer Protection Bureau of the NH Attorney General’s Office at (603) 271-3641 or the Better Business Bureau at 224-1991.

Let the sun shine in ... and other ways to save some green.

Here are a few other ways to prepare for the coming winter:

- During the day in cooler seasons, let sun shine in windows with southern exposures. Remember to close the curtains or window coverings at night to help retain the heat. Sun angles are low in winter, allowing substantial solar heat in through south-facing windows. You may also want to trim vegetation that shades windows on the southern side of your house. Windows with other exposures (i.e., east, west and north) do not contribute to the winter-heating effort, so it is best to keep them covered for extra insulation.
- Make sure you close storm windows and doors in preparation for winter, and remove your window air conditioners. Having a window air conditioner in a window for the winter can cause significant heat loss and removing it is a simple way to tighten up your home.
- Operate kitchen and bath vents minimally. Bath and kitchen vents exhaust heated air and moisture to the outside. If your home is dry during the winter, you may not need to operate these vents at all. However, if you have condensation on windows and you need to operate the vents to remove cooking and bathing moisture, be sure to turn them off when you are done. You will save on both electricity and on your heating fuel.
- Install a water heater blanket. Older water heaters may not have adequate insulation, and a special blanket for these heaters can provide extra insulation and save you energy and money. Be careful to follow manufacturer's recommendations and instructions (for both the water heater and the water heater blanket). Also, take precautions not to cover the thermostat on the water heater.
- Reduce hot water use with a few simple steps that will not impact your lifestyle. Reducing hot water use saves both water and energy, as you reduce how much water you need to heat with electricity or fuel. Low-flow showerheads and sink aerators can actually improve the quality of your water flow as they mix more air with water and often allow for a wider dispersion of water. One place you can find low-flow water devices at great prices is <http://www.nhsaves.com/catalog/>.

Other resources for energy-saving and money-saving ideas include the following:

- In New Hampshire, statewide customer-funded energy efficiency programs are available to customers of New Hampshire's electric and natural gas utilities. You can learn more by contacting your utility or checking their website. You can also find general information about the programs at www.oca.nh.gov and at www.nhsaves.com. The statewide energy efficiency programs provide customers with rebates and access to a wide range of products and services to help lower electric and natural gas bills.
- New Hampshire passed HB1434 during the last legislative session. This law, which authorizes the state to participate in the Regional Greenhouse Gas Initiative (RGGI), also creates an additional funding source for energy efficiency. The funds should be available in early 2009 and will be used for all types of energy efficiency programs regardless of fuel type. An advisory board has been established to help the Public Utilities Commission (PUC) to determine how best to spend those funds. Check the OCA's website this fall for updates on this process.
- If you qualify for certain federal or state needs-based assistance programs you may also qualify for gas or electric bill assistance and for *free* energy efficiency services. Contact your local Community Action Agency or your utility for more information.

Put Your Home on an Energy Diet

We consume a lot of energy in our homes, which result in emission of carbon dioxide, a greenhouse gas that is changing our climate. In fact, a typical home in New Hampshire produces approximately 50,000 pounds of carbon dioxide each year. Fortunately, as you have read above, there are many simple actions we can take in our homes to reduce our energy consumption and these actions will also save us money. If you would like to reduce your fuel and electric bills, the New Hampshire Carbon Challenge (NHCC) can help. (<http://www.nhcarbonchallenge.org>)

The Carbon Challenge offers lots of ideas to reduce your home's energy consumption, and their Carbon Estimator™ can walk you through the process of identifying which actions are best suited to your household. It only takes about 15 minutes and you will get a customized report on the savings your family can achieve. "Taking the Challenge" is an easy way to learn ways to quickly cut your energy bills. Check it out at <http://carbonchallenge.sr.unh.edu/calculator.jsp>!



Once you have taken the Carbon Challenge and you've started to reap the rewards, encourage your friends, family and community to take the Challenge too. You will not only help others save energy costs, but you'll also help move our state toward greater action to slow global warming. Contact the NHCC to find out how your company, place of worship, school or organization can collectively take the Challenge and "Get on the Map" (http://carbonchallenge.sr.unh.edu/maps/challenge_takers.jsp)!

***Thanks to the NH Carbon Challenge for providing this information.*

The OCA Takes on Energy...

Here at the OCA we all take energy efficiency very seriously in our office and at home. We turn out our lights and shut down our computers when we leave our offices, and we have boxes to collect recyclable materials that we take home to recycle. We are also currently exploring ways to increase our recycling programs here in our building, which houses several state agencies. We recently heard that recycling one aluminum can saves enough energy to power a TV for three hours!

Here are a few examples of things that we have done to reduce our energy use. Steve Eckberg and Ken Traum, both of whom live in Hopkinton, have biked into work this summer as their schedules (and the weather!) permitted. They both also recently invested in more energy efficient heating systems. Christina Martin follows family members around the house, shutting off unnecessary lights, unwatched TVs, and turning off the "wrinkle release" feature on the dryer, which can cause the dryer to run needlessly for hours! Rorie Hollenberg cut back on cooling costs this summer by using fans and only running air conditioning on the hottest nights. In June alone, she reduced her electric consumption by one third! Rorie also now uses a lower temperature on her dryer and hangs many things to air dry. Meredith Hatfield, always striving to stay below 200 kWh per month, has been unplugging the microwave, toaster, radio, coffee pot and other appliances that do not need to be plugged in all day.

She has also started running her dehumidifier in the basement only a few hours a day and only on the most humid days. Everyone at the OCA has CFLs in our homes and we have been reducing our driving speed to increase our MPG. How about you? Could you use these tips to save money and reduce your impact on the environment, too?

YOUR ASSIGNMENT NEW HAMPSHIRE...

We want to know: what have you been doing to cut down on energy usage and save money? Tell us how, and tell us about your savings!

As a start, read your utility bills. Did you know that the average New Hampshire electric customer uses approximately 675 kWh per month? That number is up from the previous average of 500 kWh per month. This increase is due in part to larger homes, higher use of air conditioning, and the many gadgets we now have that require electricity or the charging of batteries. In addition, everyone seems to have at least one cable box that runs all the time. Did you know that two cable boxes use as much electricity as a refrigerator? Did you also know that the new giant-screen and plasma TVs can use more than twice as much energy as a small traditional TV?

Try checking your monthly usage from January to present. If you do not keep paper copies or, if you have taken the “green” step to “turn off” your paper bills, you can access your bills online at your electric utility’s website. How did you do compared to the average? Now, check the ideas above and make some changes. Then recheck your energy usage in future months and let us know how much you have saved.

Voice of NH ratepayers...

“Without realizing it we saved about 100 (or more) gallons of oil last year just by insulating and putting up walls in the basement.” – Lauralee Powers, Weare, NH

“I replaced my twenty-year-old refrigerator and saved about \$30 per month on my electric bill. I knew I’d save money, but I had no idea that it would be this much!” – Ted Leach, Hancock, NH

“I replaced my oil burner. Immediately after the replacement I saved approximately \$35 per month. I never knew it would be so beneficial to make the upgrade.” – Ken Mailloux, Salisbury, NH.

Home Depot will collect CFLs for recycling

Home Depot announced on June, 24, 2008 that it will collect compact fluorescent light bulbs (CFL) for recycling. The home improvement store hopes that the new program will keep the bulbs, which contain a small amount of mercury, out of household trash and recycling bins.

IKEA also collects CFLs for recycling but does not have the market saturation of Home Depot; more than three-quarters of U.S. households are estimated to be within 10 miles of a Home Depot store. The company’s 1,973 U.S. stores will also switch to CFLs in light-fixture showrooms by the fall, a move expected to save it \$16 million annually in energy costs.

The OCA applauds Home Depot and IKEA for their efforts to help our environment.

Actor and environmentalist Ed Begley, Jr. speaks to NH consumers.



Ed Begley, Jr. is a well known actor, but did you know he is also a dedicated environmentalist and has been for over thirty years?

Ed was generous enough to share some of his time and knowledge with NH's utility consumers in an interview with our own Christina Martin. Please check out his website at www.livingwithed.net.

Q&A with Ed Begley, Jr.

QUESTION: What would be your advice for homeowners/renters/low-income households to get the most bang for their buck as far as energy efficiency options?

ANSWER: My first advice is pick the “low hanging fruit” first – the stuff that is cheap and easy. You don’t run up Mt. Everest. You get to base camp, you get acclimated, and then you climb as high as you can. Not everyone is Sir Edmund Hillary. Also, don’t get hung up on the big shiny sexy objects like solar panels and wind turbines. I started this stuff back in 1970 when I was a struggling actor and had very little money. I didn’t get solar hot water until 1985 and solar electric until 1990! You want to CONSERVE first. Remember, a kilowatt SAVED is much cheaper than a kilowatt PRODUCED. I recommend everyone start by conserving. This includes energy efficient lighting, a programmable thermostat, weather stripping and insulation, etc.

QUESTION: What are the easiest renewable energy options?

ANSWER: The two easiest are your local utilities green power program and a carbon offset program like TerraPass. First, if you subscribe to your local utilities green power program, you are asking them to supply you with renewable energy. They, in turn, go out and buy green power from solar, wind, geothermal, methane [generators], etc. As consumers choose this, demand for renewable energy goes up and demand for dirty power like coal goes down. At some point in the future, new renewable power plants will be constructed to meet this demand and coal plants will be shut down. The same goes for a carbon offset like TerraPass – it’s another way to increase demand for renewable energy. These two things allow everyone to purchase renewable energy without having the resources to put solar panels on your roof.

Editor’s Note: A “green power program” allows you to choose to get your electricity from renewable sources. Your utility purchases the power on your behalf from renewable sources, or purchases renewable energy credits equivalent to the amount of power. New Hampshire does not have this type of program in place at this time. To read more about green power, visit the Environmental Protection Agency’s website, <http://www.epa.gov/greenpower/>

Editor’s Note: Terra Pass is used to economically balance the emissions you can not reduce. When you buy a TerraPass, your money funds clean energy and efficiency projects such as wind farms. These projects result in verified reductions in greenhouse gas emissions.

QUESTION: What are the cheapest renewable energy options?

ANSWER: The two things above are both pretty cheap – meaning they don't cost you much more to do than your current energy portfolio. But PRODUCING power is expensive and takes resources. Down the road, there may be options for leasing solar panels for the home and other cheap renewable energy solutions. For now, the cheapest things are CONSERVATION things...CFLs, weatherstripping, insulation, thermostats, public transportation, water conservation, etc.

QUESTION: Why do you believe so strongly in energy conservation?

ANSWER: We have a number of challenges facing us. We have finite fossil fuel resources, and much of this fossil fuel comes from countries that aren't necessarily our allies. We have serious problems with pollution in cities like L.A., Houston and Bakersfield, as well as in countries like China. And we now have a very good consensus on global warming science and we know this is a problem. So for all these reasons, as well as the personal reason of Saving Money, we need to conserve energy and look to renewables for the future.

QUESTION: What types of things do you do on a daily basis to reduce your energy use?

ANSWER: Well, with my transportation, I walk, ride a bike or use public transportation almost every day. And, when in town, I also use my electric car which is charged from my solar. My house is highly insulated top, bottom and sides with high efficiency HVAC and appliances, and a GreenSwitch to shut down phantom power devices. My lighting is CFL and LED and my thermostat is very well programmed. These are all things that anyone can do.

Editor's Note: GreenSwitch is a product that is installed in designated light switches, outlets and thermostats in your home or business. Using wireless technology, a slide of the GreenSwitch Master Switch interrupts the energy flow to every non-essential light and designated outlet, and sets your thermostat back to economy mode. A slide back on returns the system to fully operational. <http://www.greenswitchnow.com/index.html>

QUESTION: How is your house powered? How many kWh do you use monthly?

ANSWER: My house is powered predominately by the solar panels on my roof. My system is 6 ½ kw, and it provides all but about \$300 a year of power to the house. That \$300 I buy from the Los Angeles Department of Water & Power on a time of use meter at night at \$0.03 a kWh. I use that power mostly to charge the electric car at night.

Editor's Note: A "time of use meter" allows you to see the actual cost of the electricity that you use at different times of the day. For example, on a hot summer afternoon energy costs can be many times higher than electricity later that night. These meters are often referred to as "smart meters" in part because they allow us to be smarter about when we use power. The NH PUC will be opening dockets soon to consider whether it is cost effective to require our utilities to provide these smart meters to customers.

QUESTION: What resources would you like to share with our audience?

ANSWER: Start with a home energy audit. Set a baseline and find out where you are in your house in terms of energy efficiency. Your power company may offer one, or go online and find a home energy auditor in your area. If you can afford it, find one that uses a blower on the door and an infrared gun. These tools help the auditor find all the leaks in the insulation and windows, etc. They can provide a really good insulation and building envelope game plan to make the house as efficient as possible. I highly recommend this as a first step.

Editor's Note: You can find information about companies that offer comprehensive energy audits at www.repa.org by clicking on "consumer guide." You can also request an energy audit from your electric or natural gas utility.

QUESTION: Is there anything else you would like to share with our office and/or our audience?

ANSWER: The best advice I can give anyone is 'get out of your car' – for a day, a week, a month, whatever you can manage. Walk, or ride a bike if weather and fitness permit. Use public transportation if it's available near you. This is the number one thing I'd like everyone to do if they can.

The OCA thanks Ed for his helpful suggestions and insight on energy efficiency. Keep up the good work!

To calculate your carbon footprint, visit <http://www.carbonfootprint.com/>.

Governor Lynch's Climate Change Task Force

On December 6, 2007 Governor Lynch signed an Executive Order establishing a Task Force to develop a Climate Change Action Plan for the State. The Task Force has 28 members including agency heads, business and community leaders, non-profit organizations, the utilities, and UNH. This diverse group has been meeting since January, and has been working with a broad range of stakeholders in subgroups to develop specific strategies to address climate change. You can view all of the documents produced thus far at <http://blogs.nh.gov/nhpress2/climate>. The Task Force will hold public sessions around the state in September, and seeks input from the public on the suite of policy options currently under consideration. You can find the dates for the public meetings at www.oca.nh.gov. The Task Force will prepare a final report with recommendations to the Governor by the end of the year.

You asked, and the OCA answers.

The OCA was recently asked why Public Service Company of New Hampshire (PSNH) does not pass on the cost of generating electricity at Seabrook Station, as they do with their coal, hydro, wood and other electric generating stations, to customers. Here is the answer:

PSNH no longer owns an interest in the Seabrook Nuclear station. After the New Hampshire Legislature passed laws restructuring the electric industry in 1996 (see RSA 374-F), all New Hampshire electric utilities were directed to divest their interests in generation. In a restructured environment, electric generating plants are to be privately owned, with the electricity they generate sold in a regional wholesale auction, rather than being built and operated using by public utilities to serve their customers. Florida Power & Light (FPL) now owns Seabrook Station and can sell its output in the regional wholesale market.

However, in 2000, after PSNH divested its interest in Seabrook (and all other NH utilities divested their interests in all generation), the NH Legislature directed PSNH to retain its remaining generating plants and to continue to provide that power to its customers (see RSA 369-B). As a result, today PSNH generates about 60% of the electricity needed by its customers, and purchases the remaining 40% from the regional wholesale market.

There is continuing debate over the question of whether public utilities should be able to own generation, or if we should continue to have private companies build and own generation, with utilities (or competitive suppliers) purchasing energy from the regional market on ratepayers' behalf. Watch the legislature this year to see if another bill is introduced on this issue.

OCA Activity

Interested in seeing what we are working on? Check out our OCA Activity, updated every other month on our website at www.oca.nh.gov. We are busy working on cases in all regulated utility industries including water, natural gas, electricity and telecommunications. You can also keep up on PUC dockets at the PUC's website, www.puc.nh.gov.

Our website has lots of useful information for consumers. Click on the Consumer link and you will find assistance programs for each industry, energy efficient programs, information on how to read and understand your utility bills, tips on saving money and tips on conserving. You can also find a detailed description of how to become involved in proceedings at the PUC and how to file complaints. Take a look! Let us know what you think and if there is something you would like us to add.

Help Us Help You!

The OCA welcomes your questions regarding any public utility matter impacting residential customers. Please send us your questions and we will answer them or we'll find the best person to answer them. The OCA exists to advocate on behalf of residential ratepayers as a group.

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