

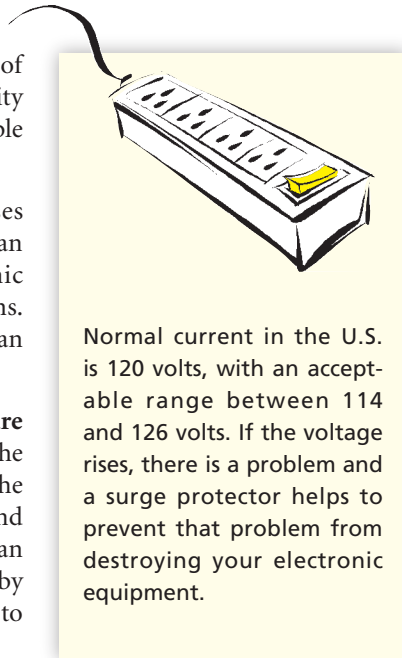
## Protect your electronics from power surges

*A few simple steps can protect your valuable electronic equipment from possible damage caused by unpredictable power surges.*

While Groton Electric is proud of our record of reliability, the unpredictable nature of electricity means that no utility can guarantee a totally stable and consistent power supply.

Power surges—sudden, temporary increases in electricity’s normal current or voltage—can damage or even destroy sensitive electronic equipment such as computers and televisions. The good news is, there are simple steps you can take to protect your electronics.

**The most important measure is to make sure your home has a functional service ground.** The service ground wire connects directly from the electric service box in your home to the ground by way of a “ground rod.” A licensed electrician can determine the adequacy of your ground by measuring its resistance. It’s worth checking to make sure your home is protected.



Normal current in the U.S. is 120 volts, with an acceptable range between 114 and 126 volts. If the voltage rises, there is a problem and a surge protector helps to prevent that problem from destroying your electronic equipment.

In addition to maintaining an adequate service ground, you should use surge protectors with all sensitive electronics. A surge protector is a standard piece of equipment you can pick up where you purchase computers or electronic equipment. It protects valuable equipment from sudden surges or spikes in voltage by sending the surplus voltage to your service ground, diverting it from your equipment.

You should regularly check your surge protectors because one large surge or a number of smaller surges can damage the surge protector so it no longer protects 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.**

### How to protect against power dips

In addition to power surges, short drops in voltage called power dips can also cause problems. Protection from power dips comes in the form of a back-up battery source, also called an uninterruptible power supply (UPS), which supplies power to connected equipment if utility power is not available or a voltage dip occurs.

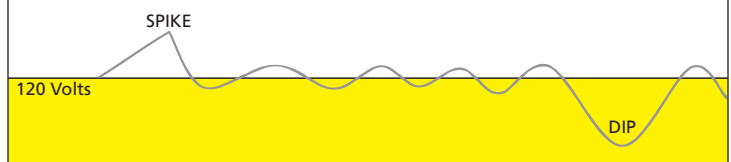
A UPS is inserted between the source of power and the equipment it is protecting. When a power failure or dip in voltage occurs, the UPS will effectively switch from utility power to its own power source almost instantaneously. This is especially important in the summer with the increased frequency of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

A **standby UPS** runs the computer off of the normal utility power until it detects a problem. With a **continuous UPS**, the computer is always running off battery power as the battery is continuously recharged. We recommend doing some research to determine the best protective equipment for your needs.

### What causes voltage variations?

Large appliances such as refrigerators, air conditioners and heating pumps require a lot of energy to operate their compressors and motors. Switching them on and off creates sudden, brief demands for power, which causes the voltage flow to spike and dip. These variations in power flow can be severe enough to damage components immediately or gradually over time, and they regularly occur in most household electrical systems.

The most familiar source of surges is lightning, though it is actually one of the least common causes of power surges. If a surge is caused by a lightning strike it is likely that any surge protector will be overpowered. *The best precaution to take during a lightning storm is to unplug your valuable equipment from the wall outlet.*



# Regional transmission costs are rising

*Groton Electric will keep customers informed of the increases in regional transmission costs while challenging unnecessary transmission projects and unreasonable costs*

In 2008, the investment in New England's high-voltage electric power grid was approximately \$1.5 billion. Within the past few years, costs to develop the power grid infrastructure have soared to \$3.8 billion. As transmission projects are completed over the next several years, the total investment is expected to increase to more than \$9 billion by 2014.

What that means is that consumers throughout New England, including Groton Electric ratepayers, could be paying approximately 4 cents/kilowatt-hour for transmission service alone in 2014, compared to the current cost of just under **2 cents/kilowatt-hour**. For customers using 500 kilowatt-hours of electricity a month, that means the transmission portion of your bill could double to about \$20/month.

In addition to these costs, which are associated with transmission projects already approved by the grid operator to ensure reliability, we are even more concerned with the potential costs of transmission projects proposed to connect remote renewable energy facilities to the grid in the years ahead. The cost of these projects to New England consumers could potentially be between \$10 billion and \$47 billion, depending on which projects are approved. This could push future transmission costs to 8 cents/kilowatt-hour, or \$40/month for a 500 kilowatt-hour customer.

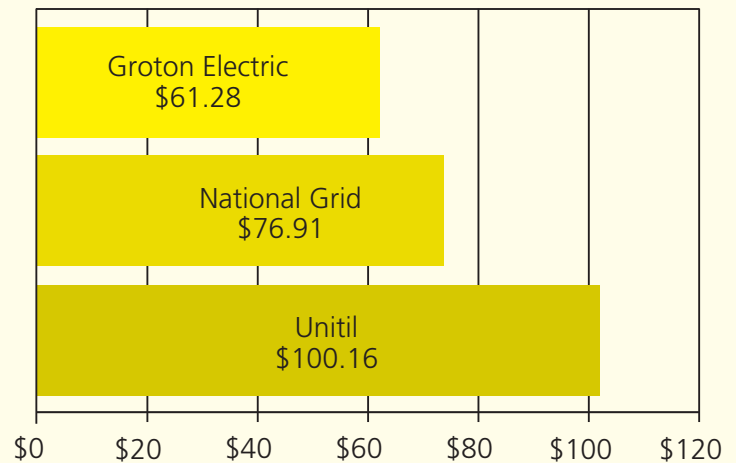
Providing our customers with reliable electric service is extremely important to us, and we have supported many of the regional transmission upgrades needed to ensure reliability. We also support the development of renewable energy resources, consistent with state and national energy goals, as a way to curb our reliance on foreign oil and reduce the environmental impacts of generating electricity.

As always, our mission remains steadfast—to provide power at the highest degree of reliability at the lowest cost that fiscal prudence dictates. It is our belief that some of the transmission projects under discussion push costs well beyond the reasonable level, which is why we are raising this issue publicly, with energy regulators, legislators, the media and our customer/owners.

We will continue our work to represent interests of our ratepayers in the state, regional and national forums where decisions about these transmission projects are being made. And we will continue to keep our customers informed.

## See how we compare

The following chart shows a typical 500 kWh bill amount for Groton Electric compared to two local investor-owned utilities. As you can see Groton Electric offers a substantial savings in comparison—National Grid's rates are 26% higher than Groton Electric's rates and Until's rates are 64% higher.



*note: this data represents the most current 12-month average*



### Congratulations Graduate!

*Manager Kevin P. Kelly graduated with honors from WPI, Worcester, MA on May 15, 2010. He received a Master of Science in Power Systems Management. Congratulations Mr. Kelly!*