



Cooperative *review*

May 2007

Your Touchstone Energy® Cooperative 
The power of human connections®

A Newsletter for Members of Union Power Cooperative

Increasing Demand, **Increasing Infrastructure**

As I arrive home each day, the first thing I do is throw my keys down on the counter and plug in my cell phone to charge. It seems those batteries don't last as long as they should. Then I usually turn on the TV to catch the weather forecast for the next day. Most of the time my wife is a step ahead of me and already has something cooking on the stove. I tend to cook in the microwave but any way you look at it, these conveniences are all modern necessities of life that we have all come to expect.

The demand for electricity is growing every day. In some months, we are adding over 400 new members to our system. In western Union County alone, we've experienced a load growth of 42 percent during one year. Union County, our largest service area, is the 15th fastest growing county in the United States and fifth fastest growing county in North Carolina. More growth means increased demand for electricity, which requires us to build more infrastructure to support and meet those needs.

Electric cooperatives have been in the business of providing safe, reliable power for nearly 70 years. For Union Power, this encompasses serving our entire membership of over 61,000 members across a five-county region. We have built an intricate system of substations, transmission lines, and distribution lines that bring the power to your homes and businesses.

These days, in this growing region, almost anywhere is in someone's backyard. We are big consumers of everything and we have big needs. And one thing everybody needs is abundant electricity. We are growing fast and we need reliable power to fuel the growth. We need power to keep us safe. Our medical facilities, fire stations, EMS facilities, communication towers, emergency shelters, 911 dispatch facilities, and water pumping stations all depend on it. Our

schools depend on it for every aspect of operation. We need power to keep us comfortable with our air conditioning, heating, hot water, and don't forget our televisions, and computers. We want all of this without interruption.

When it comes to siting substations, transmission lines, and other electric infrastructure there's a science behind it. They have to be built where the people live and work. All infrastructure facilities have to be built near the end user where they will operate most effectively and efficiently. As our communities grow, we need more substations and transmission lines that will provide safe, reliable power to our members. Opposition that we come across in building needed infrastructure, like substations and transmission lines, can put you and your neighbors at risk of losing power reliability.

Substations, transmission lines, and other infrastructure have to be built because they are a necessity to our way of life. Union Power is committed to meeting the demands for electricity and building the infrastructure needed to provide reliable service to our entire membership.

And to all of you who continue to support us in our efforts, I offer a sincere Thank You.



Tony E. Herrin
Executive Vice President
and General Manager

**'in this
issue**

page 22
Path of Electricity

page 22
Beware of Fire Ants

page 23
Bright Ideas

page 24
PowerGuard®

The Path of electricity

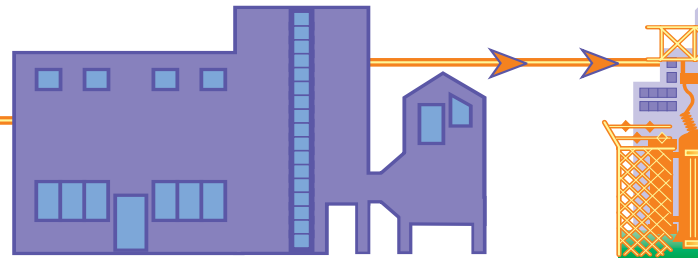
Electricity often travels long distances before reaching your home or business. Your electric cooperative buys wholesale power produced at generating facilities and distributes it through substations and power lines to consumer-members in its system.

Power Plant

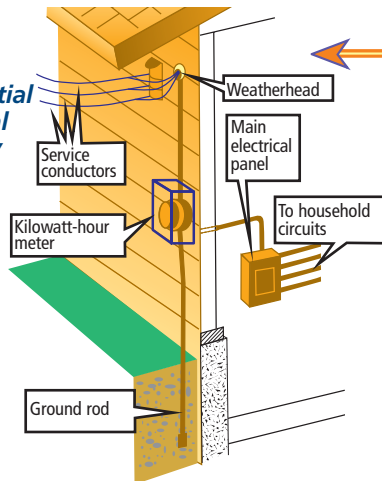
Inside a generating plant, water is heated to steam by nuclear reaction or fuels such as natural gas, oil and coal. Steam turns turbines and magnets to produce electric energy. Water at hydroelectric dams also can turn turbines.

Step-Up Substation

Substation transforms electric energy's power over long distances over power lines.



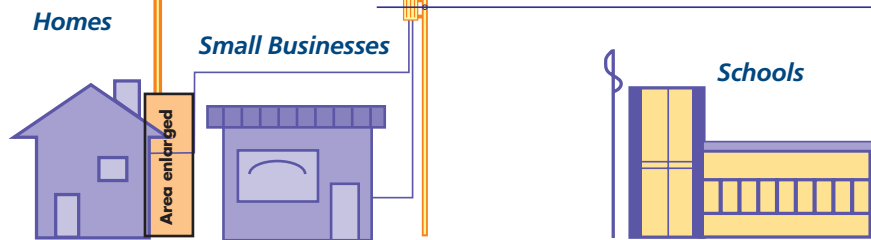
Residential Electrical Delivery



Electric power passes through transformers on poles to reduce voltage to levels for use inside farms, schools, small businesses and homes (120/240 volts).

Distribution Lines

Your cooperative's distribution lines carry 7,200 to 13,200 volts of power. These poles may also hold telephone and cable TV lines. In some areas, distribution lines are in underground conduits.



Important:

Beware of Fire Ants near Padmount Transformers



Red imported fire ants live in large colonies and build dome-shaped mounds that may contain more than 200,000 ants! Most likely you've seen them around your yard.

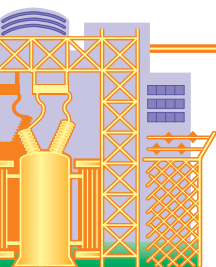
They like to build their mounds in warm areas like yards, pastures, and gardens. They also like to build nests in electrical equipment, such as transformers. They chew on insulation and can weaken and break down aluminum, causing the service line, including the neutral in the transformer to break. Without the neutral line working properly, residents could experience voltage spikes and

voltage drops, leading to damage to appliances and other electronic equipment being used in the home.

Union Power has an on-going underground inspection program where full-time linemen inspect all underground electrical equipment in our service area including padmount transformers. While conducting their inspections, they treat inside of the transformers for fire ants. All new transformers installed are treated with industrial-strength fire ant killer at the time of installation.

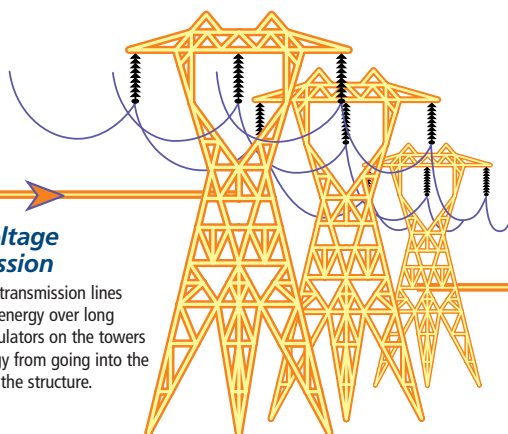
To be such small insects they can cause major problems and damage. Please call Union Power if you see a fire ant mound directly at a padmount transformer.

Substation
Transformers at generating plants increase pressure (voltage) so it can move long over lines that transmit up to 500,000



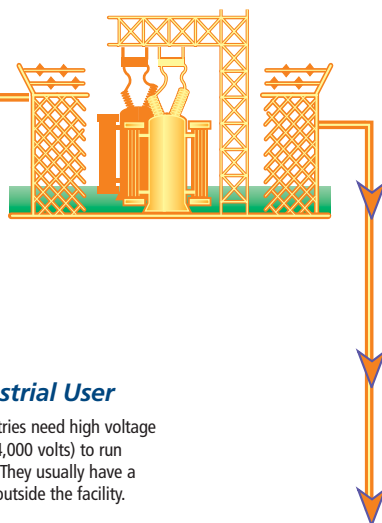
High-Voltage Transmission

High-voltage transmission lines carry electric energy over long distances. Insulators on the towers prevent energy from going into the ground or on the structure.



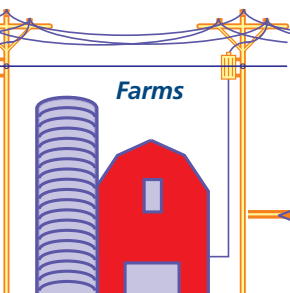
Transmission Substation

Transformers at high-voltage substations reduce voltage to a lower level (34,500 to 115,000 volts) suitable for local use.



Local Substation

Transformers in medium-voltage neighborhood substations reduce the voltage even more to be distributed to homes and businesses. Your electric cooperative operates several of these substations.



Farms

Large Industrial User

Some large industries need high voltage power (2,300 to 4,000 volts) to run heavy machinery. They usually have a small substation outside the facility.



Attention: *Teachers with Bright Ideas*



**BRIGHT
IDEAS**

Start applying now for the 2007 Bright Ideas grants.

On May 1, Union Power Cooperative will begin accepting Bright Ideas applications for the 2007-2008 school year. The grants will be given to K-12 teachers for funding of innovative and imaginative classroom projects. Teachers can apply for a Bright Ideas education grant at www.ncbrightideas.com.

All certified K-12 North Carolina teachers are eligible for a Bright Ideas grant. Since the program began in 1994, North Carolina's Touchstone Energy cooperatives have financed a variety of hands-on projects, including adventures in music, art, history,

language, reading, science, career-planning and information technologies. The Bright Ideas program has awarded more than \$5.3 million in grant money to North Carolina's teachers, has sponsored over 4,000 projects, and taught more than 800,000 students.

We look forward to another record-breaking Bright Ideas year to further demonstrate Union Power's commitment to community.

Early Bird Date—Apply by August 28 and you will be entered into a drawing for a digital camera.

Power *points*

Protect your sensitive electronics with PowerGuard®



Surges in voltage levels are caused by many different events. Lightning is the most common culprit, but accidents involving power poles or animals contacting power line equipment can generate surges. These surges can damage or even destroy electronic devices. Certain devices like computers, televisions, stereos, and fax machines are more sensitive to power fluctuations and are more likely to be damaged. It only takes one strike of lightning to cause thousands of dollars of damage.

The most effective thing to do when lightning approaches is to unplug your electronic devices but obviously, unplugging everything is not always a very practical solution. The next best thing is to install surge protectors, which react instantly to the voltage surges and electronically block the damaging voltage from reaching your electronics.

You can safeguard your sensitive electronics with PowerGuard® Surge Suppression equipment available from Union Power. PowerGuard® uses two separate suppressors to step down surges, offering superior protection from both externally and internally generated surges. Consumer Reports considers surge suppressors like the PowerGuard® system a sensible form of additional insurance. PowerGuard® is high quality equipment you can trust to do the job. Call Union Power at 704-289-3145 for more details. Financing is available for Union Power Cooperative members.

**Summer storms are right around the corner,
so call Union Power today!**



A Union Power Company



Heating, Cooling, & Electrical Services

- Certified Trane Comfort Specialist
- Heat Pump Financing Available
- Generator Installation Available
- Free Estimates for Heating and Air
- Easy Payment Plans

704-283-9047 or 800-922-6840

Cooperative Review is published monthly by



Union Power Cooperative
P.O. Box 5014
Monroe, NC 28111-5014

Tony E. Herrin
Executive Vice President and General Manager

Carrie A. Cameron
Editor

BOARD OF DIRECTORS

B. L. Starnes, President
William R. Wilson, Vice President
Jan Haigler, Secretary-Treasurer
Dent Hall Turner, Jr., Asst. Secretary-Treasurer
Neil W. Hasty
Jim T. Hartsell
Vann W. Hilton
Ralph E. Johnson
Juanita Poplin
Rufus N. Reid
Richard Simpson

Business Hours

8 a.m. to 5 p.m. Monday-Friday
(704) 289-3145 or (800) 922-6840
www.union-power.com

24-Hour Outage Reporting Service and Account Information

(800) 794-4423

Call Before You Dig

NC One Call Center
(800) 632-4949

Providing electricity and energy services to over 61,000 members in Union, Stanly, Cabarrus, Mecklenburg, and Rowan counties.

SERVICE CHARGES:

Security Deposit-charges vary

\$0, \$175, \$375

Late Payment Charge

1% of the amount of bill

Returned Check Fee

\$25

Meter Test

\$75 (refunded if not accurate)

Dual Meter Comparison

\$50 (refunded if not accurate)

Field Collection Charge

\$25 (only checks or money orders accepted, no cash)

RECONNECT CHARGES: (collected in advance)

Normal Hours

\$50 (if called in *before* 4:00 p.m.)

After Hours

\$100 (if called in *after* 4:00 p.m.)

Weekends and Holidays

\$100