the power OUTLET
The Newsletter for the Groton Electric Light Community
July, 2011

New wind project makes Groton a little "greener"

Groton Electric is part owner of the largest wind farm in Massachusetts—the Berkshire Wind Power Project—located on Brodie Mountain in Hancock.

Groton got a little greener this spring when a new wind power project in Hancock, Mass. became fully operational.

The Berkshire Wind Power Project, owned by a cooperative that includes Groton Electric, will add clean and renewable energy to Groton's power supply portfolio for years to come.

The project began in 2008, when Groton Electric partnered with our wholesale energy agent, the Massachusetts Municipal Wholesale Electric Co., and 13 other municipal utilities to form the Berkshire Wind Power Cooperative Corporation. The cooperative allowed us to own, finance and build the wind project.

The wind farm consists of ten 1.5-megawatt General Electric wind turbines capable of producing electricity for approximately 6,000 homes. The 15-megawatt wind project was declared commercial on May 28 with all 10 turbines fully operational.

Wind turbines atop Brodie Mountain in Hancock, MA will produce enough energy to power 6,000 homes.
Photo by: OnSite Studios of Boylston, MA

Public power now owns 58% of all wind power in Massachusetts!

Groton Electric will receive just over 5.5% of the project's output. The energy will not only help to diversify GELD's power supply portfolio, but will also stabilize long-term costs by reducing our reliance on fossil fuels.

In 2010, without this wind project, GELD's power purchases were 53.5% carbon-free. Over its expected life of 20 years, this project will offset the production of nearly 612,000 metric tons of carbon dioxide and the use of 1.7 million barrels of oil.

More than 50 people braved the elements to attend the project's recent dedication, including members of the Cooperative and Governor Deval Patrick. The governor, who participated in the ribbon-cutting ceremony, also praised wind energy in Massachusetts.

It's lightning season! Protect your valuable electronic equipment

Take steps to protect your home from lightning strikes and other unpredictable power surges

Due to the unpredictable nature of electricity, no utility can guarantee an unconditionally stable and consistent power supply. Several elements combine to offer the most effective protection for your home's electronics and electrical systems. ***The most important component is a functional service ground***—see "a good ground helps to protect your home".

Although Groton Electric strives to provide reliable power at the lowest price every day, there will be inconsistencies in the power supply that we have no control over. Because of this, we recommend you protect your valuable equipment with an adequate ground, surge protection, and a UPS (uninterruptible power supply).

A surge protector is a standard piece of equipment that should be included when purchasing computers and high-end electronic equipment. Surge Protectors as the name suggests, protect valuable equipment from sudden surges or spikes in voltage. A surge is a sudden, temporary increase in the normal current or voltage. Normal current in the U.S. is 120 volts, with an acceptable range between 114 and 126 volts. If the voltage rises above 120 volts, there is a problem, and a surge protector helps to prevent that problem from destroying your equipment.

Surge protectors send the surplus voltage to your service ground, diverting it from your equipment. It is important to

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It's lightning season *continued from front*

regularly check your surge protectors because one large surge or a number of smaller surges can destroy the surge protector and then it is no longer protecting your equipment.

There are many types and price ranges of surge protectors, but we recommend purchasing a surge protecting power strip with a UL rating of at least 1449, a good warranty, and an audible alarm. An audible alarm warns you that the surge protector is no longer working and needs to be replaced.

Consider a back-up battery source when purchasing expensive equipment

A UPS (uninterruptible power supply) is a battery that maintains a continuous supply of electric power to connected equipment, by supplying power if utility power is not available or a voltage dip occurs.

A UPS is inserted between the source of power and the equipment it is protecting. When a power failure or dip in voltage occurs, the UPS will effectively switch from utility power to its own power source almost instantaneously. This is especially important in the summer with the increased frequency of lightning and the increased use of air conditioners.

There are two common types of UPS devices: stand-by UPS and continuous UPS. A **stand-by UPS** runs the computer off of the normal utility power until it detects a problem. At that point, it very quickly switches to the UPS's battery. The battery "back-up" gives you time to save your work and shutdown your computer safely.

In a **continuous UPS**, the computer is always running off of battery power and the battery is continuously being recharged. If the power fails, there is no switchover time. This setup provides a very stable source of power.

Standby UPS systems are far more common for home or small-business use because they tend to cost about half as much as a continuous system. Continuous systems provide extremely clean, stable power, so they tend to be used in server rooms and critical applications. As prices drop, continuous UPSs are becoming more commonly used.

We recommend doing some research to determine the best protective equipment for your needs. There are two key ratings to be aware of when choosing a UPS unit. The first is load rating—expressed as both volt amps and watts; the load typically should not exceed 80% of the load rating. The second is runtime: do you want enough time to safely turn everything off if an outage occurs or do want to be able to operate your electronic equipment during an extended outage?

A good "ground" helps to protect your home

The most important component to protect your valuable equipment is your home's "service ground."

Without it, excess voltage can damage appliances or in extreme cases, cause a fire. The service ground wire connects directly from the electric service box to the ground via a "ground rod" or, in older homes, the water pipe. Be sure that your ground has not been removed or become loosened. A licensed electrician can determine the adequacy of your ground by measuring its resistance and by making any necessary adjustments.

Take a few minutes to be prepared

Even with the best planning, occasional power outages do occur. Prepare now so you'll be ready in a hurry if the unexpected happens:

Make a storm kit with things you will need if the power goes out. Keep enough supplies for at least three days. Include a battery-powered radio and a flashlight, along with a supply of batteries to run them. Also gather nonperishable food, a manual can-opener, bottled water, matches and candles, personal medications, and a first-aid kit. Don't forget baby formula and pet food, if needed.

You can find detailed information about preparing for the unexpected online at fema.gov. Click "Plan & Prepare" on the home page to find an in-depth guide to citizen preparedness.

Welcome Bruce!

Bruce Dubey joined Groton Electric in the fall of 2010 and is the newest addition to our line crew. As an apprentice lineman, Bruce will receive on-the-job training as well as formal schooling for the next several years until he reaches the goal of first-class lineman. Please join us in welcoming Bruce.

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The 40 Municipal Electric Utilities of Massachusetts

Groton Electric Light
23 Station Avenue
Groton, MA 01450
tel: 978-448-1150
fax: 978-448-1159
www.grotonelectric.org