THE NEW HAMPSHIRE RATE WATCHER

(It's Your Money)

The Consumer Newsletter of the
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Q. Are you informed of the new technologies out there today?
A. Now you can be!

Technology has enhanced the 9-1-1 system. Now known as "E911," the emergency assistance system is equipped to identify a caller's address and telephone number, which displays automatically on the dispatcher's computer screen. This information enables the dispatcher to re-contact a caller if the call is terminated and dispatch emergency assistance if the caller is unable to communicate his or her needs. In order for the address information to come up on the dispatcher's computer screen, your community needs to implement a 9-1-1 addressing project. **To learn of efforts by your community to do so, please contact your town office.** Your community may request assistance from the New Hampshire Bureau of Emergency Communications (NHBEC). There is no charge for this assistance.

People depend upon wireless phones more and more these days, particularly for emergency situations. Not all wireless phones are equally useful for emergencies. Some wireless phones in use today are not equipped to identify the location of a caller. In an emergency, this may be important information to have automatically - particularly when a caller is unable to communicate with emergency services personnel or if the call is terminated. Only recently have wireless phones been equipped with location-detection technology (also known as "Global Positioning" devices or "GPS" chips). To identify whether a wireless phone is equipped with such technology, look on the back of the phone or contact the wireless carrier.

"Call to Protect" is a program that enables law enforcement and agencies working with victims of domestic violence to lend wireless phones to victims. Based upon information and belief, many of these phones are "un-initialized" or not programmed with the user's name, a call back number or address. Consequently, for calls to E9-1-1, the user must identify themselves, their location and telephone number immediately. Otherwise, the dispatcher will not be able to re-contact the caller or dispatch assistance if the call is terminated.

(Information from New Hampshire Bureau of Emergency Communications)

Look for the summer edition of the Ratewatcher, coming in July. It will include detailed information regarding new telephone technology, Voice Over Internet Protocol (VOIP), and its risks relevant to E911.

Renewable Energy:
Use the natural resources that the earth provides

Alternative sources of energy do exist for residential utility customers. These alternative sources of energy are highly reliable, cost competitive and do not add to air pollution. They are not subject to fuel price volatility and supply disruptions from changes in global energy markets. These alternatives are renewable sources of energy: solar, wind, and geothermal energy. Wouldn't it be great if you could take part in protecting the environment and be less dependent on your current utility? You can be.

From Sunlight to Electricity

Solar electric systems convert direct sunlight into electricity, offering homeowners the security of producing their own power. Traditionally, bulky solar panels were used for this purpose. Today, new materials including "thin-film" solar panels - only a few micrometers thick are available. Thin film solar panels are attractive alternatives to traditional solar panels, as they can resemble traditional roofing such as shingles, slate tiles and standing-seam metal roofs.

The cost of installing a solar electric system depends on the type of system you prefer or need, your individual energy needs as well as your location (i.e., amount of sunlight available). You can look at your utility bill or contact your utility to see what your average kilowatt hour usage is. Then contact a few different companies that install solar electric systems to get an estimated cost.

While the initial cost of installing a solar electric system may be high, the investment in your home, your environment and your freedom from fossil fuel may well outweigh these costs. There are certain incentives to help alleviate some of the cost for NH residential customers. One incentive is the ability to connect your solar electric system to the utility power grid. With such a connection, a homeowner may receive electricity from their utility if their solar electric system does not meet their usage needs. Moreover, any power generated by the solar electric system in excess of the homeowner's needs may be used by the utility. In turn, the homeowner receives a credit for the excess on their utility account. This is known as "net metering" or "net billing." For more information on net metering or net billing please visit www.puc.nh.gov or contact the Public Utilities Commission at 1-800-852-3793.

Note * Be sure to speak with your homeowner's insurance provider, because the solar electric system will need to be added to your policy and, in many cases, you may have to add a rider to your policy for the grid-connected system.

Another benefit of solar is that you can participate in what is called Mainstay Energy Rewards Program – Green Tag Purchase Program. What this does is pays you money for your "Renewable Energy Credits (REC)" or "green tags". That means that all your energy produced with your solar system is marketable and profitable. For more specific information please go to the end of the newsletter for listings.

Another incentive is NH State Law, RSA 72:61-72, which grants municipalities the option to exempt certain renewable energy installations from property taxation. Right now 57 municipalities provide such tax exemptions. Check with your local tax collector or assessor or contact the Governor's Office of Energy and Planning. Please go to the end of the newsletter for contact information.

For home owners or buyers there is an Energy Efficient Mortgage (EEM) and an Energy Improvement Mortgage that can be used to pay for energy efficiency measures in a new or existing home. Such financing may be available to pay for a solar electric system or other energy efficiency measures. To find more incentives like these please go to the end of this newsletter for contact information.

Passive Solar & Solar Hot Water

The south side of a building always receives the most sunlight. Therefore, buildings designed for passive solar heating usually have large, south-facing windows. Materials that absorb and store the sun's heat can be built into the sunlit floors and walls. The floors and walls will then heat up during the day and slowly release heat at night, when the heat is needed most.

The sun can be used to heat water, too. Most solar water heating systems have two main parts: a solar collector and a storage tank. According to the Federal Energy Management Program Solar Water Heating Technology Alert, the flat plate water heating systems can range from $2,000-$4,000 for residential uses, giving you 40-80 gallons per day usage.

Wind Energy

For hundreds of years, humans have harnessed the wind's energy. Traditionally, windmills have been used to pump water or grind grain. Today's modern equivalent of the windmill is a "wind turbine", which uses the wind's energy to generate electricity.

Wind turbines can be used as stand-alone applications or like a solar electric system; they can be connected to a utility power grid. Wind turbines and solar systems can be combined for optimal energy use. Stand-alone wind turbines are typically used for pumping water or communications. In windy areas, however, homeowners could use a wind turbine to generate electricity. Maps of areas that would represent where wind turbines would be best used as well as a Small Wind Consumer's Guide can be found at the U.S. Department of Energy, Energy Efficiency website. Please see contact information at the bottom of newsletter.

Geothermal Energy

Geothermal energy is energy derived from the natural heat of the earth. Geothermal energy technologies use the heat of the earth for direct-use applications, geothermal heat pumps, and electrical power production.

Geothermal Direct Use

When a person takes a hot bath, the heat from the water will usually warm up the entire bathroom. In modern direct-use systems, a well is drilled into a geothermal reservoir to provide a steady stream of hot water. The water is brought up through the well, and a mechanical system - piping, a heat exchanger, and controls - delivers the heat directly for its intended use. A disposal system then either injects the cooled water underground or disposes of it on the surface. Direct-use applications can be used for various purposes including heating buildings

Geothermal Heat Pumps

A few feet beneath the Earth's surface, maintains nearly a constant temperature between 50 and 60 degrees Fahrenheit (10 to 16 degrees Celsius). Like a cave, this ground temperature is warmer than the air above it in the winter and cooler than the air in the summer. Geothermal heat pumps take advantage of this resource to heat and cool buildings. In the winter, heat extracted from the ground can be used to heat a home. In the summer, heat built up within a home can be moved to the ground or used to heat water.

Contact Information for Renewable Energy:

Solar Electric - For information about purchasing a solar electric system, see the "Consumer's Guide to Buying a Solar Electric System," available online at www.nrel.gov/ncpv/pdfs/26591.pdf or contact the NREL Document Distribution Service at (303) 275-4363, for a copy by mail.

Incentives - The national Database of State Incentives for Renewable Energy (www.dsireusa.org) or contact the NH Governor's Office of Energy and Planning at 603-271-2155 or website http://nh.gov/oep/programs/energy/documents/renewableenergyincentives.pdf for Renewable Energy Incentives and Tax Exemptions in New Hampshire.

State Energy Contacts - The U.S. Department of Energy's Energy Efficiency and Renewable Energy Network (EREN) has compiled a list of state energy contacts (see www.eren.doe.gov/state_energy) or call the NH Governor's Office of Energy and Planning.

N.H. Governor's Office of Energy and Planning Renewable Energy Contact: Joseph C. Broyles (603) 271-2155 e-mail joseph.broyles@nh.gov

Link to Renewable Energy Resources: http://nh.gov/oep/programs/energy/conservation_renewable_energy.htm or call the NH Governor's Office of Energy and Planning.

** The Office of Consumer Advocate does not endorse any products or methods referenced in this newsletter. The information is provided for consumer education only.**

(Information provided in this newsletter was taken from various informational sources including, but not limited to, U.S. Department of Energy, Database of State Incentives for Renewable Energy DSIRE, Solarbuzz, the Maine Public Advocate Office Electricity Guide, U.S. Department of Energy's Energy Efficiency and Renewable Energy Network (EREN) and Geoexchange)

Tip for the Season:

- Never dig around your home or business without first calling this toll-free number for Dig Safe in New Hampshire: 1-888-344-7233.
- Do dishes, wash and dry clothes and charge batteries after 8pm in order to take strain off the electric grid during hours of peak demand.
- Make sure the light bulbs in all your fixtures are the correct wattage as recommended by the light fixture manufacturer. If too high a wattage bulb is used in a light fixture, heat produced inside the fixture can lead to fire inside the fixture, ceiling or wall.
- Review your fire escape plan with your family.
- Protect all your electrical appliances from power surges and lightning with surge protectors.
- If you have a gas-fired water heater, check to make sure it is venting properly. Light a match next to the vent and wave it out (don't blow it out). See if the smoke is pulled up into the vent. If it isn't, have a professional inspect and repair. This can cause carbon - monoxide and other combustibles to build up in the home.
- Check around the base of your water heater for evidence of leaks. If your water heater is over five years old, it should be checked monthly for any leakage or rusting at the bottom. If water leakage or rust is found, the water heater should be replaced.
- Install and/or check batteries of smoke and carbon monoxide alarms.
- Inspect and clean dust from the covers of your smoke and carbon monoxide alarms.
- Purchase ENERGY STAR rated Compact Fluorescent Lamp lights (CFL). They last up to 10 times longer than an equivalent incandescent bulb and use 75% less energy.

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Quote of the month: *"As you grow older you will discover that you have two hands; one for helping yourself, and the other for helping others."*
- Audrey Hepburn

If you have any ideas or suggestions for any upcoming newsletters, or have any comments regarding present or past newsletters, please contact Christina Martin at 271-1172.