



WHAT IS GRID RESILIENCY?

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Resiliency of the power grid is one of the most popular concepts being talked about in the electric industry today. This concept recently made headlines in the wake of Hurricanes Irma and Maria, which caused extraordinary damage to Puerto Rico's electric grid resulting in the longest sustained outage in U.S. history. Lack of resilience became the go-to phrase to describe Puerto Rico's grid. At Sussex Rural Electric Cooperative, what does grid resiliency mean for you?

Resiliency is many things – it is reliability in your electric service, it is our ability to efficiently restore your power, it is being able to meet the demands of new technology and it is how we serve you with various integrated generation sources. Ultimately, resilience is how we deliver on our promise to maintain and even improve the quality of life for our members.

When it comes to having a resilient electric grid, it begins with a system that is designed and built to withstand high winds, powerful storms, cybersecurity threats and other disruptions that could result in outages. A resilient grid is also flexible and adaptable by allowing different types of generation to seamlessly work together to provide you with safe and reliable power.

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Resiliency is a 24/7, 365-days-a-year task. Whether it's the power lines, substations or generation facilities on our grid, it takes proactive maintenance and investment to keep them running smoothly. With thousands of consumers without power for months, the lack of resiliency in Puerto Rico's power grid wasn't solely caused by hurricane damage; it was apparently the result of years of neglect in taking care of their system and preparing for a worst-case scenario.

The storm systems that hit our area this past March caused the Boards of Public Utilities in New Jersey and New York to review maintenance practices of investor-owned utilities due to the slow recovery of many towns outside our territory. Our territory, however, is entwined with an investor-owned utility, and sometimes power outage causes are beyond our delivery point and our control. Some electric lines stretch through different utilities, so, for example, a tree down on a transmission line in Franklin could cause an outage beyond our control in Wantage.

In the dictionary, resilience is defined as "the ability to bounce back, recover quickly, and go back into shape or position after being stretched." When it comes to providing our members with resilient service, this is what we work toward – day in and day out!

So how is your Cooperative keeping its own grid resilient? One way we do it is by taking

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proactive measures like regularly trimming trees in the power line rights-of-way, physically inspecting our poles, using an infra-red camera on all of our transmission and primary lines to find weak or loose connections, and embarking on planned maintenance schedules of equipment like transformers, regulators, and reclosers. We trim all the trees on our system every four years and when we've completed our system, we go back and start over again. By proactively finding the hanging branch, the weakened insulator that was perhaps struck by lightning, or the bird or insect damaged wood pole, we're preventing an outage.

And those annoying power blinks that sometimes occur, causing you to have to reset your blinking clocks? As frustrating as they may be, they do serve a useful purpose for our grid. The blink in power (which is a momentary, brief power outage) allows a fault to clear through the line, whether it was from a tree branch contacting the line or an animal contact issue. Once that fault has cleared, the power comes back on after that momentary blink. The technology allows the blink to happen up to three times before deciding the fault has not cleared and the power has to stay off until a line crew can troubleshoot the problem. Without these blinks, we would be dealing with an outage for an hour or two. Each morning, we analyze reports of where blinks have occurred, and we'll dispatch someone to patrol the area, finding a potential future outage-causing tree branch that needs to be trimmed. No other utility in the state does this kind of proactive analysis to find potential future causes of outages. This is grid resiliency at its best!

In a similar way to how you maintain your vehicles with regular oil changes, inspections, and tire rotations, a grid must also be properly maintained. In doing so, our goal is to find the problem before it becomes one. We strive to be proactive, instead of reactive, when storms strike.



ETS Heating - Break the Cold with Bricks!

An ETS heating system is an excellent, low cost way to add warmth to cold and drafty rooms, or heat an addition to your house without disrupting your present heating system. An ETS heating system is clean, quiet, and very efficient. There are no flames. No fumes. Nothing to pollute the air inside your home.

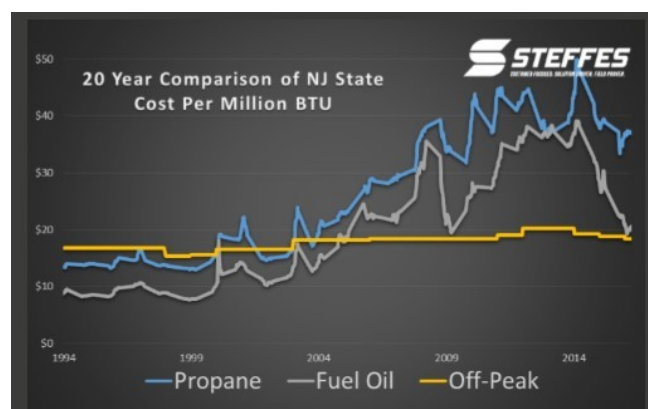
ETS furnaces and heaters collect electricity at night, when rates are lower, and store it for later use. The heating elements rest within heat-storing ceramic components.

In an electric versus oil heat price contest, electricity has been coming out ahead. Heating a home with electricity is less expensive. For winter 2014 to 2015, the average cost of using ETS heat was \$960. For the same period, heating oil costs averaged \$1,851.

Another advantage is that electric furnaces and heaters are available for either whole houses or individual rooms. This makes them useful for heating additions or seldom-used rooms.

Electric furnaces are also very safe, as they don't produce dangerous gases as by-products. There is no combustion in electric heaters, so the chance of a home fire is remote as well.

Plus, take advantage of our ETS Refer-A-Friend program and other incentive programs. **For more information go to sussexrec.com.**



History shows SREC's ETS rate has been very stable since 1994. Oil and propane rates have taken their customers on roller coaster rides. Do you have the stomach for the next price spike?

Check Your Mail!

At the Annual Meeting and in the June issue of *Currents* we informed our members that every one of our members is getting a gift of four LED light bulbs from Sussex Rural Electric Cooperative— for free! It's part of an energy efficiency plan that Allegheny Electric Cooperative, our power generation provider, unveiled this year where all 230,000 cooperative households across New Jersey and Pennsylvania will receive these bulbs. We encourage you to replace four standard incandescent bulbs in your home with these 60-watt equivalent, soft white LED bulbs. You save: it is projected that each bulb will save you over \$6 per year in energy costs, for over 20 years. That box of four bulbs has about \$500 in savings in it. The Cooperative saves: the combined effect of all the lightbulbs installed will help reduce our power costs, as it reduces the need for Allegheny to purchase power on the open market, above what its own assets generate. We all save: just like our water heater program, by reducing our operating costs, we can continue to keep your electricity rate as one of the lowest in the state of NJ. This allows us to continue our focus on providing the highest quality of service to our membership at the lowest possible price.



Some members who have already received their lightbulbs have asked if they can purchase more. Allegheny Electric is looking into this possibility and we will keep you updated as information becomes available. Certainly, LED lightbulbs are available at a host of retail stores but this particular light is not sold in stores.

Boxes are being delivered daily. If you do not receive your box by August 17th, please let us know by contacting our office at 973-875-5101 or at customerservice@sussexrec.com. There are directions in the box for replacements if the bulbs are damaged during shipment.

Start saving money today by installing your new lights!

FOOD DRIVE

In June and July, the members of the Cooperative donated over 430 pounds of food to the Sussex County Food Bank.



It's not magic, it's ETS Heat!

The "magic" of the cost effectiveness of Electric Thermal Storage (ETS) is the ability to store heat during off-peak billing hours for use during higher priced on-peak billing hours.

An ETS furnace offers several distinct advantages:

- ⇒ No oil tanks or fuel deliveries to worry about.
- ⇒ No wide price fluctuations that make budgeting difficult.
- ⇒ No burners to maintain or fumes to vent.
- ⇒ Quieter operation—practically no sound.

A variety of furnace sizes are available to fit your home ranging from 19.2kW—45.6kW.



ETS Furnace
(cutaway view)



ETS Room Unit
(cutaway view)



For more information go to

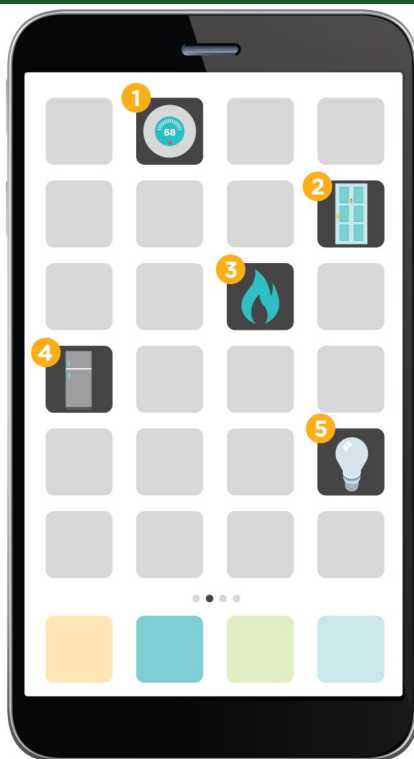
www.sussexrec.com or give us a call at 973.875.5101

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SMART HOME TECH APPS

Smart home technologies are continuously improving, and companion mobile apps take the convenience to a new level. Here's some of the latest app functionalities:



- 1 **Smart Thermostat Apps:** Use geofencing on your smartphone to set a boundary around your home. When you leave the boundary, the thermostat will change to away or return mode.
- 2 **Smart Security Apps:** Video doorbells allow you to keep a watchful eye from anywhere, and smart security apps can send alerts to signal activity outside your home.
- 3 **Smart Smoke and CO Sensor Apps:** These apps have the ability to send alerts, conduct status checks and silence alarms - even when you're away.
- 4 **Smart Appliance Apps:** App functionality depends on the appliance. Refrigerator cameras allow you to see what needs to be stocked (while grocery shopping!), and smart dryers can sense when electric use is high and turn off.
- 5 **Smart Lighting Apps:** Control lighting options for individual rooms. You can adjust brightness and color all from the convenience of your smartphone!

*Lightning cracks.
Power fails.
Cummins works.*



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Energy Efficiency Tip of the Month

Look for LED products and fixtures for outdoor use, such as pathway, step and porch lights. Many include features like automatic daylight shut-off and motion sensors. You can also find solar-powered lighting for outdoor spaces.

Source: energy.gov



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inbox over
the mailbox?**

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